

**Dr. ANAND NAYYAR**  
*Academician, Researcher, Scientist, Innovator,  
Inventor, Reviewer, Orator*

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**Residential Address (Viet Nam):** Apartment No: 2A, Hong Loi Tower, Lot 011B2.1, Binh Minh 1 Street, Binh Thuan Ward, Hai Chau District, Da Nang 550000, Viet Nam.

**Residential Address (India):** 14-B Raman Enclave Extension, Near Rishi Nagar, Opp. Y-Block, Ludhiana-141004, Punjab, India.

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Official Link: <https://scs.duytan.edu.vn/-khoa-khoa-hoc-may-tinh-tpb/55-nayyar-anand>

Website : <http://www.anandnayyar.com>

Facebook Page : [www.facebook.com/expertresearcher](https://www.facebook.com/expertresearcher)

YouTube Channel : [www.youtube.com/anandnayyar](https://www.youtube.com/anandnayyar) (Gyaan with Anand Nayyar)

Mobile : +91-9878327635 (WhatsApp) (India) ; +84-933622812 (Vietnam)

### Career Objective

An astute performer with proven expertise in devising and effectuating policies aimed at assuring smooth running of operations and execution of Academic, Research and Administration tasks within the Professional College/University premises, possessing potential for distinctive achievement through strategy, innovation, implementation and control.

### Career Synopsis

- Excellent Academician, Researcher, Author, Writer, Scientist, Innovator, Inventor and Consultant with strong Inter-Personnel, Analytical, Problem-Solving, Research & Teaching Skills.
- A stickler for Quality, team building to the core and a natural motivator with perseverance and integrity. Commands excellent communication skills that have been honed through interacting with people at various levels.
- Excellent skills in communication with students and solving their problems with full satisfaction and ensuring 100% Results in academics and other duties delegated in Administration.

- More than 18+ Years of Consolidated Experience (**Teaching, Research & Administration**) as (**Centre Manager**) Pace Computers LTD (June 2008-July 2009); (**Lecturer- Department of Computer Applications**)-Arya College, Ludhiana (June 2009-Feb 2010); (**Assistant Professor- Department of Computer Science**) in Kamla Lohtia Sanatan Dharam College (June 2010-July 2011); (**Assistant Professor & Head-Research and Development Cell- Department of Computer Applications & IT**) at KCL Institute of Management and Technology, Jalandhar (August 2011- October 2017).
- Currently working as **Professor, Scientist, Vice Chairman-Research, Director (IoT and Intelligent Systems Lab)** in School of Computer Science, Faculty of Information Technology, International School, American Degree Programme (ADP) Department's- Computer Science / Information Technology at **Duy Tan University (DTU)**, Da Nang, Vietnam. (Jan 2018-Present)
- Certified in **125+ Professional International Certifications** from varied Corporate IT Giants like CISCO, Microsoft, BCS, ISTQB, EXIN, Oracle, Google, Cyberoam, EXIN, Six Sigma and BeingCert.com, GAQM Certification Authority, Publons.
- Published **150+ ISI Publications** in High Reputed Impact Factor Journals-SCI/SCIE/SSCI Indexed; **26 Research Papers** in SCOPUS/ESCI Indexed Journals.
- Awarded **5 Best Paper Awards** at ACCT16, ICCCS2016, ICDMAI 2019, ICIT 2020 International Conferences for Networks and Communications based Research papers.
- Attended various **1/2/5/7/16/28 Days FDP's/Workshops** on various areas of Computer Science/Information Technology in various Institutions and IT industries.
- Reviewed more than **4300+ Research Papers(Total)/ 2100+ (Web of Science)** for various National and International Conferences/Referred SCI/SCIE/SSCI High Impact Factor Journals including IEEE/Elsevier/Springer/ACM/InterScience/IGI-Global/Sage/Taylor and Francis. ***Certified Publons Academy Peer Reviewer. (Ranked: Top 50 under Web of Science Reviewers Category and Ranked No:3 Overall under Computer Science)***
- Acting as **Editor-in-Chief**, IGI-Global, USA- Journal titled "**International Journal of Smart Vehicles and Smart Transportation (IJSVST)**". **Managing Editor in Chief**, IGI Global, USA- International Journal of Knowledge and System Science (IJKSS).
- Guided various BCA, B.S., MCA, M. Tech, M.S students for their Projects/Capstone/Thesis. Supervised **2 M. Tech (ECE)** students; **5 M. Tech (CSE); 2 M.S.(CS)** students for Dissertation/Projects; **30 MCA** students for Projects. **1 Ph.D Student (Undergoing) for Ph.D Guidance (Duy Tan University).**

- Chaired **150+ International/National Conferences/Seminars** as Keynote Speaker, Session Chair, Resource person.
- Esteemed member of more than **50** National and International Professional R & D Organizations, Associations and Societies as Life Member/Senior Member/Associate Member. Acting as **Senior Member-ACM.**
- Esteemed Member of more than **300+** National and International Refereed Journals cum various National and International Conferences as **Editorial Board, Reviewer Board, Technical Committee Board, and Organizing Committee cum Advisory Board.**
- Published **40+ books** on different subjects of Computer Science, Electronics and Information Technology with National/International Publishers of repute.
- **Intellectual Property Rights: Granted 18 Australian Patents of Innovation, 7 German Patents, 4 Japanese Patents, 6 UK Patents, 33 Indian Design and Utility Patents and 3 Indian Copyright and 2 Canadian Copyrights.**
- Delivered **250+** Invited Talks/Guest lectures/Workshops/Webinars/Faculty Development Programs on various topics in Computer Science/Information Technology/Research Methodology/Teaching Skills Enhancements in various academic institutions, Universities, NITs and degree colleges across the country.
- Visiting **Faculty/Consultant/Researcher/Scientist/Expert** to various Top Ranked National/International Institutions/Universities and Corporate Organizations for Research, Technology Transfer and Consultancy activities.
- Awarded **42 Awards for Teaching and Research : College Color Award** by DBIMCA, Punjab; **Best Teacher Award** by Indian Society for Technical Education (ISTE), New Delhi; **Shiksha Ratan Puraskar** by India International Friendship Society (IIFS); **Best Citizen of India-Computer Science** by Best Citizen Publishing House New Delhi; **Best Teacher Award** by Dotway Computers, Ludhiana; **Young Scientist Award** by IRAJ Association; **Bharat Excellence Award** by Friendship Forum of India; **Rashtriya Gaurav Award** by India International Friendship Society; **Rashtriya Jewel Award** by Friendship Forum of India; **Global Excellence Award** by Friendship Forum of India; **Exemplary Educationist Award** by Indo Global Chamber of Commerce, Industries and Agriculture; **Distinguished Faculty Award** by Indo Global Chamber of Commerce, Industries and Agriculture at The International Education and Leadership Summit Awards Ceremony; **Indira Gandhi Award of Excellence** by India International Friendship Society; **ISTE Section Best Computer Science Teacher Award** by Indian Society for Technical Education (ISTE); **Global Teacher Role Model Award 2015** by MVLA Trust, Mumbai; **Young Researcher Award 2017** by ITSr, Jaipur; **Best Scientist Award 2017** by ITSr, Jaipur; **Asian Status Award for Intellectual People 2018, Global Indian Personality Award 2018, Indo International Emerging Star**

**Award 2018** by Friendship Forum India, **Outstanding Researcher Award (Computer Science and Engineering) 2019** by GOREA, India, **Top 1% Reviewer in Computer Science, Engineering and Cross-Field 2019** by Publons, **Best Researcher Award(Computer Science Research) 2019** by Duy Tan University, Da Nang, Viet Nam, **Distinguished Scientist Award (Computer Science) 2020** by VDGGOOD Professional Association under International Scientist Awards on Engineering, Science and Medicine., **International Researcher of the Year 2020** by ICCIC 2020; **Excellence in Education Award 2020** by ITSr; **Outstanding Teacher of Indian Origin working in Foreign University 2020** by MTC Global; **Top 2% Scientist in PLOS ONE and Stanford University- Artificial Intelligence, Networking and Telecommunications and Information and Communication Technologies.- 2019, 2020, 2021;** **Dr. Sarvepalli Radhakrishnan Best Teacher Award 2021** by Society for Learning Technologies; **Distinguished Scientist Award 2021** by SSRN, Elsevier, **Outstanding Scientist Award 2021** by VDGGOOD, India; **Vivekananda Prize 2021** by Institute of Researchers, India; **Best Scientist, Researcher and Professor Award- Year 2019, 2020-2021, 2021-2022** by Duy Tan University, Da Nang, Viet Nam; **Distinguished Professor Award 2022** by Cognizance, India; **Excellence Service Award 2022** by VDGGOOD, India; **Perficio Award 2022- Best Innovative Faculty of Year** by DHS Foundation, India and Faculty of Entrepreneurship and Business, Universiti Malaysia, Kelantan, Malaysia; **InRes Young Fellow Award 2022** by Institute of Researchers, India; **Best Senior Scientist Award 2022** by GECL (Global Education and Corporate Leadership), India; **Asia Top 50 Scientist and Academician 2022** by Education Expo TV, India; **Research.com—Computer Science—National Ranking:2; World Ranking: 9867; D-Index: 31; Best Editor Award 2022** by IASC Journal, Tech Science Press; **Distinguished Scientist Award 2023** by National University of Singapore; **Obada Prize 2023** by Obada Committee.

- Cited in **Marquis Who's Who in the World- 2014/2015/2016/2017/2018/2019/2020/2021/2022/2023** America's Biographer since 1899. Cited in **Asia Pacific: Who's Who Men and Women of Achievement-Year 2013**, by Rifacimento International Association in 2014, **AD Scientific Index- World Scientist and University Ranking 2021/2022/2023**
- Completed **1 Grassroot** project in Duy Tan University. Completed **2 Grant Based Ph. D Support Projects** worth Rs **3 Lakh** from IRAJ and Gill Instruments, Bangalore on Wireless Sensor Networks, undergoing **1 ASEAN Project based Grant development.**

## Educational Credentials

- Doctorate of Philosophy (**PhD**)-**Computer Science** from Desh Bhagat University, Mandi Gobindgarh. June 2013 to October 2017.  
(Regular-Mode)

### **Course Work Details-**

Year of Passing: October 2017; **Division: 1<sup>ST</sup>**

**Achievement: Topper: Computer Science Stream.**

**Thesis Title: Improvised Energy Efficient Multipath Ant Colony Optimization (ACO) based Routing Protocol for Wireless Sensor Networks (WSNs)**

- Master in Business Administration (**MBA**) in **Information Systems (IS)** from Sikkim Manipal University, Manipal.  
Year of Passing: December 2013; **Division: 1<sup>st</sup>**.  
**Project: *Application of Project Management Techniques in Sales and Inventory Management System***
- Master of Computer Applications (**MCA**) from Punjabi University, Patiala.  
Year of Passing: August 2008; **Division: 1<sup>ST</sup> with Distinction;**

**Achievement: University Topper, Gold Medallist, College Color cum Best Speaker-3 Years, Roll of Honor- Awardee**

**Industrial Training Project: *Virtual Private Networking-VPN (Site-To-Site & Remote Access VPN)***

- Certificate in Cyber Law (**CCL**) from Indian Institute of Law (ILI), New Delhi.  
Year of Passing: December 2011; **Division: 1<sup>ST</sup>**  
Achievement: **“A+” Grade.**
- Certificate in Intellectual Property Rights and Information Technology in the Internet Age (**C-IPR**) from Indian Law Institute (ILI), New Delhi.  
Year of Passing: March 2012; **Division: 1<sup>ST</sup>**.  
Achievement: **“A” Grade.**
- Bachelor of Commerce (**B.Com**) from Punjab University, Chandigarh.  
Year of Passing: August 2005.

## Professional Certifications

### CISCO Certifications

- CCNA (Cisco Certified Network Associate) (Cisco Routers and Switches).  
(*CISCO ID: CSC011463046*)

### Microsoft Certifications

(*MCP ID: 6353755*)

*Microsoft ID: MS0429292876*

<https://www.credly.com/users/anand-nayyar/badges>

- Microsoft Certified Professional (MCP)- (Windows XP-Client)
- Microsoft Certified Systems Administrator (MCSA) (Windows Server 2003)
- Microsoft Certified Systems Administrator (MCSA-Messaging) (Microsoft Exchange Server 2003)
- Microsoft Certified Systems Engineer (MCSE) (Windows Server 2003)
- Microsoft Certified Technology Specialist (MCTS) (Windows Server 2008)- Network Infrastructure Configuration, Active Directory Configuration, Applications Infrastructure Configuration.
- Microsoft Certified IT Professional (MCITP) (Windows Server 2008)- Server Administrator
- Microsoft Certified Solutions Associate (MCSA) (Windows Server 2008)
- Microsoft Certified Professional (MCPS) (Windows Server 2008)
- Microsoft Certified Solutions Associate (MCSA) (Windows Server 2012)
- Microsoft Certified Solutions Associate (MCSA) (Cloud Platform)
- Microsoft Certified Solutions Expert (MCSE) (Cloud Platform and Infrastructure)
- Microsoft Certified Solutions Expert (MCSE) (Productivity)
- Microsoft Certified Solutions Associate (MCSA) (Web Applications)
- Microsoft Certified Solutions Developer (MCSD) (App Builder)
- Microsoft Certified Solutions Associate (MCSA) (Windows Server 2016)
- Microsoft Certified Solutions Associate (MCSA) (Dynamics 365)
- Microsoft Certified Solutions Expert (MCSE) (Business Applications)

## **Amazon Certifications**

- **AWS Certified Cloud Practitioner. Validation Number: CF3F35LB3FRQQ8GH**
- **AWS Certified Solutions Architect- Associate. Validation Number: DGY3930JGJFE1Q3Y**

## **Beingcert.com- Online ISO 9001:2008 UKAS Accreditation Certification Authority, U.K.**

- **Certified Scrum MASTER (CSM). Certification Number: B0000559**
- **Lean Six Sigma Yellow Belt Certified. Certification Number: B0000642**
- **Lean Six Sigma Green Belt Certified. Certification Number: B0000650**
- **Lean Six Sigma Black Belt Certified. Certification Number: B0000658**
- **Certified Data Center Professional (CDCP). Certification Number: B0000982**
- **Certified Data Center Specialist (CDCS). Certification Number: B0000983**
- **Certified Data Center Expert (CDCE). Certification Number: B0000992**
- **Certified Data Center Facilities Operations Manager (CDCFOM). Certification Number: B0000993**
- **Certified Big Data Foundation Specialist (CBDFS). Certification Number: B0001007**
- **Foundation Certificate in DevOps (FCDO). Certification Number: B00001008**
- **Certified DevOps Master (CDM). Certification Number: B00001018**
- **Certified Computer Hardware Engineer (CCHE). Certification Number: B00001023**
- **Certified Web Developer (CWD). Certification Number: B00001028**
- **Agile Scrum Foundation (ASF). Certification Number: B00001238**
- **Agile Scrum Master (ASM). Certification Number: B00001239**
- **Certified PHP Developer. Certification Number: B00001242**
- **Associate in Project Management (APM). Certification Number: B00001243**
- **Professional in Project Management (PPM). Certification Number: B00001251**
- **Certified Project Director (CPD). Certification Number: B00001252**



## GAQM Certification

- **Linux Certified Professional (LPI-LCP). Certification Number: 89913**
- **Linux Certified Engineer (LPI-LCE). Certification Number: 89921**
- **Linux Certified Master (LPI-LCM). Certification Number: 89932**
- **Certified Cloud Computing Professional (CCCP). Certification Number: 89938**
- **Certified Cloud Computing Consultant (CCCC). Certification Number: 89940**
- **Certified Associate Python Programmer (CAPP). Certification Number: G-102654**
- **Certified Professional Python Programmer (CPPP). Certification Number: G-102663**

## EXIN CERTIFICATIONS

### EXIN Testing ID: EXIN241070

- **Certified in *ITIL® Foundation Certificate in IT Service Management- EXIN Certification*. Registration Number: 6042946; Certification Number: 6043048.20678022**
- **Certified in *PRINCE2 ® Foundation Certificate in Project Management- EXIN Certification*. Registration Number: 6049015; Certification Number: 6043048.20680519**
- **Certified in *CCC Big Data Foundation- EXIN Certification*. Registration Number: 6446777; Certification Number: 6043048.20833155**
- **Certified in *CCC Internet of Things Foundation- EXIN Certification*. Registration Number: 6447115; Certification Number: 6043048.20833243**
- **Certified in *EXIN Blockchain Foundation*. Registration Number: 6447519; Certification Number: 6043048.20833596**
- **Certified in *EXIN Blockchain Essentials*. Registration Number: 6447517; Certification Number: 6043048.20833584**
- **Certified in *EXIN Information Security Foundation Based on ISO/IEC 27001 ISFS*. Registration Number: 6450582; Certification Number: 6043048.20834490**



- Certified in *EXIN Information Security Management Professional based on ISO/IEC 27001 ISMP*. Registration Number: 6450583; Certification Number: 6043048.20834541
- Certified in *EXIN Information Security Officer*. Certification Number: 6043048.20834542
- Certified in *EXIN BCS Artificial Intelligence Foundation*. Registration Number: 6451106. Certification Number: 6043048.20834783
- Certified in *EXIN BCS Artificial Intelligence Essentials*. Registration Number: 6450730. Certification Number: 6043048.20834632
- Certified in *EXIN Cloud Computing Foundation*. Registration Number: 6452098. Certification Number: 6043048.20835017
- Certified in *EXIN Certified Integrator- Secure Cloud Services*. Registration Number: 6043048.20835016
- Certified in *EXIN Ethical Hacking Foundation*. Registration Number: 6454102. Certification Number: 6043048.20835688
- Certified in *EXIN SIAM Foundation*. Registration Number: 6454927. Certification Number: 6043048.20836027
- Certified in *EXIN SIAM Professional*. Registration Number: 6454928. Certification Number: 6043048.20836104
- Certified in *EXIN Digital Service Manager Integration*. Certification Number: 6043048.20836105
- Certified in *EXIN Service Integration Manager*. Certification Number: 6043048.20836103
- Certified in *EXIN IT Service Management Foundation Based on ISO/IEC 20000*. Registration Number: 6456351. Certification Number: 6043048.20836587.
- Certified in *EXIN Privacy and Data Protection Foundation*. Registration Number: 6502761. Certification Number: 6043048.20852042.

- Certified in *EXIN Privacy and Data Protection Professional*. Registration Number: 65032763. Certification Number: 6043048.208512138
- Certified in *EXIN Data Protection Officer*. Certification Number: 6043048.20852139
- Certified in *EXIN DevOps Foundation*. Registration Number: 65032763. Certification Number: 6043048.20852097
- Certified in *EXIN DevOps Professional*. Registration Number: 6503281. Certification Number: 6043048.20852306

### **Aveta Business Institute**

- Certified in **Lean Six Sigma White Belt** from Aveta Business Institute, USA.

### **Cyberoam Technologies**

- Certified in **Cyberoam Certified Network & Security Professional (CCNSP)** from Sophos Cyberoam Technologies. (Certification No: CP011215/V3.0/01618)

### **BCS: The Chartered Institute for IT**

**BCS Testing ID: BCS064033**

**ISTQB (International Software Testing Qualifications Board)- Certified Tester Foundation Level (CTFL). Candidate Number: GU36155989; Certificate Number: 00360394; Unique ID: ID11560703;**

**BCS Intermediate Certificate in Software Testing- Candidate Number: XW36366507; Certificate Number: 00371721;**

### **Asian School of Cyber Laws (ASCL), Mumbai**

- Certified in **Ethical Hacking- CEH. (Gold Medallist). (Rank: Black Hat Hacker)**
- Certified in **Cyber Crime Protection Program**
- Certified in **Data Privacy Law**

## **Oracle Technologies**

### **Oracle JAVA Certifications**

- **Oracle Certified Associate (OCA), Java SE 8 Programmer.**
- **Oracle Certified Professional (OCP), Java SE 8 Programmer.**

### **Oracle Database Certifications**

- **Oracle Certified Associate (OCA), Oracle Database 12c Administrator.**
- **Oracle Certified Professional (OCP), Oracle Database 12c Administrator.**

### **Oracle Testing ID: OC1718781**

#### **Publons Academy**

- **Certified Publons Academy Peer Reviewer.**

#### **Elsevier Researcher Academy**

- **Certified Peer Reviewer Course.**

# Computer Science/Information Technology Specializations

- **Networking & Data Communications/ Wireless Communications / Sensor Networks:** Network Infrastructure Development, Mobile Communications, Wireless Networks, Future Internet Standards-WiMAX, Wireless Sensor Networks (WSN), Body Sensor Networks, Wireless Mesh Networks, Opportunistic Networks, Mobile Adhoc Networks (MANET), Flying Adhoc Networks (FANET), Underwater Sensor Networks, Biomedical sensors, Delay Tolerant Networks, Internet of Things (IoT), Internet of Everything (IoE).
- **Network Security:** Ethical Hacking, Intrusion Detection/Prevention Systems, Honeynets/ Honeypots, Firewalls, Cyber Forensics, Penetration Testing, Information Security Planning and Development, Security Operating Systems Cyberoam Technologies- Firewalls and UTM's, Sophos Network Security Hardware, DEFT Forensics, Mobile Forensics, Blockchain Security, Wireless Security, Dark Web.
- **Virtualization/Cloud Computing:** VMware Administration, HYPER-V, XEN, Oracle Virtual Box, Cloud Servers Infrastructure Deployment, Ubuntu Cloud, Amazon Web Services, OwnCloud, Microsoft Azure, Cloud Computing Security, Google Cloud Platform, Alibaba Cloud.
- **Machine Learning/Deep Learning:** Python with ML/DL Libraries, R Language, Artificial Intelligence, Explainable Artificial Intelligence.
- **Windows Servers/ Linux based Desktop Operating Systems (Desktop Support/ System Administration & Engineering):** - Windows, Linux, Solaris, Unix, HP UX.
- **Web Development:** HTML, DHTML, JavaScript, jQuery, XML, XHTML, CSS, ASP.net, Search Engine Optimization, Search Engine Marketing, Google Analytics, Google AdSense, Google Keyword Tools and other SEO Online Tools, Black Hat SEO.
- **Database's/Big Data/ Data Science:** Fundamental Concepts of DBMS & RDBMS, Data Mining, Data Warehousing, Database Security, Database Administration, Big Data Analytics.

- **Database Software's**: - MS-Access, Oracle 9i/10g/11i/12c, Microsoft SQL Server, MySQL, PostgreSQL, MongoDB, NoSQL, MariaDB, SQLite, IBM DB2, Orient DB, Graph DB, Apache Hadoop, MapReduce, Pig, Hive, Sqoop, Apache Cassandra, Apache Kafka, Zookeeper.
- **Programming**: - C, C++, C#, C#.net, Core Java, Data & File Structures, Python, TCL, OTCL, Python, R, Ruby on Rails, Go.
- **Embedded Systems Technologies/Software's**: Raspberry Pi, Android Smart PC Technologies, Arduino Smart Boards/Shields/Lilypad's, Intel Smart Board-Galileo Board, AVR, PIC Microcontrollers, Freeduino, ATMEGA Microcontrollers, Intel Galileo Board, Intel Skylake Technology, MSP430 Processor Technology, Intel Compute Stick, Basic Robotic Operations, Beaglebone Board, Odroid, Cubie board, Nano-PC, Nvidia Jetson Nano, Latte Panda.  

Software's: Micro C Compiler, Arduino IDE  
Development Environment, IAR Workbench for MSP430.
- **Mobile Communications**: 3G, 4G, 5G, 6G Technology, Mobile Security, Future Mobile Communications Technologies, Intelligent Communication Systems.
- **Smart and Intelligent Technologies**: Smart Cities, Green Buildings, Smart Transportation, Industry 4.0, Sustainable Technologies, Cyber Physical Systems, Cobotics.
- **Misc. Computer Science Subjects**: Software Engineering & Software Testing, System Analysis & Design (SAD), Project Management, Management Information System (MIS), Computer Graphics, Algorithm Analysis and Design (ADA), Multimedia and Internet Technology, Object Oriented Analysis and Design using UML (OOAD), Operating Systems, Advanced Operating Systems, E-Commerce & M-Commerce, Systems Software, System Simulation, Computer Graphics, Compiler Design, Computer System Architecture, Digital Electronics, Artificial Intelligence & Robotics Engineering.
- **Simulators (Networking/ Cloud Computing)**: NS-2, NS-3, OPNET, MATLAB, SCILAB, Qualnet, LabVIEW, OMNeT++, Boson Network Simulator, Cisco Packet Tracer, Cloud Analyst, CloudSim, GreenCloud, Cloud Reports, NetSim, OptSim, CupCarbon-IoT Simulator, ONE Simulator- Opportunistic Networks, Q-Sim.

## Research Areas

- **Wireless Communications:** Mobile Adhoc Networks, Wireless Sensor Networks, Underwater Sensor Networks, Opportunistic Networks, Vehicular Adhoc Networks, Flying Adhoc Networks, Sea Adhoc Networks, UAV Adhoc Networks/Drones, Wireless Mesh Networks.
- **Cyber Security:** Ethical Hacking & Cyber Forensics, Cyber Laws & Intellectual Property Rights, Penetration Testing, Black Hat Hacking Techniques, Vulnerability Assessment, Threat Prevention Techniques development, Kali Linux and other Hacking and Security Tools.
- **Client Server Computing:** Pervasive Computing, Distributed Computing, Parallel Computing, Scalable Computing, High Performance Computing, Cluster Computing.
- **Big Data Analytics:** Data Mining, Big Data and Securing Database Servers, Social and Multimedia Data Mining, Distributed Systems, Big Data Analytics and Reporting, Social Data Mining.
- **Cloud Computing and Virtualization:** Virtualization, Cloud Computing and Securing Cloud, Cloud Simulations, Artificial Intelligence in Cloud Computing.
- **Optimization Techniques:** Algorithm Design and Development, Swarm Intelligence, Genetic Algorithms, Nature Inspired Algorithms and Metaheuristics.
- **Artificial Intelligence/Machine Learning/ Deep Learning:** Embedded Systems, Robotics, AI Techniques Design, Machine Learning, Deep Learning, Cognitive Intelligence, Computational Intelligence, Chatbots, Robot Process Automation (RPA), Cobotics, AI Programming.
- **Microcontrollers and Development Boards:** PIC Microcontrollers, Arduino Boards- Lilypad's, Shields, Raspberry Pi, Beaglebone, Cubie Board, Odroid, UDOO, Asus Tinker Board, Pine 64, Nano-PC, Nvidia Jetson, BBC Micro Bit, and other IoT Development Kits.
- **Other Areas:** Internet of Things (IoT), Smart Grids, SCADA, Power Systems, Photonics, Optical Fibre Communication.

# Research Papers/ Conferences/ Edited Books/ Intellectual Property

## Publication Synopsis

Papers Published in International Conferences:	70
a. IEEE Xplore:	21
b. Springer:	43
c. ACM (ACM Digital Library):	6
Papers Published in International Journals:	177
a. Scopus/ ESCI:	26
b. SCI & SSCI:	13
c. SCIE:	138
Papers Published in Edited Books/Book Chapter:	46
Articles Published in National/International Leading Magazines:	91
Patents: (Australia: 18; India: 33; German: 6; Japan: 4; UK: 6; US:1)	68
Copyrights: (India: 3; Canadian: 2)	5
Books Published:	45
Total:	502

## Indexing Services

Google Scholar: <http://scholar.google.co.in/citations?user=7uvZuX8AAAAJ&hl=en>

DBLP: <http://dblp.uni-trier.de/pers/hd/n/Nayyar:Anand>

Researcher ID: F-3732-2015; <http://www.webofscience.com/wos/author/record/F-3732-2015>

Scopus: <https://www.scopus.com/authid/detail.uri?authorId=55201442200> ID: 5201442200

ResearchGate: [https://www.researchgate.net/profile/Anand\\_Nayyar](https://www.researchgate.net/profile/Anand_Nayyar)

ORCID: <https://orcid.org/0000-0002-9821-6146>

EXALY: <https://exaly.com/author/7095485/anand-nayyar/>

Citations: **10100**; H-Index: **53**; I-Index: **190** (Google Scholar)

Citations: **5000**; H-Index: **38**; (Scopus); D-Index: 31 (Research.com)

Cumulative Impact Factor: 672 (Dated: June 2023)



## International Conference's

### IEEE Xplore (SCOPUS INDEXED)

1. **Simulation Based Evaluation of Reactive Routing Protocol for MANET.** 2<sup>nd</sup> International Conference on Advanced Computing and Communication Technologies (ACCT'12) organized by RG Education Society, Rohtak. (CD-Version)- CD-ISBN NO: 978-0-7695-4640-7.

Research Paper Published: CS Digital Library: IEEE Computer Society

IEEE Computer Society Link:

<http://www.computer.org/csdl/proceedings/acct/2012/4640/00/4640a561-abs.html>

ISBN No: 978-1-4673-0471-9

IEEE Catalogue No: CFP1203S-PRT

DOI: <http://doi.ieeecomputersociety.org/10.1109/ACCT.2012.104>

(SCOPUS INDEXED)

2. **A Review of De-Facto MAC Standard: IEEE 802.11 DCF.** 4<sup>th</sup> International Conference on Advanced Computing and Communication Technologies (ACCT'14) organized by RG Education Society, Rohtak. (CD-Version) CD-ISBN NO: 978-1-4799-4910-6

Research Paper Published: CS Digital Library: IEEE Computer Society

IEEE Computer Society Link:

<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?tp=&arnumber=6783481&queryText%3DA+Review+of+De-Facto+MAC+Standard%3A+IEEE+802.11+DCF>

(SCOPUS INDEXED)

DOI: 10.1109/ACCT.2014.19.

3. **A Novel Defense Mechanism via Genetic Algorithm for Counterfeiting and Combating Jelly Fish Attack in Mobile Adhoc Networks (MANETS).** IEEE Sponsored Confluence 2014: The Next Generation Information Technology Summit being organized by Amity University, Noida (U.P), India.

Published in: Confluence the Next Generation Information Technology Summit (Confluence), 2014 5<sup>th</sup> International Conference. Page: 354-358; Print ISBN: 978-1-4799-4237-4; INSPEC Accession Number: 14737157; DOI: 10.1109/CONFLUENCE.2014.6949279.

Link of IEEE:

[http://ieeexplore.ieee.org/xpl/articleDetails.jsp?reload=true&arnumber=6949279&punumber%3D6937353%26sortType%3Dasc\\_p\\_Sequence%26filter%3DAND%28p\\_IS\\_Number%3A6949036%29%26pageNumber%3D3](http://ieeexplore.ieee.org/xpl/articleDetails.jsp?reload=true&arnumber=6949279&punumber%3D6937353%26sortType%3Dasc_p_Sequence%26filter%3DAND%28p_IS_Number%3A6949036%29%26pageNumber%3D3)

4. **Enhancement in DDCSA for Improving Power Consumption and Network Lifetime of Wireless Sensor Networks using Geographical Forwarding via Face Routing Technique.** IEEE Sponsored Confluence 2014: The Next Generation Information Technology Summit being organized by Amity University, Noida (U.P), India.

Published in: Confluence the Next Generation Information Technology Summit (Confluence), 2014 5<sup>th</sup> International Conference. Page: 359-364; Print ISBN: 978-1-4799-4237-4; INSPEC Accession Number: 14737121; DOI: 10.1109/CONFLUENCE.2014.6949280

Link of IEEE:

[http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6949280&punumber%3D6937353%26sortType%3Dasc\\_p\\_Sequence%26filter%3DAND%28p\\_IS\\_Number%3A6949036%29%26pageNumber%3D3](http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6949280&punumber%3D6937353%26sortType%3Dasc_p_Sequence%26filter%3DAND%28p_IS_Number%3A6949036%29%26pageNumber%3D3)

(SCOPUS INDEXED)

5. **A Review of Beaglebone Smart Board's- A Linux/Android Powered Low Cost Development Platform based on ARM Technology.** 2015 9<sup>th</sup> International Conference on Future Generation Communication and Networking (FGCN 2015) being organized by Jeju National University International Center, Jeju Island, Korea. (Conference Proceedings) Proceedings of 2015 9<sup>th</sup> International Conference on Future Generation Communication and Networking (FGCN 2015). ISBN No: 978-1-4673-9834-3/15. DOI No: 10.1109/FGCN.2015.23. Page No: 55-63

*IEEE*

Proceedings of 2015 9<sup>th</sup> International Conference on Future Generation Communication and Networking (FGCN 2015)

IEEE Computer Society Order Number: P5729

BMS Part No: CFP1534D-CDR

ISBN No: 978-1-4673-9834-3/15

Link of IEEE:

[http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=7434875&filter%3DAND%28p\\_IS\\_Number%3A7434853%29](http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=7434875&filter%3DAND%28p_IS_Number%3A7434853%29)

**6. 10<sup>th</sup> INDIACom 2016: 3<sup>rd</sup> International Conference on Computing for Sustainable Global Development (IEEE Sponsored & IEEE Xplore Indexed Conference), Conference ID: 37465**

**Research Paper Presented:**

- **Ant Colony Optimization- Computational Swarm Intelligence Technique.**
- **A Review of Arduino Boards, Lilypad's and Arduino Shields.**
- **Real Time Smart Home Automation Based on PIC Microcontroller, Bluetooth and Arduino Technology**

**Research Paper Published: Full Paper Conference Proceedings of 10<sup>Th</sup> INDIACom, 2016 3<sup>rd</sup> International Conference on Computing for Sustainable Global Development. ISSN No: 0973-7529, ISBN No: 978-93-80544-20-5.**

- **Ant Colony Optimization- Computational Swarm Intelligence Technique. pp: 2404-2410**
- **A Review of Arduino Boards, Lilypad's and Arduino Shields. pp: 2368-2375**
- **Real Time Smart Home Automation Based on PIC Microcontroller, Bluetooth and Arduino Technology. pp: 2361-2367**

***IEEE Xplore Indexing:***

**ISBN No: 978-9-3805-4421-2/16**

- 1. Ant Colony Optimization- Computational Swarm Intelligence Technique. pp: 1493-1499.**  
**<http://ieeexplore.ieee.org/document/7724515/>**
- 2. A Review of Arduino Boards, Lilypad's and Arduino Shields. pp: 1485-1492.**  
**<http://ieeexplore.ieee.org/document/7724514/>**
- 3. Real Time Smart Home Automation Based on PIC Microcontroller, Bluetooth and Arduino Technology. pp: 1478-1484.**  
**<http://ieeexplore.ieee.org/document/7724513/>**

**(SCOPUS INDEXED)**

7. International Conference on Advances in Big Data, Computing and Data Communication Systems (icABCD 2018) being organized by IEEE South Africa Section Computer Society Chapter, IEEE Mauritius Section and Durban University of Technology, Durban South Africa.

***Flying Adhoc Network (FANETs): Simulation Based Performance Comparison of Routing Protocols: AODV, DSDV, DSR, OLSR, AOMDV and HWMP***

**Research Paper Published:**

***Flying Adhoc Network (FANETs): Simulation Based Performance Comparison of Routing Protocols: AODV, DSDV, DSR, OLSR, AOMDV and HWMP***

**Paper Details:**

***IEEE Xplore Proceedings- 2018 International Conference on Advances in Big Data, Computing and Data Communication Systems (icABCD 2018). IEEE Conference Number: 41997. Scopus Indexed***

***E-ISBN: 978-1-5386-3060-0***

***PoD (Print on Demand) ISBN: 978-1-5386-3061-7***

***DOI: 10.1109/ICABCD.2018.8465130***

***Web Link: <https://ieeexplore.ieee.org/document/8465130>***

**(SCOPUS INDEXED)**

8. 2018 International Conference on Intelligent and Innovative Computing Applications (ICONIC 2018) being organized at Hotel Holiday Inn, Mon Tresor, Plaine Magnien, Mauritius.

***Comprehensive Analysis of Routing Protocols for Cognitive Radio Ad-Hoc Networks (CRAHNs)***

**Research Paper Published**

**IEEE Xplore Proceedings: 2018 International Conference on Intelligent and Innovative Computing Applications (ICONIC 2018). (SCOPUS INDEXED)**

**Publisher: IEEE**

**ISBN Details: E-ISSN: 978—5386-6477-3; USB ISBN: 978-1-5386-6476-6; Print on Demand (PoD): 978-1-5386-6478-0**

**DOI: 10.1109/ICONIC.2018.8601301**

**Pages: 1-7**

9. 2018 4<sup>th</sup> International Conference on Computing Sciences (ICCS) being organized at Lovely Professional University (LPU), Jalandhar, Punjab.

**Internet of Robotic Things: Driving Intelligent Robotics of Future- Concept, Architecture, Applications and Technologies**

**Publisher: IEEE**

**IEEE Xplore Proceedings: 2018 4<sup>th</sup> International Conference on Computing Sciences (ICCS)**

**ISBN: - Electronic ISBN: 978-1-5386-8025-4; Print on Demand (PoD)—978-1-5386-8026-1**

**DOI: 10.1109/ICCS.2018.00033**

**Pages: 151-160**

10. IEEE Global Communications Conference (IEEE GlobeCom 2018) being organized at Abu Dhabi, UAE.

- **BHEEM: A Blockchain based framework for securing Electronic Health records**

**Link: <https://ieeexplore.ieee.org/abstract/document/8644088>**

**Publisher: IEEE**

**IEEE Xplore Proceedings: 2018 Globecom Workshops (GC Wkshps)**

**DOI: 10.1109/GLOCOMW.2018.8644088**

**Electronic ISBN: 978-1-5386-4920-6**

**USB ISBN: 978-1-5386-6977-8**

**Print on Demand (PoD) ISBN: 978-1-5386-4921-3**

- **Data Consumption- Aware Load Forecasting scheme for Smart Grid Systems**

**Link: <https://ieeexplore.ieee.org/abstract/document/8644096>**

**Publisher: IEEE**

**IEEE Xplore Proceedings: 2018 Globecom Workshops (GC Wkshps)**

**DOI: 10.1109/GLOCOMW.2018.8644096**

**Electronic ISBN: 978-1-5386-4920-6**

**USB ISBN: 978-1-5386-6977-8**

**Print on Demand (PoD) ISBN: 978-1-5386-4921-3**

**11. 2018 International Conference on System Modeling & Advancement in Research Trends (SMART) being organized at Moradabad, U.P., India.**

- **Distributed Big Data Analytics in the Internet of Signals**

Link: <https://ieeexplore.ieee.org/abstract/document/8746983>

Publisher: IEEE

IEEE Xplore Proceedings: 2018 International Conference on System Modeling & Advancement in Research Trends (SMART)

DOI: 10.1109/SYSSMART.2018.8746983

Electronic ISBN: 978-1-5386-6369-1

USB ISBN: 978-1-5386-6368-4

Print on Demand (PoD) ISBN: 978-1-5386-6370-7

pp: 73-77

- **Predicting Employee Attrition using XGBoost Machine Learning Approach**

Link: <https://ieeexplore.ieee.org/abstract/document/8746940>

Publisher: IEEE

IEEE Xplore Proceedings: 2018 International Conference on System Modeling & Advancement in Research Trends (SMART)

DOI: 10.1109/SYSSMART.2018.8746940

Electronic ISBN: 978-1-5386-6369-1

USB ISBN: 978-1-5386-6368-4

Print on Demand (PoD) ISBN: 978-1-5386-6370-7

pp: 113-120

**12.2019- 9<sup>th</sup> International Conference on Cloud Computing, Data Science and Engineering (Confluence 2019) being organized at Amity University, Noida, India.**

**Movie Recommender System using K-Means Clustering AND K-Nearest Neighbor**

**Link:** <https://ieeexplore.ieee.org/document/8776969>

**Publisher: IEEE**

**IEEE Xplore Proceedings: 2019 9<sup>th</sup> International Conference on Cloud Computing, Data Science and Engineering (Confluence 2019)**

**DOI: 10.1109/CONFLUENCE.2019.8776969**

**Electronic ISBN: 978-1-5386-5933-1**

**CD-ROM ISBN: 978-1-5386-5932-8**

**Print on Demand (PoD) ISBN: 978-1-5386-5934-2**

**pp: 263-268**

**13.2020 International Conference on Artificial Intelligence, Big Data, Computing and Data Communication Systems (icABCD 2020) being organized at Durban, KwaZulu Natal, South Africa.**

- **Object detection based approach for Automatic detection of Pneumonia**

**Link:** <https://ieeexplore.ieee.org/document/9183876>

**Publisher: IEEE**

**IEEE Xplore Proceedings: 2020 International Conference on Artificial Intelligence, Big Data, Computing and Data Communication Systems (icABCD 2020)**

**DOI: 10.1109/icABCD49160.2020.9183876**

**Electronic ISBN: 978-1-7281-6770-1**

**USB ISBN: 978-1-7281-6769-5**

**Print on Demand(PoD) ISBN: 978-1-7281-6771-8**

**Pages: 6 Pages**



- **Sigmoidal Salp Swam Optimization**

Link: <https://ieeexplore.ieee.org/document/9183825>

Publisher: IEEE

IEEE Xplore Proceedings: 2020 International Conference on Artificial Intelligence, Big Data, Computing and Data Communication Systems (icABCD 2020)

DOI: 10.1109/icABCD49160.2020.9183825

Electronic ISBN: 978-1-7281-6770-1

USB ISBN: 978-1-7281-6769-5

Print on Demand(PoD) ISBN: 978-1-7281-6771-8

Pages: 6 Pages

14. 2020 7<sup>th</sup> NAFOSTED Conference on Information and Computer Science (NICS 2020) being organized in Ho Chi Minh City, Viet Nam

Research Paper Presented:

**Improving Recommendation Accuracy using Cross-domain Similarity**

Proceedings Link: <https://ieeexplore.ieee.org/xpl/conhome/9335828/proceeding>

Link: <https://ieeexplore.ieee.org/abstract/document/9335913>

Publisher: IEEE

IEEE Xplore Proceedings: 2020 7<sup>th</sup> NAFOSTED Conference on Information and Computer Science (NICS)

DOI: 10.1109/NICS51282.2020.9335913

Electronic ISBN: 978-0-7381-0553-6

USB ISBN: 978-0-7381-0552-9

Print on Demand(PoD) ISBN: 978-0-7381-0554-3

Pages: 280-285

15. 2021- 7<sup>th</sup> International Conference on Optimization and Applications (ICOA 2021) being organized at Wolfenbuttel, Germany.

Research Paper Presented:

**Predicting Device Availability in Mobile Crowd Computing using ConvLSTM**

Proceedings Link: <https://ieeexplore.ieee.org/xpl/conhome/9442615/proceeding>

Link: <https://ieeexplore.ieee.org/abstract/document/9442629>

Publisher: IEEE

IEEE Xplore Proceedings: 2021- 7<sup>th</sup> International Conference on Optimization and Applications (ICOA 2021)

DOI: 10.1109/ICOA51614.2021.9442629

Electronic ISBN: 978-1-6654-4103-2

Print on Demand(PoD) ISBN: 978-1-6654-4103-2

IEEE Catalog Number: CFP21DBA-ART

Pages: 275-279

16. 2020 8<sup>TH</sup> International Conference on Orange Technology (ICOT 2020) being organized by Kyungpook National University, Daegu, South Korea.

Research Paper Presented:

**Mitigating Sparsity and Cold Start Problem in Collaborative Filtering Using Cross-domain similarity**

Proceedings Link: <https://ieeexplore.ieee.org/xpl/conhome/9468715/proceeding>

Link: <https://ieeexplore.ieee.org/document/9468770>

Publisher: IEEE

IEEE Xplore Proceedings: 2020 8<sup>th</sup> International Conference on Orange Technology (ICOT 2020)

DOI: 10.1109/ICOT51877.2020.9468770

Electronic ISBN: 978-1-6654-1852-2

Print on Demand(PoD) ISBN: 978-1-6654-4818-5

Pages: 1-6

## **International Conference's Springer (SCOPUS INDEXED)**

1. 4<sup>th</sup> International Conference on Information System Design and Intelligent Applications (India 2017) being organized at Duy Tan University, Da Nang, Vietnam.

### **Smart Surveillance Robot for Real-Time Monitoring and Control System in Environment and Industrial Applications.**

**Springer Book: Information Systems Design and Intelligent Applications under Advances in Intelligent Systems and Computing (AISC, Volume 672)**

**DOI:** [https://doi.org/10.1007/978-981-10-7512-4\\_23](https://doi.org/10.1007/978-981-10-7512-4_23)

**Print ISBN:** 978-981-10-7511-7

**Online ISBN:** 978-981-10-7512-4

**Publisher:** Springer, Singapore

**Pages:** 229-243

**Online Link:** [https://link.springer.com/chapter/10.1007/978-981-10-7512-4\\_23](https://link.springer.com/chapter/10.1007/978-981-10-7512-4_23)

**(SCOPUS INDEXED)**

2. 3<sup>rd</sup> International Conference on Next Generation Computing Technologies (NGCT 2017) being organized by University of Petroleum and Energy Studies (UPES), Dehradun, India.

### **IEEMARP: Improvised Energy Efficient Multipath Ant Colony Based Routing Protocol for Wireless Sensor Networks**

**Springer Book: Smart and Innovative Trends in Next Generation Computing Technologies under Communications in Computing and Information Science (CCIS Series)- PART-II (Scopus Indexed)**

**DOI:** [https://doi.org/10.1007/978-981-10-8660-1\\_1](https://doi.org/10.1007/978-981-10-8660-1_1)

**Soft Cover ISBN:** 978-981-10-8659-5

**eBook ISBN:** 978-981-10-8660-1

**Series ISSN:** 1865-0929

**Pages:** 3-24 , **Edition:** I

**Online Link:** [https://link.springer.com/chapter/10.1007%2F978-981-10-8660-1\\_1](https://link.springer.com/chapter/10.1007%2F978-981-10-8660-1_1)  
**(SCOPUS INDEXED)**

3. 2<sup>ND</sup> International Conference on Data Management, Analytics and Innovation (ICDMAI 2018) being jointly organized by Computer Society of India-Division II; Computer Society of India, Pune Chapter and Adhyogik Tantra Shikshan Sanstha's, Institute of Industrial and Computer Management and Research, Pune (IICMR).

- **Comprehensive Analysis of Routing Protocols Surrounding Underwater Sensor Networks (UWSNs)**
- **Artificial Bee Colony Optimization- Population-Based Meta-Heuristic Swarm Intelligence Technique**
- **Firefly Swarm: Metaheuristic Swarm Intelligence Technique for Mathematical Optimization**
- **Defending Jellyfish Attack in Mobile Ad Hoc Networks via Novel Fuzzy System Rule**
- **A Comprehensive Survey on Ransomware Attack: A Growing Havoc Cyberthreat**

**Springer AISC Series- Data Management, Analytics and Innovation- Proceedings of ICDMAI 2018, Volume 1 (Scopus Indexed)**

**Publisher: Springer, Singapore**

**DOI: 10.1007/978-981-13-1402-5**

**eBook ISBN No: 978-981-13-1402-5**

**Soft Cover ISBN No: 978-981-13-1401-8**

**Series ISSN: 2194-5357**

**Edition: 1**

**Comprehensive Analysis of Routing Protocols Surrounding Underwater Sensor Networks (UWSNs)**

**DOI: [https://doi.org/10.1007/978-981-13-1402-5\\_33](https://doi.org/10.1007/978-981-13-1402-5_33)**

**pp: 435-450**

**Springer AISC Series- Data Management, Analytics and Innovation- Proceedings of ICDMAI 2018, Volume 2 (Scopus Indexed)**

**Publisher: Springer, Singapore**

**eBook ISBN: 978-981-13-1274-8**

**DOI: 10.1007/978-981-13-1274-8**

**Softcover ISBN: 978-981-13-1273-1; Series ISSN: 2194-5357; Edition: 1**

**A Comprehensive Survey on Ransomware Attack: A Growing Havoc Cyberthreat**

DOI: [https://doi.org/10.1007/978-981-13-1274-8\\_31](https://doi.org/10.1007/978-981-13-1274-8_31)

pp: 403-420

**Defending Jellyfish Attack in Mobile Ad Hoc Networks via Novel Fuzzy System Rule**

DOI: [https://doi.org/10.1007/978-981-13-1274-8\\_33](https://doi.org/10.1007/978-981-13-1274-8_33)

pp: 437-455

**Firefly Swarm: Metaheuristic Swarm Intelligence Technique for Mathematical Optimization**

DOI: [https://doi.org/10.1007/978-981-13-1274-8\\_34](https://doi.org/10.1007/978-981-13-1274-8_34)

pp: 457-466

**Artificial Bee Colony Optimization- Population-Based Metaheuristic Swarm Intelligence Technique**

DOI: [https://doi.org/10.1007/978-981-13-1274-8\\_38](https://doi.org/10.1007/978-981-13-1274-8_38)

pp: 513-525

(SCOPUS INDEXED)

**4. International Conference on Innovative Computing and Communications (ICICC -2018) being organized at Guru Nanak Institute of Management, New Delhi.**

- **BioSenHealth 1.0: A Novel Internet of Medical Things (IoMT)-Based Patient Monitoring System**
- **Analysis of Simulation Tools for Underwater Sensor Networks (UWSNs)**
- **Arrhenius Artificial Bee Colony Algorithm**

**Research Papers Published:**

**BioSenHealth 1.0: A Novel Internet of Medical Things (IoMT)-Based Patient Monitoring System. Pages: 155-164. DOI: [https://doi.org/10.1007/978-981-13-2324-9\\_16](https://doi.org/10.1007/978-981-13-2324-9_16).**

**Analysis of Simulation Tools for Underwater Sensor Networks (UWSNs). Pages: 165-180. DOI: [https://doi.org/10.1007/978-981-13-2324-9\\_17](https://doi.org/10.1007/978-981-13-2324-9_17)**

Proceedings of ICICC 2018, Volume 1 under Springer Book Series- Lecture Notes in Networks and Systems (LNCS). DOI: 10.1007/978-981-13-2324-9.

eBook ISBN: 978-981-13-2324-9; Series ISSN: 2367-3370; Edition: 1; Series Volume: 55

<https://www.springer.com/gp/book/9789811323232>

Arrhenius Artificial Bee Colony Algorithm. Pages: 187-195. DOI:

[https://doi.org/10.1007/978-981-13-2354-6\\_21](https://doi.org/10.1007/978-981-13-2354-6_21).

Proceedings of International Conference on Innovative Computing and Communications (ICICC 2018), Volume 2. Lecture Notes in Networks and Systems. Volume 56.

eBook ISBN: 978-981-13-2354-6. DOI:10.1007/978-981-13-2354-6. Series ISSN:2367-3370. Edition 1

<https://www.springer.com/us/book/9789811323539>

(SCOPUS INDEXED)

5. International Conference on Industrial Networks and Intelligent Systems (INISCOM 2018) being organized by Duy Tan University, Da Nang, Vietnam

- **Logarithmic Spiral Based Local Search in Artificial Bee Colony Algorithm**
- **Wireless Power Transfer Under Secure Communication with Multiple Antennas and Eavesdroppers**
- **Smart-IoUT 1.0: A Smart Aquatic Monitoring Network based on Internet of Underwater Things (IoUT)**

Springer Proceedings---Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering (Scopus Indexed)

Publication Details

Edited Book: Industrial Networks and Intelligent Systems (Title); 14<sup>th</sup> EAI International Conference, INISCOM 2018 (Sub Title); Series Volume: 257; eBook ISBN No: 978-3-030-05873-9; Softcover ISBN: 978-3-030-05872-2; Series ISSN: 1867-8211; Edition: 1

Papers Publications

- **Logarithmic Spiral Based Local Search in Artificial Bee Colony Algorithm**  
DOI: [https://doi.org/10.1007/978-3-030-05873-9\\_2](https://doi.org/10.1007/978-3-030-05873-9_2) pp: 15-27
- **Smart-IoUT 1.0: A Smart Aquatic Monitoring Network Based on Internet of Underwater Things (IoUT)**  
DOI: [https://doi.org/10.1007/978-3-030-0873-9\\_16](https://doi.org/10.1007/978-3-030-0873-9_16) pp: 191-207

- **Wireless Power Transfer Under Secure Communication with Multiple Antennas and Eavesdroppers**

DOI: [https://doi.org/10.1007/978-3-030-058732-9\\_17](https://doi.org/10.1007/978-3-030-058732-9_17) pp: 208-220

(SCOPUS INDEXED)

6. **7<sup>th</sup> International Conference on Frontiers of Intelligent Computing: Theory and Application (FICTA 2018)** being organized at Duy Tan University, Da Nang, Viet Nam.

**Robot Path Planning using Modified Artificial Bee Colony Algorithm**

Springer Proceedings: Advances in Intelligent Systems and Computing (AISC) (Scopus Indexed)

Publication Details: Frontiers in Intelligent Computing: Theory and Applications- Proceedings of the 7th International Conference on FICTA (2018), Volume 2; ISBN 978-981-13-9920-6

Paper Publication Details:

Robot Path Planning using Modified Artificial Bee Colony Algorithm. pp: 25-36

DOI: [https://link.springer.com/chapter/10.1007%2F978-981-13-9920-6\\_3](https://link.springer.com/chapter/10.1007%2F978-981-13-9920-6_3)

Print ISBN: 978-981-13-9919-0; Online ISBN: 978-981-13-9920-6

(SCOPUS INDEXED)

7. **3<sup>rd</sup> International Conference on Advanced Informatics for Computing Research (ICAICR-2019)** being organized at Club Mahindra Kandaghat, Shimla, India.

**Human Age Classification System Using K-NN Classifier**

Springer Proceedings—Communications in Computer and Information Science (CCIS Series) (Scopus Indexed)

Edited Book: Advanced Informatics for Computing Research (AICR); Third International Conference on Advanced Informatics for Computing Research (ICAICR 2019); CCIS Book Series, Volume: 1075

Paper Publication Details:

Human Age Classification System Using K-NN Classifier. pp: 294-311

DOI: [https://link.springer.com/chapter/10.1007/978-981-15-0108-1\\_28](https://link.springer.com/chapter/10.1007/978-981-15-0108-1_28)

Print ISBN: 978-981-15-0107-4; Online ISBN: 978-981-15-0108-1

Online Link: [https://link.springer.com/chapter/10.1007/978-981-15-0108-1\\_28](https://link.springer.com/chapter/10.1007/978-981-15-0108-1_28)

(SCOPUS INDEXED)



**8. 3<sup>rd</sup> International Conference on Data Management, Analytics and Innovation (ICDMAI-2019) being organized at Lincoln University College, Malaysia.**

**Research Papers Presented:**

- **Empirical Study of Soft Clustering Technique for Determining Click Through Rate in Online Advertising.**
- **FacTex: A Practical Approach to Crime Detection**
- **Simulation-Based Performance Analysis of Location-Based Opportunistic Routing Protocols in Underwater Sensor Networks Having Communication Voids.**
- **Effective Classification and Handling of Incoming Data Packets in Mobile Ad Hoc Networks (MANETs) Using Random Forest Ensemble Technique (RF/ET).**

**Research Papers Published:**

Full Conference proceedings titled “Data Management, Analytics and Innovation”, Proceedings of ICDMAI 2019, Volume 1 and 2, under Springer Series – Advances in Intelligent Systems and Computing (AISC), Volume 1042, 1016 by Springer, Scopus Indexed.

**Details of Publications:**

**Data Management, Analytics and Innovation. ICDMAI 2019, Volume 1, AISC-VOLUME 1042.**

- **Empirical Study of Soft Clustering Technique for Determining Click Through Rate in Online Advertising. DOI: [https://doi.org/10.1007/978-981-32-9949-8\\_1](https://doi.org/10.1007/978-981-32-9949-8_1). pp: 3-14**  
**[https://link.springer.com/chapter/10.1007%2F978-981-32-9949-8\\_1](https://link.springer.com/chapter/10.1007%2F978-981-32-9949-8_1)**
- **Factex: A Practical Approach to Crime Detection. DOI: [https://doi.org/10.1007/978-981-32-9949-8\\_35](https://doi.org/10.1007/978-981-32-9949-8_35). pp: 503-516**  
**[https://link.springer.com/chapter/10.1007%2F978-981-32-9949-8\\_35](https://link.springer.com/chapter/10.1007%2F978-981-32-9949-8_35)**
- **Simulation-Based Performance Analysis of Location-Based Opportunistic Routing Protocols in Underwater Sensor Networks Having Communication Voids. [https://doi.org/10.1007/978-981-32-9949-8\\_49](https://doi.org/10.1007/978-981-32-9949-8_49). pp: 697-711.**  
**[https://link.springer.com/chapter/10.1007%2F978-981-32-9949-8\\_49](https://link.springer.com/chapter/10.1007%2F978-981-32-9949-8_49)**

**Data Management, Analytics and Innovation. ICDMAI 2019, Volume 2, AISC- VOLUME 1016.**

- **Effective Classification and Handling of Incoming Data Packets in Mobile Ad Hoc Networks (MANETs) Using Random Forest Ensemble Technique (RF/ET).** [https://doi.org/10.1007/978-981-13-9364-8\\_31](https://doi.org/10.1007/978-981-13-9364-8_31). pp: 431-444.

[https://link.springer.com/chapter/10.1007%2F978-981-13-9364-8\\_31](https://link.springer.com/chapter/10.1007%2F978-981-13-9364-8_31)

### **BEST PAPER AWARD**

**Effective Classification and Handling of Incoming Data Packets in Mobile Ad Hoc Networks (MANETs) Using Random Forest Ensemble Technique (RF/ET) under Track-IV- Advances in Network Technologies**

**(SCOPUS INDEXED)**

**9. First International Conference on Sustainable Technologies for Computational Intelligence (ICTSCI 2019) being organized at Sri Balaji College of Engineering and Technology, Jaipur, Rajasthan.**

**Research Paper presented:**

**The Internet of Drone Things (IoDT): Future Envision of Smart Drones**

**Research Paper Published:**

**Springer- Advances in Intelligent Systems and Computing (AISC) Volume 1045, First International Conference on Sustainable Technologies for Computational Intelligence (ICTSCI 2019)- SCOPUS Indexed. ISBN No: 978-981-15-0028-2; E-ISBN: 978-981-15-0029-9**

**The Internet of Drone Things (IoDT): Future Envision of Smart Drones**

[https://link.springer.com/chapter/10.1007/978-981-15-0029-9\\_45](https://link.springer.com/chapter/10.1007/978-981-15-0029-9_45).

**DOI: [https://doi.org/10.1007/978-981-15-0029-9\\_45](https://doi.org/10.1007/978-981-15-0029-9_45). PP: 563-580**

**(SCOPUS INDEXED)**

10. First International Conference on Computing, Communications, and Cyber Security (IC4S 2019) being organized at Northwest Group of Institutions, Punjab.

Research Paper Presented:

**Multilingual Opinion Mining Movie Recommendation System Using RNN**

**Pneumonia Detection Using Convolutional Neural Networks (CNNs)**

Research Paper Published:

Springer- Lecture Notes in Networks and Systems (LNNS) Volume 121, First International Conference on Computing, Communications, and Cyber Security (IC4S 2019)- Softcover ISBN: 978-981-15-3368-6; Series ISSN: 2367-3370; Edition Number:1; eBook ISBN: 978-981-15-3369-3; Publisher: Springer Singapore

**Multilingual Opinion Mining Movie Recommendation System Using RNN**

[https://link.springer.com/chapter/10.1007%2F978-981-15-3369-3\\_44](https://link.springer.com/chapter/10.1007%2F978-981-15-3369-3_44)

DOI: [https://doi.org/10.1007/978-981-15-3369-3\\_44](https://doi.org/10.1007/978-981-15-3369-3_44); Pages: 589-605

**Pneumonia Detection Using Convolutional Neural Networks (CNNs)**

[https://link.springer.com/chapter/10.1007%2F978-981-15-3369-3\\_36](https://link.springer.com/chapter/10.1007%2F978-981-15-3369-3_36)

DOI: [https://doi.org/10.1007/978-981-15-3369-3\\_36](https://doi.org/10.1007/978-981-15-3369-3_36) Pages: 471- 483

(SCOPUS INDEXED)

11. Second International Conference on Information Management and Machine Intelligence (ICIMMI 2020) being Organized by Poornima University, Rajasthan, India

Research Paper Presented:

**Evaluation of Geotagging Twitter Data Using Sentiment Analysis During COVID-19**

Research Paper Published:

Springer- Lecture Notes in Networks and Systems book series (LNNS), Volume 166. Proceedings of the Second International Conference on Information Management and Machine Intelligence (ICIMMI 2020). DOI: <https://doi.org/10.1007/978-981-15-9689-6> . Print ISBN: 978-981-15-9688-9; Online ISBN: 978-981-15-9689-6; Series Online ISSN: 2367-3389; Print ISSN: 2367-3370.

**Evaluation of Geotagging Twitter Data Using Sentiment Analysis During COVID-19**

[https://link.springer.com/chapter/10.1007/978-981-15-9689-6\\_65](https://link.springer.com/chapter/10.1007/978-981-15-9689-6_65)

DOI: [https://doi.org/10.1007/978-981-15-9689-6\\_65](https://doi.org/10.1007/978-981-15-9689-6_65) pp: 601-608

(SCOPUS INDEXED)

12.2<sup>ND</sup> International Conference on Computing, Communication and Cyber Security (IC4S 2020) being organized at Krishna Engineering College, Ghaziabad, India.

Research Paper Presented:

**Face Mask Detection using Deep Learning during COVID-19**

Research Paper Published:

Springer- Lecture Notes in Networks and Systems (LNNS) Book Series. Series Volume: 203. Proceedings of Second International Conference on Computing, Communications and Cyber Security (IC4S 2020). DOI: 10.1007/978-981-16-0733-2. E-Book ISBN: 978-981-16-0733-2; Softcover ISBN: 978-981-16-0732-5. Series ISSN: 2367-3370

**Face Mask Detection using Deep Learning during COVID-19**

[https://link.springer.com/chapter/10.1007%2F978-981-16-0733-2\\_3](https://link.springer.com/chapter/10.1007%2F978-981-16-0733-2_3)

DOI: [https://doi.org/10.1007/978-981-16-0733-2\\_3](https://doi.org/10.1007/978-981-16-0733-2_3) .pp.: 39-51

(SCOPUS INDEXED)

13. Third International Conference on Future Trends in Network and Communication Technologies (FTNCT 2020) being organized in Taganrog, Russia.

Research Paper Presented:

**Time Series Forecasting for Coronavirus (COVID-19)**

Research Paper Published:

Springer- Communications in Computer and Information Science (CCIS) Book Series. Series Volume: 1396. Proceedings of Third International Conference Futuristic Trends in Network and Communication Technologies. DOI: 10.1007/978-981-16-1483-5. E-Book ISBN: 978-981-16-1483-5; Softcover ISBN: 978-981-16-1482-8. Series ISSN: 1865-0929

<https://www.springerprofessional.de/en/time-series-forecasting-for-coronavirus-covid-19/19021790>

DOI: [https://doi.org/10.1007/978-981-16-1480-4\\_27](https://doi.org/10.1007/978-981-16-1480-4_27). pp: 309-320

(SCOPUS INDEXED)

14. 4<sup>th</sup> International Conference on Micro-Electronics and Telecommunication Engineering (ICMETE 2020) being organized at SRM Institute of Science and Technology, U.P, India

Research Papers Presented:

- **Optimization of the CNN Model for Hand Sign Language Recognition Using Adam Optimization Technique**
- **Hybrid Spectrum Access Strategy for Throughput Enhancement of Cognitive Radio Network**
- **Speech Emotion Recognition Through Extraction of Various Emotional Features Using Machine and Deep Learning Classifiers**

Research Papers Published:

Springer Edited Book: Micro-Electronics and Telecommunication Engineering—Lecture Notes in Networks and Systems. Series Volume: 179. E-book ISBN: 978-981-334-687-1. DOI: 10.1007/978-981-33-4687-1. Soft Cover ISBN: 978-981-334-686-4. Series ISSN: 2367-3370. <https://www.springer.com/gp/book/9789813346864>

- **Optimization of the CNN Model for Hand Sign Language Recognition Using Adam Optimization Technique**

Link: [https://link.springer.com/chapter/10.1007/978-981-33-4687-1\\_10](https://link.springer.com/chapter/10.1007/978-981-33-4687-1_10). DOI: [https://doi.org/10.1007/978-981-33-4687-1\\_10](https://doi.org/10.1007/978-981-33-4687-1_10). Chapter-10. pp: 89-104

- **Hybrid Spectrum Access Strategy for Throughput Enhancement of Cognitive Radio Network**

Link: [https://link.springer.com/chapter/10.1007/978-981-33-4687-1\\_11](https://link.springer.com/chapter/10.1007/978-981-33-4687-1_11) DOI: [https://doi.org/10.1007/978-981-33-4687-1\\_11](https://doi.org/10.1007/978-981-33-4687-1_11). Chapter-11. pp: 105-122

- **Speech Emotion Recognition Through Extraction of Various Emotional Features Using Machine and Deep Learning Classifiers**

Link: [https://link.springer.com/chapter/10.1007/978-981-33-4687-1\\_12](https://link.springer.com/chapter/10.1007/978-981-33-4687-1_12) DOI: [https://doi.org/10.1007/978-981-33-4687-1\\_12](https://doi.org/10.1007/978-981-33-4687-1_12) . Chapter-12. pp: 123-140

(SCOPUS INDEXED)

15. 4<sup>th</sup> International Conference on Advanced Informatics for Computing Research (ICAICR 2020) being organized in Gurugram, India.

**Research Papers Presented:**

- **Smart PDM: A Novel Smart Meter for Design Measurement and Data Collection for Smart Grid.**
- **Detection and Classification of Toxic Comments by Using LSTM and Bi-LSTM Approach.**
- **Transfer Learning to Improve Breast Cancer Detection on Unannotated Screening Mammography.**

**Research Papers Published:**

Springer Edited Book: 4<sup>th</sup> International Conference on Advanced Informatics for Computing Research—Communications in Computing and Information Science Series Volume: 1393 and 1394. E-book ISBN: 978-981-16-3660-8. Print ISBN: 978-981-16-3659-2 DOI: 10.1007/978-981-16-3660-8. Series ISSN: 1865-0929; 1865-0937.

<https://link.springer.com/book/10.1007/978-981-16-3660-8>

<https://link.springer.com/book/10.1007/978-981-16-3653-0>

- **Smart PDM: A Novel Smart Meter for Design Measurement and Data Collection for Smart Grid.** Chapter-4. CCIS-1394, DOI: [https://doi.org/10.1007/978-981-16-3653-0\\_4](https://doi.org/10.1007/978-981-16-3653-0_4) . pp: 37-58
- **Detection and Classification of Toxic Comments by Using LSTM and Bi-LSTM Approach.** Chapter-10. CCIS-1393, DOI: [https://doi.org/10.1007/978-981-16-3660-8\\_10](https://doi.org/10.1007/978-981-16-3660-8_10) . pp: 100-112
- **Transfer Learning to Improve Breast Cancer Detection on Unannotated Screening Mammography.** Chapter-53. CCIS-1393, DOI: [https://doi.org/10.1007/978-981-16-3660-8\\_53](https://doi.org/10.1007/978-981-16-3660-8_53) . pp. 563-576

(SCOPUS INDEXED)

16. International Conference on Optical and Wireless Technologies (OWT) being organized at Jaipur, India.

Research Paper Presented:

- **Dispersion Engineered AsSe<sub>2</sub> Based Chalcogenide Photonic Crystal Fiber for MIR Region Supercontinuum Generation**

Dispersion Engineered AsSe<sub>2</sub> Based Chalcogenide Photonic Crystal Fiber for MIR Region Supercontinuum Generation. [https://link.springer.com/chapter/10.1007/978-981-16-2818-4\\_34](https://link.springer.com/chapter/10.1007/978-981-16-2818-4_34) . [https://doi.org/10.1007/978-981-16-2818-4\\_34](https://doi.org/10.1007/978-981-16-2818-4_34). Pages: 311-319

(SCOPUS INDEXED)

17. International Conference on Soft Computing for Security Applications (ICSCS 2021) being organized at Dhirajlal Gandhi College of Engineering, Salem, India.

Research Paper Presented:

- **Improved Genetic Algorithm Using Machine Learning Approaches to Feature Modelled for Microarray Gene Data**

Publication Link: [https://link.springer.com/chapter/10.1007/978-981-16-5301-8\\_60](https://link.springer.com/chapter/10.1007/978-981-16-5301-8_60)

DOI: [https://doi.org/10.1007/978-981-16-5301-8\\_60](https://doi.org/10.1007/978-981-16-5301-8_60)

Pages: 859-872

Research Paper Published:

Springer Edited Book: Proceedings of Soft Computing for Security Application (ICSCS 2021) under Advances in Intelligent Systems and Computing. ISBN: 978-981-16-5300-1 (Hard Copy); 978-981-16-5301-8 (E-Book). <https://link.springer.com/book/10.1007/978-981-16-5301-8#about>. DOI: 10.1007/978-981-16-5301-8

(SCOPUS INDEXED)

**18.4<sup>th</sup> International Conference on Computational Intelligence and Data Engineering (ICCIDE 2021) being organized at VIT-AP University, India.**

**Research Paper Presented:**

- **Genetic Algorithm-Based Vaccine Optimization Technique to Control COVID-19**

**Publication Link:** [https://link.springer.com/chapter/10.1007/978-981-16-7182-1\\_1](https://link.springer.com/chapter/10.1007/978-981-16-7182-1_1)

**DOI:** [https://doi.org/10.1007/978-981-16-7182-1\\_1](https://doi.org/10.1007/978-981-16-7182-1_1)

**Pages:** 1-15

**Springer Edited Book: Proceedings of International Conference on Computational Intelligence and Data Engineering (ICCIDE 2021). eBook ISBN: 978-981-16-7182-1; Softcover ISBN: 978-981-16-7181-4; Series E-ISSN: 2367-4520. DOI:**

<https://doi.org/10.1007/978-981-16-7182-1>;

<https://link.springer.com/book/10.1007/978-981-16-7182-1#about>

**(SCOPUS INDEXED)**

**19.2021 International Conference on Emerging Technologies for Computing, Communication and Smart Cities (ETCCS 2021) being organized at New Delhi, India.**

**Research Paper Presented:**

- **Designing of Learning Environment of an Intelligent Tutoring System for Academic Learning Needs of Learning-Disabled Learners based on Survey Report of Region-Specific Target Group**

**Publication Link:** [https://link.springer.com/chapter/10.1007/978-981-19-0284-0\\_29](https://link.springer.com/chapter/10.1007/978-981-19-0284-0_29)

**DOI:** [https://doi.org/10.1007/978-981-19-0284-0\\_29](https://doi.org/10.1007/978-981-19-0284-0_29)

**Chapter No:** 29

**Pages:** 389-404

**Springer Edited Book: Proceedings of Emerging Technologies for Computing, Communication and Smart Cities (ETCCS 2021). Hardcover ISBN: 978-981-19-0283-3. Softcover ISBN: 978-981-19-0286-4. eBook ISBN: 978-981-19-0284-0. Series ISSN: 1876-1100. Series E-ISSN: 1876-1119. Edition Number: 1.**

<https://link.springer.com/book/10.1007/978-981-19-0284-0>

**(SCOPUS INDEXED)**



20. The Fifth International Conference on Safety and Security with IoT (SaSeIoT 2021) being organized Virtually.

Research Paper Presented:

- **Natural Scenes' Text Detection and Recognition Using CNN and Pytesseract**

Publication Link: [https://link.springer.com/chapter/10.1007/978-3-030-94285-4\\_10](https://link.springer.com/chapter/10.1007/978-3-030-94285-4_10)

DOI: [https://doi.org/10.1007/978-3-030-94285-4\\_10](https://doi.org/10.1007/978-3-030-94285-4_10)

Chapter No: 10

Pages: 159-171

Springer Edited Book: Proceedings of The Fifth International Conference on Safety and Security with IoT (SaSeIoT 2021). Hardcover ISBN: 978-3-030-94284-7. Softcover ISBN: 978-3-030-94285-4. Series ISSN: 2522-8595; 2522-8609. Edition No: 1. DOI: <https://doi.org/10.1007/978-3-030-94285-4>. Link: <https://link.springer.com/book/10.1007/978-3-030-94285-4>

(SCOPUS INDEXED)

21. International Conference on Industrial Networks and Intelligent Systems (INISCOM 2022) being organized Virtually.

- **Performance Analysis of RF Energy Harvesting NOMA Mobile Edge Computing in Multiple Devices IIoT Networks**
- **Throughput Optimization for NOMA Cognitive Radios with Multi-UAV Assisted Relay**

Springer Proceedings---Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering (Scopus Indexed)

Publication Details

Edited Book: Industrial Networks and Intelligent Systems (Title); 8<sup>th</sup> EAI International Conference- INISCOM 2022 Series Volume: 444; Hard Cover ISBN No: 978-3-031-08877-3; Softcover ISBN: 978-3-030-08878-0; Series ISSN: 1867-8211; 1867-822x Edition: 1

Papers Publications

- **Performance Analysis of RF Energy Harvesting NOMA Mobile Edge Computing in Multiple Devices IIoT Networks**

DOI: [https://doi.org/10.1007/978-3-031-08878-0\\_5](https://doi.org/10.1007/978-3-031-08878-0_5) pp: 62-76

- **Throughput Optimization for NOMA Cognitive Radios with Multiple-UAV Assisted Relay**

DOI: [https://doi.org/10.1007/978-3-031-08878-0\\_7](https://doi.org/10.1007/978-3-031-08878-0_7) pp: 91-104

(SCOPUS INDEXED)

22. 5<sup>th</sup> International Conference on Advanced Informatics for Computing Research (ICAICR 2021) being organized Virtually.

- **A Hybrid Filter/Wrapper Machine Learning Model for Classification Cancer Dataset**
- **Securing of Identification System Data Transmission Using Deep Autoencoders and Data Mining**

Springer Proceedings---Communications in Computer and Information Science (Scopus Indexed)

#### Publication Details

Edited Book: Advanced Informatics for Computing Research, ICAICR 2021; Softcover ISBN: 978-3-031-09468-2; E-BOOK ISBN: 978-3-031-09469-9. Series ISSN: 1865-0929; 1865-0937 Edition: 1. DOI: <https://doi.org/10.1007/978-3-031-09469-9>

#### Papers Publications

- **A Hybrid Filter/Wrapper Machine Learning Model for Classification Cancer Dataset**  
DOI: [https://doi.org/10.1007/978-3-031-09469-9\\_2](https://doi.org/10.1007/978-3-031-09469-9_2). Chapter-2. pp: 15-29
- **Securing of Identification System Data Transmission Using Deep Autoencoders and Data Hiding**  
DOI: [https://doi.org/10.1007/978-3-031-09469-9\\_18](https://doi.org/10.1007/978-3-031-09469-9_18) . Chapter-18 pp: 203-220

(SCOPUS INDEXED)

26. 4<sup>th</sup> International Conference on Futuristic Trends in Networks and Computing Technologies (FTNCT 2021) being organized Virtually.

- **Advancement and Evolution of LNG Terminals: A Review**

Springer Proceedings---Lecture Notes in Electrical Engineering (Scopus Indexed)

#### Publication Details

Edited Book: Conference Proceedings Futuristic Trends in Networks and Computing Technologies, FTNCT 2021; SoftCover ISBN: 978-981-19-5037-7; Hard Copy ISBN: 978-981-19-5036-0. Series ISSN: 1876-1100; 1876-1119 Edition: 1. DOI: <https://doi.org/10.1007/978-981-19-5037-7>

#### Papers Publications

- **Advancement and Evolution of LNG Terminals: A Review**  
DOI: [https://doi.org/10.1007/978-981-19-5037-7\\_57](https://doi.org/10.1007/978-981-19-5037-7_57). Chapter-57. pp: 799-813

**27. 4<sup>th</sup> International Conference on Computing, Communications, and Cyber Security (IC4S 2022) being organized at Krishan Engineering College, Ghaziabad, India.**

- **Supercontinuum Generation in Dispersion-Tailored Tetrachloroethylene Filled Photonic Crystal Fibers**
- **Reconfigurable Intelligent Surface-Enabled Energy-Efficient Cooperative Spectrum Sensing**

**Springer Proceedings---Lecture Notes in Networks and Systems (Scopus Indexed)**

**Publication Details**

**Edited Book: Proceedings of Fourth International Conference on Computing, Communications, and Cyber-Security, IC4S 2022; Softcover ISBN: 978-981-99-1478-4; E-BOOK ISBN: 978-981-99-1479-1. Series ISSN: 2367-3370; E-ISSN: 2367-3389 Edition: 1. DOI: <https://doi.org/10.1007/978-981-99-1479-1>**

**Papers Publications**

- **Supercontinuum Generation in Dispersion-Tailored Tetrachloroethylene Filled Photonic Crystal Fibers**  
DOI: [https://doi.org/10.1007/978-981-99-1479-1\\_7](https://doi.org/10.1007/978-981-99-1479-1_7). Chapter-7. pp: 95-104
- **Reconfigurable Intelligent Surface-Enabled Energy-Efficient Cooperative Spectrum Sensing**  
DOI: [https://doi.org/10.1007/978-981-99-1479-1\\_12](https://doi.org/10.1007/978-981-99-1479-1_12). Chapter-12 pp: 159-168

**(SCOPUS INDEXED)**

## ACM (ACM Digital Library--SCOPUS INDEXED)

1. 2020 5<sup>th</sup> International Conference on Intelligent Information Technology (ICIIT 2020) being organized at Hanoi, Viet Nam. (<http://www.iciit.org>)

Research Paper Presented:

- **Facial Emotion Detection to Assess Learners State of Mind in an Online Learning System**
- **Fuzzy Logic based Hybrid Model for Automatic Extractive Text Summarization**

Research Paper Published:

ICIIT 2020: Proceedings of the 2020 5<sup>th</sup> International Conference on Intelligent Information Technology by Association for Computer Machinery, New York, USA. ISBN No: 978-1-4503-7659-4.  
<https://dl.acm.org/doi/proceedings/10.1145/3385209>;

- Facial Emotion Detection to Assess Learner's State of Mind in an Online Learning System. Pages: 107-115. DOI: <https://doi.org/10.1145/3385209.3385231> . February 2020. <https://dl.acm.org/doi/10.1145/3385209.3385231>
- Fuzzy Logic based Hybrid Model for Automatic Extractive Text Summarization. Pages: 7-15. DOI: <https://doi.org/10.1145/3385209.3385235> ; February 2020. <https://dl.acm.org/doi/abs/10.1145/3385209.3385235>

(Indexed in SCOPUS, ACM Digital Library, ISI-Web of Science, Ei Compendex)

Best Paper Award:

**Best Paper Award's:**

- **Facial Emotion Detection to Access Learner's State of Mind in an Online Learning System**
- **Fuzzy Logic based Hybrid Model for Automatic Extractive Text Summarization**

2. 2<sup>nd</sup> International Conference on Intelligent and Innovative Computing Applications (ICONIC 2020) being organized in Mauritius.  
(<https://mauricon.org/>)

**Research Papers Presented:**

- **Scene Detection and Recognition by Analysing Deep Features Using PlacesCNN**
- **Modified Grasshopper Optimisation Algorithm**

**Research Papers Published:**

ICONIC '20: Proceedings of the 2<sup>nd</sup> International Conference on Intelligent and Innovative Computing Applications. September 2020. ISBN: 978-1-4503-7558-0.  
<https://dl.acm.org/doi/proceedings/10.1145/3415088>

- Scene detection and recognition by analysing deep features using PlacesCNN

DOI: <https://doi.org/10.1145/3415088.3415091>;  
<https://dl.acm.org/doi/abs/10.1145/3415088.3415091> Pages: 1-8

- Modified Grasshopper Optimisation Algorithm. DOI:  
<https://doi.org/10.1145/3415088.3415092>.  
<https://dl.acm.org/doi/abs/10.1145/3415088.3415092> Pages: 1-7

3. 6<sup>th</sup> International Conference on Intelligent Information Technology (ICIIT 2021) being organized in Ho Chi Minh City, Viet Nam

**Research Papers Presented:**

1. **A Personalized Recommendation Framework for Ubiquitous Learning System**

**Research Papers Published:**

2021 6th International Conference on Intelligent Information Technology (ICIIT 2021). ACM Digital Library. ISBN: 978-1-4503-8894-8

<https://dl.acm.org/doi/proceedings/10.1145/3460179>

A Personalized Recommendation Framework for Ubiquitous Learning System

<https://dl.acm.org/doi/10.1145/3460179.3460190> Page: 63-72.

<https://doi.org/10.1145/3460179.3460190>

4. 2022 7<sup>th</sup> International Conference on Intelligent Information Technology (ICIIT 2020) being organized at Foshan, China. (<http://www.iciit.org>)

**Research Paper Presented:**

- **Hybrid Single Board Computer System for Unmanned Ground Vehicle**

**Research Paper Published:**

**Hybrid Single Board Computer System for Unmanned Ground Vehicle.**

**Pages: 106-112. DOI <https://doi.org/10.1145/3524889.3524907> . February 2022. <https://dl.acm.org/doi/10.1145/3524889.3524907>**

**Conference Proceedings**

**ICIIT 2022: Proceedings of the 2022 7<sup>th</sup> International Conference on Intelligent Information Technology by Association for Computer Machinery, New York, USA. ISBN No: 978-1-4503-9617-2. <https://dl.acm.org/doi/proceedings/10.1145/3524889>;**

## (ISI- Web of Science---SCI/SCIE/SSCI/ Indexed)

Total Publications: 136 (SCIE); 9 (SCI); 4 (SSCI) = 149

**Q1= 20; Q2= 82; Q3= 33; Q4= 3**

### SCIE Indexed

Total: 138

1. *APD-JFAD: Accurate Prevention and Detection of Jelly Fish Attack in MANET.* IEEE Access. Volume 6. September 2018. pp. 56954-56965. e-ISSN No: 2169-3536. DOI: <https://doi.org/10.1109/ACCESS.2018.2868544> (Q2-SCIE INDEXED) Impact Factor: 3.9. Publisher: IEEE
2. *Fog Computing: from architecture to edge computing and big data processing.* The Journal of Super Computing. DOI: <https://doi.org/10.1007/s11227-018-2701-2>. Vol 75, Issue 4. November 2018. pp: 2070-2105. ISSN No (Print): 0920-8542, (Online): 1573-0484. (Q2-SCIE INDEXED) Impact Factor: 3.3. Publisher: Springer
3. *Sarcasm Detection using Soft Attention-Based Bidirectional Long Short-Term Memory Model with Convolution Network.* IEEE Access. Volume 7. February 2019. pp. 23319-23328. e-ISSN No: 2169-3536. DOI: <https://doi.org/10.1109/ACCESS.2019.2899260> (Q2-SCIE INDEXED) Impact Factor: 3.9. Publisher: IEEE
4. *Rumour veracity detection on twitter using Particle Swarm Optimization shallow classifiers.* Multimedia Tools and Applications. Vol.78, pp: 24083-24101, March 2019. Print ISSN:1380-7501; Online ISSN: 1573-7721. DOI: <https://doi.org/10.1007/s11042-019-7398-6> (Q2-SCIE INDEXED) Impact Factor: 3.6. Publisher: Springer
5. *IEEMARP- a novel energy efficient multipath routing protocol based on ant colony optimization (ACO) for dynamic sensor networks.* Multimedia Tools and Applications. Volume 79. May 2019. pp: 35221-35252 Print ISSN:1380-7501; Online ISSN: 1573-7721. DOI: <https://doi.org/10.1007/s11042-019-7627-z> (Q2-SCIE INDEXED) Impact Factor: 3.6. Publisher: Springer
6. *Convolutional neural network based early fire detection.* Multimedia Tools and Applications. Volume 79, Year June 2019, pp: 9083-9099. Print ISSN:1380-7501; Online ISSN: 1573-7721. DOI: <https://doi.org/10.1007/s11042-019-07785-w> (Q2-SCIE INDEXED) Impact Factor: 3.6. Publisher: Springer
7. *An Optimization Model for Software Quality Prediction with Case Study Analysis using MATLAB.* IEEE Access. Volume 7. June 2019. pp:85123-85138 Print ISSN: 2169-3536; Online ISSN: 2169-3536. DOI: <https://doi.org/10.1109/ACCESS.2019.2920879> (Q2-SCIE INDEXED) Impact Factor: 3.9. Publisher: IEEE

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**Total Chapters: 46**

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[https://digital-library.theiet.org/content/books/10.1049/pbhe035e\\_ch18](https://digital-library.theiet.org/content/books/10.1049/pbhe035e_ch18)
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- 45. *Blockchain for security and privacy in healthcare informatic.*** Innovations in Healthcare Informatics: From interoperability to data analysis. DOI: [https://doi.org/10.1049/PBHE041E\\_ch5](https://doi.org/10.1049/PBHE041E_ch5); Book DOI: 10.1049/PBHE041E; Chapter Number: 5. ISBN: 9781839534584. e-ISBN: 9781839534591. Pages: 157-184
- 46. *Design and practical implementation of a grid-connected single-stage flyback photovoltaic micro-inverter.*** Digital Technologies for solar photovoltaic systems: From general to rural and remote installations. DOI: [https://doi.org/10.1049/PBPO228E\\_ch3](https://doi.org/10.1049/PBPO228E_ch3) ; Chapter Number: 3; Book DOI: 10.1049/PBPO228E; ISBN: 9781839536779; e-ISBN: 9781839536786. Pages: 55-92.

**Books Published****Total Books: 45****Publisher Springer****No. of Books:10**

<b>Sr. No</b>	<b>Name of Book</b>	<b>Publisher Name</b>	<b>ISBN No</b>	<b>Edition</b>	<b>Sole/Co-Author/editor</b>	<b>Class</b>
<b>1.</b>	<b>A Roadmap to Industry 4.0: Smart Production, Sharp Business and Sustainable Development</b>	<b>Springer</b>	<b>Hard Cover ISBN 978-3-030-14544-6 eBook ISBN: 978-3-030-14544-6 DOI: <a href="https://doi.org/10.1007/978-3-030-14544-6">https://doi.org/10.1007/978-3-030-14544-6</a> Series ISSN: 2522-8714</b>	<b>1<sup>st</sup></b>	<b>Editor &amp; Author (1 Chapter)</b>	<b>Edited Book + Refereed Book</b>
<b>2.</b>	<b>Emerging Technologies for Battling COVID-19: Applications and Innovations</b>	<b>Springer</b>	<b>Print ISBN: 978-3-030-60038-9 Online ISBN: 978-3-030-60039-6 Series Online ISSN: 2198-4190 Series Print</b>	<b>1<sup>st</sup></b>	<b>Editor &amp; Author (2 Chapters)</b>	<b>Edited + Refereed Book</b>

			ISSN: 2198-4182 Doi: <a href="https://doi.org/10.1007/978-3-030-60039-6">https://doi.org/10.1007/978-3-030-60039-6</a>			
3.	<b>Development and Future of Internet of Drones (IoD): Insights, Trends and Road Ahead</b>	<b>Springer</b>	eBook ISBN 978-3-030-63339-4  Hardcover ISBN 978-3-030-63338-7  Series ISSN 2198-4182  DOI <a href="https://doi.org/10.1007/978-3-030-63339-4">https://doi.org/10.1007/978-3-030-63339-4</a>	1 <sup>st</sup>	<b>Editor</b>	<b>Edited + Refereed Book</b>
4.	<b>Artificial Intelligence and Sustainable Computing for Smart City First International Conference, AIS2C2 2021, Greater Noida, India, March 22–23, 2022</b>	<b>Springer</b>	<b>Link of the Book:</b> <a href="https://www.springer.com/gp/book/9783030823214">https://www.springer.com/gp/book/9783030823214</a>	1 <sup>st</sup>	<b>Editor</b>	eBook ISBN: 978-3-030-82322-1 Softcover ISBN: 978-3-030-82321-4 Series ISSN: 1865-0929



						<b>DOI:</b> <b>10.1007</b> <b>/978-3-</b> <b>030-</b> <b>82322-1</b> <b>Numbe</b> <b>r of</b> <b>Pages:</b> <b>XIII,</b> <b>295</b> <b>Series</b> <b>Volume</b> <b>: 1434</b> <b>Series</b> <b>Under:</b> <b>Comm</b> <b>unicati</b> <b>ons in</b> <b>Compu</b> <b>ter and</b> <b>Inform</b> <b>ation</b> <b>Science</b> <b>Scopus</b> <b>Indexe</b> <b>d</b> <b>Link of</b> <b>Series:</b> <a href="https://www.springer.com/series/7899">https://</a> <a href="https://www.springer.com/series/7899">www.s</a> <a href="https://www.springer.com/series/7899">pringer</a> <a href="https://www.springer.com/series/7899">.com/se</a> <a href="https://www.springer.com/series/7899">ries/789</a> <a href="https://www.springer.com/series/7899">9</a>
<b>5.</b>	<b>Emergence of Cyber Physical Systems and IoT in Smart Automation and Robotics</b>	<b>Springer</b>	<b>Hardcover ISBN: 978-3-030- 66221-9 eBook ISBN: 978-3-030- 66222-6</b>	<b>1<sup>st</sup></b>	<b>Editor</b>	<b>Edited + Referre d Book</b>

			<b>DOI</b> <a href="https://doi.org/10.1007/978-3-030-66222-6">https://doi.org/10.1007/978-3-030-66222-6</a>			
<b>6.</b>	<b>Intelligence of Things: AI-IoT Based Critical-Applications and Innovations</b>	<b>Springer</b>	<b>Link of Book:</b> <a href="https://link.springer.com/book/10.1007/978-3-030-82800-4#toc">https://link.springer.com/book/10.1007/978-3-030-82800-4#toc</a>	<b>1<sup>st</sup></b>	<b>Editor + 1 Chapter (Author)</b>	<b>Hardcover</b> <b>ISBN:</b> 978-3-030-82799-1; <b>Soft cover</b> <b>ISBN:</b> 978-3-030-82802-8. <b>EBOOK</b> <b>ISBN:</b> 978-3-030-82800-4 <b>Link:</b> <a href="https://link.springer.com/book/10.1007/978-3-030-82800-4#about">https://link.springer.com/book/10.1007/978-3-030-82800-4#about</a>
<b>7.</b>	<b>IoT and IoE Driven Smart Cities</b>	<b>Springer</b>	<b>Link of Book:</b> <a href="https://link.springer.com/book/10.1007/978-3-030-82717-5">https://link.springer.com/book/10.1007/978-3-030-82717-5</a>	<b>1<sup>ST</sup></b>	<b>Editor</b>	<b>Softcover</b> <b>ISBN:</b> 978-3-030-82717-5;

			<a href="#"><u>82715-1</u></a>			<b>Hardcover</b> <b>ISBN:</b> <b>978-3-030-82714-4;</b> <b>EBOOK</b> <b>K</b> <b>ISBN:</b> <b>978-3-030-82715-1;</b> <b>Series</b> <b>ISSN:</b> <b>2522-8595;</b> <b>Series</b> <b>E-</b> <b>ISSN:</b> <b>2522-8609</b>
8.	<b>Machine Learning for Critical Internet of Medical Things Applications and Use Cases</b>	Springer	<a href="https://link.springer.com/book/10.1007/978-3-030-80928-7"><u>https://link.springer.com/book/10.1007/978-3-030-80928-7</u></a>	1 <sup>st</sup>	<b>Editor +1 Chapter</b>	<b>DOI:</b> <b>https://doi.org/10.1007/978-3-030-80928-7</b> <b>Hardcover</b> <b>ISBN:</b> <b>978-3-030-80927-0</b> <b>Softcover</b> <b>ISBN:</b> <b>978-3-030-80930-0</b> <b>eBook</b>

						<b>ISBN:978-3-030-80928-7</b> <b>Pages: 261</b>
<b>9.</b>	<b>The Fifth International Conference on Safety and Security with IoT (SaSeIoT 2021)</b>	<b>Springer</b>	<a href="https://link.springer.com/book/10.1007/978-3-030-94285-4">https://link.springer.com/book/10.1007/978-3-030-94285-4</a>	<b>1<sup>st</sup></b>	<b>Edited Book</b>	<b>Hardcover</b> <b>ISBN: 978-3-030-94284-7</b>  <b>eBook</b> <b>ISBN 978-3-030-94285-4</b>  <b>Series</b> <b>ISSN 2522-8595</b>  <b>Series</b> <b>E-ISSN 2522-8609</b> <b>Pages: 205</b> <b>Edition : 1</b>
<b>10.</b>	<b>New Horizons for Industry 4.0 in Modern Business</b>	<b>Springer</b>	<a href="https://link.springer.com/book/9783031204425">https://link.springer.com/book/9783031204425</a>	<b>1<sup>st</sup></b>	<b>Edited Book</b>	<b>eBook</b> <b>ISBN: 978-3-031-20443-2</b> <b>Hardcover</b> <b>ISBN: 978-3-031-20442-5</b>

						<b>Softcover</b> <b>ISBN:</b> <b>978-3-031-20445-6</b> <b>Series</b> <b>ISSN:</b> <b>2731-8303</b> <b>Series</b> <b>E-</b> <b>ISSN:</b> <b>2731-8311</b> <b>Pages:</b> <b>329</b>
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**Publisher: CRC Press/ Routledge**

**No of Books: 8**

<b>Sr. No</b>	<b>Name of Book</b>	<b>Publisher Name</b>	<b>ISBN No</b>	<b>Edition</b>	<b>Sole/Co-Author/Editor</b>	<b>Book Type</b>
<b>1.</b>	<b>Advances in Swarm Intelligence for Optimizing Problems in Computer Science</b>	<b>CRC Press</b>	<b>978-11-38482-51-7</b> <b>Link:</b> <a href="https://www.routledge.com/Advances-in-Swarm-Intelligence-for-Optimizing-Problems-in-Computer-Science/Nayyar-Le-Nguyen/p/book">https://www.routledge.com/Advances-in-Swarm-Intelligence-for-Optimizing-Problems-in-Computer-Science/Nayyar-Le-Nguyen/p/book</a>	<b>1<sup>st</sup></b>	<b>Editor &amp; Author (2 Chapters)</b>	<b>Edited Book + Refereed Book</b>

			<a href="https://doi.org/10.1201/9780429289675">ok/9781138482517</a>			
2.	<b>Swarm Intelligence and Evolutionary Algorithms in Healthcare and Drug Development</b>	<b>CRC Press</b>	<b>978-03-67257-57-6 (Hard Copy)</b> <b>978-04-29289-67-5 DOI:</b> <a href="https://doi.org/10.1201/9780429289675">https://doi.org/10.1201/9780429289675</a>	<b>1<sup>st</sup></b>	<b>Editor &amp; Author (2 Chapters)</b>	<b>Edited Book+ Refereed Book</b>
3.	<b>Machine Learning in Signal Processing: Applications, Challenges and the Road Ahead</b>	<b>CRC Press</b>	<b>ISBN: 978-0-367-61890-2 (Hard Book)</b> <b>978-0-367-61892-6 (Print Cover)</b> <b>978-1-003-10702-6 (Ebook)</b>  <b>Link of Book:</b> <a href="https://www.routledge.com/Machine-Learning-in-Signal-Processing-Applications-Challenges-and-the/Tanwar-Nayyar-Rameshwar/p/book/9780367618902#">https://www.routledge.com/Machine-Learning-in-Signal-Processing-Applications-Challenges-and-the/Tanwar-Nayyar-Rameshwar/p/book/9780367618902#</a>	<b>1<sup>st</sup></b>	<b>Editor</b>	<b>Edited Book + Referred Book</b>

4.	<b>Green Internet of Things</b>	<b>CRC Press</b>	<b>ISBN</b> <b>9781032069135</b> <b>Pages: 144</b> <b>Edition: 1</b>  <a href="https://www.routledge.com/Green-Internet-of-Things/Mahapatra-Nayyar/p/book/9781032069135">https://www.routledge.com/Green-Internet-of-Things/Mahapatra-Nayyar/p/book/9781032069135</a>	<b>1<sup>st</sup></b>	<b>Authored Book</b>	<b>Authored</b>
5.	<b>SDN Supported Edge-Cloud Interplay for Next Generation Internet of Things</b>	<b>CRC Press</b>	<b>Pages: 220;</b> <b>ISBN:</b> <b>9781032101491</b> <a href="https://www.routledge.com/SDN-Supported-Edge-Cloud-Interplay-for-Next-Generation-Internet-of-Things/Sahoo-Solanki-Mishra-Nayyar/p/book/9781032101491">https://www.routledge.com/SDN-Supported-Edge-Cloud-Interplay-for-Next-Generation-Internet-of-Things/Sahoo-Solanki-Mishra-Nayyar/p/book/9781032101491</a>	<b>1<sup>st</sup></b>	<b>Edited Book</b>	<b>Edited</b>
6.	<b>Advances in Distance Learning in Times of Pandemic</b>	<b>CRC Press</b>	<b>ISBN</b> <b>9781032334417</b> <b>Pages: 322</b> <a href="https://www.routledge.com/Advances-in-Distance-">https://www.routledge.com/Advances-in-Distance-</a>	<b>1<sup>st</sup></b>	<b>Edited Book</b>	<b>Edited</b>



			<a href="#"><u>Learning-in-Times-of-Pandemic/Rosak-Szyrocka-Zywiolek-Nayyar-Naved/p/book/9781032334417</u></a>			
7.	<b>Blockchain, IoT and AI Technologies for Supply Chain Management</b>	<b>CRC Press</b>	<b>ISBN:</b> <b>9781032206400. Pages:</b> <b>294</b> <a href="https://www.routledge.com/Blockchain-IoT-and-AI-Technologies-for-Supply-Chain-Management/Chawla-Kumar-Nayyar-Naved/p/book/9781032206400"><u>https://www.routledge.com/Blockchain-IoT-and-AI-Technologies-for-Supply-Chain-Management/Chawla-Kumar-Nayyar-Naved/p/book/9781032206400</u></a>	<b>1<sup>ST</sup></b>	<b>Edited Book</b>	<b>Edited</b>
8.	<b>Renewable Energy and AI for Sustainable Development</b>	<b>CRC Press</b>	<b>ISBN</b> <b>9781032439495</b> <b>Pages: 286</b> <a href="https://www.routledge.com/Renewable-Energy-and-AI-for-Sustainable-Development/Iyer-Nayyar-Naved-Al-"><u>https://www.routledge.com/Renewable-Energy-and-AI-for-Sustainable-Development/Iyer-Nayyar-Naved-Al-</u></a>	<b>1<sup>st</sup></b>	<b>Edited Book</b>	<b>Edited</b>

			<a href="https://www.sciencedirect.com/book/9781032439495">Turjman/p/book/9781032439495</a>			
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**Publisher: Elsevier**

**No of Books: 2**

Sr. No	Name of Book	Publisher Name	ISBN No	Edition	Sole/Co-Author/Editor	Type
1.	Generative Adversarial Networks for Image-to-Image Translation	Elsevier	ISBN: 978-0-12-823519-5 Pages: 429 <a href="https://www.sciencedirect.com/book/9780128235195/generative-adversarial-networks-for-image-to-image-translation">https://www.sciencedirect.com/book/9780128235195/generative-adversarial-networks-for-image-to-image-translation</a>	1 <sup>ST</sup>	Editor	
2.	Comprehensive Guide to Heterogeneous Networks	Elsevier	<a href="https://www.sciencedirect.com/book/9780323905275/comprehensive-guide-to-heterogeneous-networks">https://www.sciencedirect.com/book/9780323905275/comprehensive-guide-to-heterogeneous-networks</a> 978-0-323-90527-5 Pages: 338	1 <sup>st</sup>	Edited Book	Edited + Referred Book

**Publisher: Wiley**

**No of Books: 2**

<b>Sr. No</b>	<b>Name of Book</b>	<b>Publisher Name</b>	<b>ISBN No</b>	<b>Edition</b>	<b>Sole/Co-Author/Editor</b>	<b>Type</b>
1.	<b>Digital Cities Roadmap: IoT Based Architecture and Sustainable Buildings</b>	<b>Wiley</b>	ISBN: 978-1-119-79159-1 Pages: 544 <a href="https://www.wiley.com/en-us/Digital+Cities+Roadmap:+IoT+Based+Architecture+and+Sustainable+Buildings-p-9781119792055">https://www.wiley.com/en-us/Digital+Cities+Roadmap:+IoT+Based+Architecture+and+Sustainable+Buildings-p-9781119792055</a>	1 <sup>st</sup>	<b>Editor</b>	<b>Edited + Refereed Book</b>
2.	<b>Software Defined Networks: Architecture and Applications</b>	<b>Wiley</b>	Pages: 576. ISBN: 978-1-119-85730-3 Doi: 10.1002/9781119857921 <a href="https://online.library.wiley.com/doi/abs/10.1002/9781119857921.ch3">https://online.library.wiley.com/doi/abs/10.1002/9781119857921.ch3</a>	1 <sup>st</sup>	<b>Edited Book</b>	

**Publisher: IGI-Global**

**No of Books: 3**

<b>Sr. No</b>	<b>Name of Book</b>	<b>Publisher Name</b>	<b>ISBN No</b>	<b>Edition</b>	<b>Sole/Co-Author/Editor</b>	<b>Type</b>
<b>1.</b>	<b>Green Building Management and Smart Automation</b>	<b>IGI-Global, USB</b>	<b>ISBN13: 9781522597544</b> <b>ISBN10: 1522597549</b> <b>EISBN13: 9781522597568</b> <b>Pages: 312</b> <b>DOI: <a href="https://doi.org/10.4018/978-1-5225-9754-4">https://doi.org/10.4018/978-1-5225-9754-4</a></b>	<b>1<sup>st</sup></b>	<b>Editor &amp; Author (1Chapter)</b>	<b>Edited Book + Refereed Book</b>
<b>2.</b>	<b>Handbook of Research on Emerging Trends and Applications of Machine Learning</b>	<b>IGI-Global, USA</b>	<b>ISBN13: 9781522596431</b> <b>ISBN10:1522596437</b> <b>EISBN13: 9781522596455</b> <b>Pages: 674</b> <b>DOI: <a href="https://doi.org/10.4018/978-1-5225-9643-1">https://doi.org/10.4018/978-1-5225-9643-1</a></b>	<b>1<sup>st</sup></b>	<b>Editor</b>	<b>Edited Book + Refereed Book</b>
<b>3.</b>	<b>Applications of Computational Science in Artificial Intelligence</b>	<b>IGI-GLOBAL</b>	<b>ISBN 9781799890126 (h/c)   ISBN 9781799890133 (s/c)   ISBN</b>	<b>1<sup>st</sup></b>	<b>Edited Book</b>	<b>Edited Book + Refereed Book</b>

			<b>9781799890140</b> (ebook). <b>Pages: 284</b> <a href="https://www.igi-global.com/book/applications-computational-science-artificial-intelligence/275267">https://www.igi-global.com/book/applications-computational-science-artificial-intelligence/275267</a>			
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**Publisher: IOS Press**

**No of Books: 2**

Sr. No	Name of Book	Publisher Name	ISBN No	Edition	Sole/Co-Author/Editor	Type
1.	Computer Methods in Medicine and Healthcare	IOS Press	<b>978-1-64368-334-8 (print)</b> <b>  978-1-64368-335-5 (online)</b> <b>Link:</b> <a href="https://ebooks.iospress.nl/ISBN/978-1-64368-334-8">https://ebooks.iospress.nl/ISBN/978-1-64368-334-8</a>	1 <sup>st</sup>	Editor	CMMHC 2022—Conference Proceedings-Edited Book
2.	Proceedings of the 2022 International Conference on Smart Manufacturing and Material Processing (SMMP2022)	IOS Press	<b>978-1-64368-350-8 (print)</b> <b>  978-1-64368-351-5 (online)</b> <a href="https://ebooks.iospress.nl/volume/proceedings-of-">https://ebooks.iospress.nl/volume/proceedings-of-</a>	1 <sup>st</sup>	Editor	SMMP 2022-Conference Proceedings- Edited Book

			<a href="#"><u>the-2022-international-conference-on-smart-manufacturing-and-material-processing-smmp2022</u></a>			
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**Publisher: IET**

**No of Books: 1**

Sr. No	Name of Book	Publisher Name	ISBN No	Edition	Sole/Co-Author/Editor	Type
1.	<b>Innovations in Healthcare Informatics: From Interoperability to data Analysis</b>	<b>IET Press, USA</b>	<b>978-1-83953-458-4 (Hardback);</b> <b>978-1-83953-459-1 (Print)</b>  <a href="https://digital-library.theiet.org/content/books/9781839534584/9781839534591"><u>https://digital-library.theiet.org/content/books/9781839534584/9781839534591</u></a> <b>DOI:</b> <b>10.1049/PBH E041E</b>	<b>1<sup>st</sup></b>	<b>Editor/Author</b>	<b>Edited Book</b>

**Publisher: BPB/ABS/Thakur/VSRD/Scholar Press**

**No of Books: 17**

<b>Sr. No</b>	<b>Name of Book</b>	<b>Publisher Name</b>	<b>ISBN No</b>	<b>Edition</b>	<b>Revised Edition</b>	<b>Sole/Co-Author</b>	<b>Class</b>
<b>1.</b>	<b>Windows and Networking</b>	<b>ABS Publications</b>	<b>987-81-7072-121-5</b>	<b>1<sup>st</sup>- 2010</b>	<b>----</b>	<b>Co-Author</b>	<b>B.Com (Prof.) II G.N.D.U</b>
<b>2.</b>	<b>Computer Applications</b>	<b>ABS Publications</b>	<b>978-81-7072-118-5</b>	<b>1<sup>st</sup>- 2010</b>	<b>2<sup>nd</sup> 2011</b>	<b>Co-Author</b>	<b>B.Com (Prof.) I G.N.D.U</b>
<b>3.</b>	<b>Data Communication s and Computer Networking</b>	<b>ABS Publications</b>	<b>978-81-7072-127-7</b>	<b>1<sup>ST</sup>- 2011</b>		<b>Sole Author</b>	<b>Refereed Book</b>
<b>4.</b>	<b>Computer Applications</b>	<b>ABS Publications</b>	<b>978-81-7072-134-5</b>	<b>1<sup>ST</sup>- 2012</b>		<b>Co-Author</b>	<b>P.S.E.B XI Class</b>
<b>5.</b>	<b>Computer Applications</b>	<b>ABS Publications</b>	<b>978-81-7072-135-2</b>	<b>1<sup>st</sup>- 2012</b>		<b>Co-Author</b>	<b>P.S.E.B. XII Class</b>
<b>6.</b>	<b>Computer Applications for Business</b>	<b>ABS Publications</b>	<b>978-81-7072-148-2</b>	<b>1<sup>st</sup>- 2013</b>		<b>Co-Author</b>	<b>B. Com (Prof.) Sem-II G.N.D.U</b>
<b>7.</b>	<b>Software Engineering &amp; Project Management</b>	<b>Thakur Publications</b>	<b>978-93-83130-17-7</b>	<b>1<sup>st</sup></b>		<b>Co-Author</b>	<b>MCA Sem-III PTU, Jal.</b>
<b>8.</b>	<b>Information Management</b>	<b>ABS Publications</b>	<b>978-81-7072-160-4</b>	<b>1<sup>st</sup></b>		<b>Sole Author</b>	<b>MCA-I PTU, Jal.</b>
<b>9.</b>	<b>Data Warehousing and Data Mining</b>	<b>Thakur Publications</b>	<b>978-93-5163-015-9</b>	<b>1<sup>st</sup></b>		<b>Co-Author</b>	<b>MCA-4<sup>th</sup> PTU, Jal.</b>
<b>10.</b>	<b>Embedded Systems</b>	<b>Thakur Publications</b>	<b>978-93-5163-133-0</b>	<b>1<sup>st</sup></b>		<b>Co-Author</b>	<b>MCA-5<sup>th</sup> PTU, Jal.</b>



<b>11.</b>	<b>Wireless Sensor Networks</b>	<b>VSRD Publications</b>	<b>978-93-86258-11-3</b>	<b>1<sup>st</sup></b>		<b>Co-Author</b>	<b>Refereed Book</b>
<b>12.</b>	<b>Management Information Systems</b>	<b>VSRD Publications</b>	<b>978-93-86258-18-2</b>	<b>1<sup>st</sup></b>		<b>Co-Author</b>	<b>Refereed Book</b>
<b>13.</b>	<b>Handbook of Arduino</b>	<b>Scholar-Press, Germany</b>	<b>978-3-330-65093-0</b>	<b>1<sup>st</sup></b>		<b>Co-Author</b>	<b>Refereed Book</b>
<b>14.</b>	<b>Design and Analysis of Algorithms</b>	<b>Thakur Publications</b>	<b>978-93-86488-64-0</b>	<b>1<sup>st</sup></b>		<b>Co-Author</b>	<b>MCA-5<sup>th</sup> PTU</b>
<b>15.</b>	<b>Handbook of SPSS</b>	<b>VSRD Publications</b>	<b>978-93-86258-72-4</b>	<b>1<sup>st</sup></b>		<b>Co-Author</b>	<b>Refereed Book</b>
<b>16.</b>	<b>Handbook of Cloud Computing</b>	<b>BPB Publications</b>	<b>978-93-8817-666-8</b>	<b>1<sup>st</sup></b>		<b>Editor &amp; Author (2 Chapters)</b>	<b>Edited Book+ Refereed Book</b>
<b>17.</b>	<b>Instant Approach to Software Testing: Principles, Applications, Techniques and Practices</b>	<b>BPB Publications</b>	<b>978-93-88511-162</b>	<b>1<sup>st</sup></b>		<b>Editor &amp; Author (1 Chapter)</b>	<b>Edited Book + Refereed Book</b>

## PATENTS

### USA Patents

1. **In-memory management system and method using user traffic.** Application Number: US20230179500A1. (Patent Published)

### Indian Patents

### Indian Design Patents

**Total Intellectual Properties Granted: 33**

1. **Biomedical Equipment for Oral Radiographs.** Application Number: 336976-001. Date of Registration: 30/12/2020. Journal No: 04/2021; Journal Date: 22/01/2021 (Patent Granted)
2. **Tracheostomy Tube for Better Breath through Wind Pipe.** Application Number: 348226-001. Date of Registration: 23/08/2021. Journal No: 42/2021; Journal Date: 15/10/2021 (Patent Granted)
3. **Pneumatic Based Prosthetic Leg with Strong Springing Motion.** Application Number: 348225-001. Date of Registration: 23/08/2021. Journal No: 42/2021; Journal Date: 15/10/2021 (Patent Granted)
4. **Nasopharyngeal Swab Sampling Robot.** Application Number: 347909-001. Date of Registration: 14/08/2021; Journal No: 42/2021; Journal Date: 15/10/2021 (Patent Granted)
5. **Anti-Theft Drug Security Device.** Application Number: 350729-001. Date of Registration: 05/10/2021; Journal No: 52/2021; Journal Date: 24/12/2021 (Patent Granted)
6. **Mini Ethernet Convertor TCP/IP Module.** Application Number: 350730-001. Date of Registration: 05/10/2021; Journal No: 50/2021; Journal Date: 10/12/2021 (Patent Granted)
7. **Screw Less Bracket Cable for Electric Tooth Brush.** Application Number: 358029-001. Date of Registration: 07/02/2022; Journal No: 13/2022; Journal Date: 01/04/2022 (Patent Granted)
8. **Smart Tooth Pick Dispenser.** Application Number: 358037-001. Date of Registration: 07/02/2022; Journal No: 15/2022; Journal Date: 15/04/2022 (Patent Granted)
9. **Dental Intraoral Camera to Prevent Musculo-Skeletal Pain.** Application Number: 358028-001. Date of Registration: 07/02/2022; Journal No: 16/2022; Journal Date: 22/04/2022 (Patent Granted)

10. **X-Ray Machine.** Application Number: 358449-001. Date of Registration: 12/02/2022; Journal No: 16/2022; Journal Date: 22/04/2022 (**Patent Granted**)
11. **DIODE BRIDGE.** Application Number: 336950. Date of Registration: 29/12/2020; Journal No: 44/2022; Journal Date: 04/11/2022 (**Patent Granted**)
12. **Smart Gloves with Flexi Sensor for Remote Operation.** Application Number: 362997-001. Date of Registration: 22/04/2022; Journal No: 51/2022; Journal Date: 23/12/2022 (**Patent Granted**)
13. **Artificial Intelligence based Heart Rate Monitoring Device for Sports Training.** Application Number: 370463-001. Date of Registration: 07/09/2022; Journal No: 51/2022; Journal Date: 23/12/2022 (**Patent Granted**)
14. **Blockchain Enabled Device for Enhancing Computer Network Security.** Application Number: 370531-001. Date of Registration: 08/09/2022; Journal No: 51/2022; Journal Date: 23/12/2022 (**Patent Granted**)
15. **Wireless Device for Queue Management.** Application Number: 356873-001. Date of Registration: 17/01/2022; Journal No: 11/2022; Journal Date: 18/03/2022 (**Patent Granted**)
16. **Smart Energy Consumption Monitoring Meter.** Application Number: 362254-001. Date of Registration: 08/06/2022; Journal No: 11/2022; Journal Date: 24/06/2022 (**Patent Granted**)
17. **Device for Monitoring the Color & Texture of Samples.** Application Number: 368553-001. Date of Registration: 20/04/2022; Journal No: 17/2022; Journal Date: 29/04/2022 (**Patent Granted**)
18. **Device for Vehicle Drowsiness Detection and Alerting.** Application Number: 368369-001. Date of Registration: 20/04/2022; Journal No: 16/2022; Journal Date: 22/04/2022 (**Patent Granted**)
19. **IoT Enabled Hemoglobin Analyzer.** Application Number: 355530-001. Date of Registration: 15/02/2022; Journal No: 07/2022; Journal Date: 18/02/2022 (**Patent Granted**)
20. **An Intelligent Shopping Cart for Tracking Product using IoT.** Application Number: 367570-001. Date of Registration: 19/04/2023; Journal No: 16/2023; Journal Date: 21/04/2023 (**Patent Granted**)
21. **Biometric Attendance Device with Touch-Free Body Temperature Screening.** Application Number: 360414-001. Date of Registration: 31/05/2022; Journal No: 22/2022; Journal Date: 03/05/2022 (**Patent Granted**)
22. **Accident Notifying Device for Vehicles .** Application Number: 360413-001. Date of Registration: 25/05/2022; Journal No: 24/2022; Journal Date: 17/06/2022 (**Patent Granted**)
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26. **Organic Waste Composer.** Application Number: 380967-001. Date of Registration: 18/05/2023; Journal No: 20/2023; Journal Date: 19/05/2023 (**Patent Granted**)
27. **Construction Block for Building.** Application Number: 332834-001. Date of Registration: 17/05/2023; Journal No: 20/2023; Journal Date: 19/05/2023 (**Patent Granted**)
28. **IoT Based Wearable Health Monitoring Device.** Application Number: 380966-001. Date of Registration: 23/05/2023; Journal No: 21/2023; Journal Date: 26/05/2023 (**Patent Granted**)
29. **Ultrasound Machine.** Application Number: 380968-001. Date of Registration: 24/05/2023; Journal No: 21/2023; Journal Date: 26/05/2023 (**Patent Granted**)
30. **Glucose Device for Diabetes Monitoring.** Application Number: 381748-001. Date of Registration: 24/05/2023; Journal No: 21/2023; Journal Date: 26/05/2023 (**Patent Granted**)
31. **Portable Device for Location Tracking.** Application Number: 371901-001. Date of Registration: 07/06/2023; Journal No: 23/2023; Journal Date: 09/06/2023 (**Patent Granted**)
32. **IoT Enabled Integrated Printer.** Application Number: 383114-001. Date of Registration: 30/06/2023; Journal No: 26/2023; Journal Date: 30/06/2023 (**Patent Granted**)

## Indian Utility Patents

1. **Internet of Things Sensors based System for Consumer Behavior Analysis using Neural Network.** Application Number: 201921045998 A. Date of Filing: 12/11/2019. Date of Publication: 06/12/2019. (**Patent Granted** on “19<sup>th</sup> June, 2021”)

## Indian Copyrights

### Total Copyrights Granted: 3

1. **Self-Cleaning and Germ-Killing Revolving Public Toilet**. Registration Number: L-103519/2021. Diary Number: 21651/2020-CO/L. **Date of Grant**: 20<sup>th</sup> May, 2021.
2. **IoT Based Neonatal Caddy**. Registration Number: L-112894/2022. Diary Number: 29791/2021-CO/L. **Date of Grant**: 9<sup>th</sup> March, 2022
3. **IoT Based Sustainable Smart Water Quality Prediction System for Biofloc Agriculture**. Registration Number: L-112896/2022. Diary Number: 29788/2021-CO/L. **Date of Grant**: 9<sup>th</sup> March, 2022

## Canadian Copyrights

### Total Copyrights Granted: 2

1. **ANALYSIS OF IOT BASED WEATHER MONITORING USING FUZZY LOGIC**. Registration Number: 1189027. **Date of Registration**: 15 December, 2021. <https://www.ic.gc.ca/app/opic-cipo/cpyrghts/dtls.do?fileNum=1189027&type=1&lang=eng>
2. **FM Transaction: A Tool Implemented with Internet of Things**. Registration Number: 1188698. **Date of Registration**: 9 December, 2021. <https://www.ic.gc.ca/app/opic-cipo/cpyrghts/dtls.do?fileNum=1188698&type=1&lang=eng>

## Japan Patents

### Total Patents Granted: 4

1. **An Electromagnetic Suspension-Based Power Generation System for Electric Vehicles.** Patent Registration Number: 3238104. Utility Model Application Number: 2022-001435. Identification Number: 522175082. (**Patent Granted**: 21<sup>st</sup> June, 2022)
2. **An Absorber System for harvesting Solar Energy.** Patent Registration Number: 3239447. Utility Model Application Number: 2022-002699. Identification Number: 522175082 (**Patent Granted**: 5<sup>th</sup> October, 2022)
3. **Actuator based on IoT- (To provide an IoT-Based actuator for improving performance).** Patent Registration Number: 3242105. Utility Model Application Number: 2023-000959. Identification Number: 522175118 (**Patent Granted**: 18<sup>th</sup> May, 2023)
4. **Monitoring and Controlling Machine Parts- (IoT-based system and apparatus for monitoring and controlling a mechanical system).** Patent Registration Number: 3242106. Utility Model Application Number: 2023-000960. Identification Number: 522175118 (**Patent Granted**: 18<sup>th</sup> May, 2023)

## UK Patents

### Total Patents Granted: 6

1. **IoT based Weather Signal Monitoring Device.** Patent Registration Number: 6275827. <https://www.registered-design.service.gov.uk/find/6275827>. (**Patent Granted**: 27<sup>th</sup> April, 2023).
2. **Artificial Intelligence based smart glasses for determining retinal stress.** Patent Registration Number: 6285565. <https://www.registered-design.service.gov.uk/find/6285565>. (**Patent Granted**: 26<sup>th</sup> May, 2023).
3. **IOT based camera for health care management.** Patent Registration Number: 6288671. <https://www.registered-design.service.gov.uk/find/6288671>. (**Patent Granted**: 18<sup>th</sup> June 2023).
4. **Apparatus for healing diabetic foot ulcer.** Patent Registration Number: 6287718. <https://www.registered-design.service.gov.uk/find/6287718>. (**Patent Granted**: 14<sup>th</sup> June 2023).
5. **Machine learning based robot for determining crop yield.** Patent Registration Number: 6289798. <https://www.registered-design.service.gov.uk/find/6289798>. (**Patent Granted**: 21<sup>st</sup> June 2023).
6. **Artificial Intelligence Based Skin Cancer Inspection Device.** Patent Registration Number: 6293058 <https://www.registered-design.service.gov.uk/find/6293058>. (**Patent Granted**: 6<sup>th</sup> July, 2023).

## German Patents

### Total Patents Granted: 6

1. **An IoT Based System for Monitoring and Feeding Pets. Ein IoT-gestütztes System zur Überwachung und Fütterung von Haustieren.** Patent Number: 20 2022 100 253.3. Date of Registration: 28<sup>TH</sup> January, 2022.  
<https://register.dpma.de/DPMAreger/pat/register?AKZ=2020221002533>
2. **An IoT Based System to Detect Face Mask and Maintain Social Distance in A Premise. Ein IoT-basiertes System zur Erkennung von Gesichtsmasken und zur Wahrung der sozialen Distanz in einem Gebäude.** Patent Number: 20 2022 100 252.5. Date of Registration: 11 February, 2022.  
<https://register.dpma.de/DPMAreger/pat/register?AKZ=2020221002525>
3. **Blockchain Enabled Portable Device for Public Distribution Centers. Blockchain-fähiges tragbares Gerät für öffentliche Vertriebszentren.** Patent Number: 20 2022 101 609.7. Date of Registration: 13 April, 2022.  
<https://register.dpma.de/DPMAreger/pat/register?AKZ=2020221016097>
4. **An IoT Enabled Device for Warning People From Electrically Shorted Poles at Public Places Ein IOT-fähiges Gerät zur Warnung von Menschen vor elektrisch kurzgeschlossenen Masten an öffentlichen Plätzen.** Patent Number: 20 2022 104 409.0. Date of Registration: 16 August, 2022.  
<https://register.dpma.de/DPMAreger/pat/register?AKZ=2020221044090&CURSOR=3>
5. **Responsible system based on artificial intelligence for intelligent and climate friendly energy production- Verantwortungsbewusstes System auf der Grundlage Künstlicher Intelligenz für eine intelligente und klimafreundliche Energieerzeugung.** Patent Number: 20 2022 105 963.2. Date of Registration: 22<sup>nd</sup> November, 2022.  
<https://register.dpma.de/DPMAreger/pat/register?AKZ=2020221059632&CURSOR=0>
6. **Responsible artificial intelligence based system to reduce greenhouse gas emissions in 6G networks- Verantwortungsvolles, auf Künstlicher Intelligenz basierendes System zur Verringerung der Treibhausgasemissionen in 6G-Netzen.** Patent Number: 20 2022 105 964.0. Date of Registration: 22<sup>nd</sup> November, 2022.  
<https://register.dpma.de/DPMAreger/pat/register?AKZ=2020221059640&CURSOR=0>

## Australian Patents

### Total Patents Granted: 18

1. **Velocity and Network Condition based Selection Method for WiMAX/WLAN Integrated Networks.**  
Patent Number: 2020102358. Date of Grant: 21<sup>st</sup> October, 2020.
2. **Edge Preserving Image Smoothing Benchmark System with Deep Convolutional Neural Network.**  
Patent Number: 2020102385. Date of Grant: 21<sup>st</sup> October, 2020
3. **Drowsy Driver Detection System Using Average Local Binary Structure.**  
Patent Number: 2020102438. Date of Grant: 28<sup>th</sup> October, 2020
4. **LoRa- ZigBee Hybrid Smart Communication System.**  
Patent Number: 2020102711. Date of Grant: 18<sup>th</sup> November, 2020
5. **Digital Imaging Methods and System for Processing Agar Plate Images for Automated Diagnosis.** Patent Number: 2020103713. Date of Grant: 3<sup>rd</sup> Feb, 2021
6. **A Smart Meter for Design Measurement and Data Collection for Smart Grid.**  
Patent Number: 2020104384. Date of Grant: 3<sup>rd</sup> March, 2021
7. **Home Automation based on User Detection Using Internet of Things**  
Patent Number: 2021100439. Date of Grant: 7<sup>th</sup> April, 2021
8. **An Artificial Intelligence based system to identify the medical condition prior to doctor consultation**  
Patent Number: 2021101576. Date of Grant: 28<sup>th</sup> April, 2021
9. **IoT based Gas Leakage Prevention System**  
Patent Number: 2021101582. Date of Grant: 5<sup>th</sup> May, 2021
10. **A Wireless Networking of Medical Equipment's on Mobile Application for Paperless Clinic**  
Patent Number: 2021101362. Date of Grant: 12<sup>th</sup> May, 2021
11. **An IoT based Solar Washing Machine**  
Patent Number: 2021103399. Date of Grant: 16<sup>th</sup> June, 2021
12. **A System based on Artificial Intelligence and Machine learning on Traffic Control**  
Patent Number: 2021103933. Date of Grant: 23<sup>rd</sup> March, 2022



**13. A System based on Artificial Intelligence for Recognition of Emotional Status**

Patent Number: 2021104079. Date of Grant: 23<sup>rd</sup> March, 2022

**14. Walking Stick for Blind Person with Multiple Sensors**

Patent Number: 2021104044. Date of Grant: 6<sup>th</sup> April, 2022

**15. Solar Assisted System and Method for Water De-Fluoridation**

Patent Number: 2021103219. Date of Grant: 13<sup>th</sup> April, 2022

**16. An Artificial Intelligence based IoT Enabled Drowsiness Detection System**

Patent Number: 2021104783. Date of Grant: 13<sup>th</sup> April, 2022

**17. Advanced Digital Test Rig – Iron Removal Filter for Borewell Water**

Patent Number: 2021102666. Date of Grant: 20<sup>th</sup> April, 2022

**18. Advanced Wi-Fi Enable Water Surface Cleaner**

Patent Number: 2021102665. Date of Grant: 27<sup>th</sup> April, 2022

## Special Issues- Guest Editor

Total Completed: 15

### SCOPUS/ESCI Indexed

1. Special Issue on “*Recent Trends and Future of Fog and Edge Computing, Services and Enabling Technologies*” –Scalable Computing: Practice and Experience. (SCOPUS, ESCI Indexed)—Vol. 20, No 2. <https://scpe.org/index.php/scpe/Call-issue-2-2019>
2. Special Issue on “*Advances in Swarm Intelligence and Machine Learning for Optimizing Problems in Image Processing and Data Analytics*” –Recent Patents on Computer Science. (SCOPUS Indexed)—Vol 12 (2019), Number 4. <http://www.eurekaselect.com/article/98526>
3. Special Issue on “*Recent Innovations and Advancements in Swarm Intelligence: Algorithms, Methodologies and Applications*”- Recent Advances in Computer Science and Communications “Formerly: Recent Patents on Computer Science”. (SCOPUS Indexed)- Vol 13, Number 1, 2020. pp: 3-4(2). <http://www.eurekaselect.com/article/104455>
4. Special Issue on “*Swarm Intelligence for Optimizing Next Generation Networks*”- Recent Advances in Computer Science and Communications “Formerly: Recent Patents on Computer Science”. (SCOPUS Indexed)- Vol 13, Number 2, 2020. pp: 108-109. <https://www.eurekaselect.com/article/105602>
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7. Special Issue on “*Convergence of Big Data, Cloud and IoT for Real Time Applications*”- Recent Patents on Engineering, Bentham Science. ISSN No: 2212-4047 (Online); 1872-2121 (Print). (SCOPUS Indexed). Vol.14, Issue No: 4. Doi: 10.2174187221211404201201111120.  
<https://www.eurekaselect.com/article/111968>
8. Special Issue on “*Energy Efficiency in Building using Intelligent Computing for Smart Cities*”- Energy Systems, Springer. ISSN No: 1868-3975 (Online); 1868-3967 (Print). DOI: <https://doi.org/10.1007/s12667-021-00458-4>
9. Special Issue on “*Advancements and Trends in Green Computing and Communication*”- Recent Advances in Computer Science and Communications “Formerly: Recent Patents on Computer Science”. (SCOPUS Indexed)- Vol 14, Number 4, 2021. pp: 978-979. <https://www.eurekaselect.com/article/113608>

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<https://www.sciencedirect.com/journal/sustainable-cities-and-society/special-issue/10T5F9KSVPH>
2. Special Issue on “*Blockchain Driven Secure Cyber-Physical Systems*”. Computers Material and Continua. (SCIE Indexed). ISSN: 1546-2218 (Print); 1546-2226 (Online). Impact Factor: 3.860.  
[https://www.techscience.com/cmc/special\\_detail/blockchain-driven](https://www.techscience.com/cmc/special_detail/blockchain-driven)
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1. Special Issue on “*Internet of Everything (IoE) for Smart Cities: Technologies and Applications*”- EAI Endorsed Transactions on Smart Cities. Issue 11, Year 2020. <https://eudl.eu/issue/sc/4/11>

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1. *Augmented Reality: Revolutionizing Medical Applications-* Electronics for You- November 2016, Vol.5, No. 7, ISSS No: 2454-4426, Page No: 25-27.
2. *Biomedical Sensors Advancing Medical and Biotechnology-* Electronics for You- February 2017, Vol.49, No.2, Page No: 28-32.
3. *OLED Displays and their Applications-* Electronics for You- April 2018, Vol.50, No.4, Page No: 18-22.
4. *Autopilot Applications for Autonomous Vehicles-* Electronics for You- May 2021, Vol.53 No:5, Page No: 56-59.
5. *Amazing Flying Warehouse for Delivery from the Sky-* Electronics for You- June 2021, Vol.53 No:6, Page No: 32-35
6. *Precision Agriculture Enabling Farming Drones-* Electronics for You- August 2021, Vol.53 No:8, Page No: 30-34
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<https://opensourceforu.com/author/anand-nayyar/>

**Total Articles: 83**

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3. *Choosing the Right Open Source Programming Language*-Open Source for You- September 2016, Page No: 59-64.
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9. *The Best Android Phones of 2016*- Open Source for You- February 2017, Vol.5, Issue 5, Page No: 75-79
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14. *Eight Easy-To-Use Open Source Hybrid Mobile Application Development Platforms*- Open Source for You- July 2017, Vol.5, Issue 10, Page No: 67-70
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- 16. *Eight-Top of the Line Open Source Game Development Tools – Open Source for You- September 2017, Vol 5., Issue 12, Page No: 96-104***
- 17. *The Top Five Open Source Project Management Tools for Your Business Needs- Open Source for You- February 2018, Vol 6., Issue No. 5, Page No: 28-31***
- 18. *Ten Emerging Open Source Technologies- Open Source for You- February 2018, Vol .6, Issue No:5, Page No: 40-43.***
- 19. *Why MariaDB scores Over MySQL- Open Source for You- March 2018, Vol.6, Issue No:6, Page No: 63-67.***
- 20. *A Quick Look at Open Source Databases for Mobile App Development- Open Source for You- March 2018, Vol.6, Issue No:6, Page No: 89-93.***
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- 33. *Chatbots and the Open Source Tools You can use to Develop them- December 2018, Vol.7, Issue No: 3. Page No: 61-66***

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- 35. *Top 10 Open Source Media Server Software in 2018- February 2019, Vol.7, Issue No: 5. Page No: 42-46***
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- 38. *An Instant Guide to Firewall Builder- April 2019, Vol.7, Issue No: 7. Page No: 63-65***
- 39. *GameShell: The Handheld Open Source Gaming Console- April 2019, Vol.7, Issue No: 7. Page No: 24-25***
- 40. *AForge.Net: A Powerful Open Source Computer Vision Tool- May 2019, Vol.7, Issue No: 8. Page No: 65-67***
- 41. *The Path to Becoming a DevOps Engineer- June 2019, Vol.7, Issue No: 9. Page No: 32-39***
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- 46. *Top 5 Open Source Alternatives to Microsoft Office- November 2019, Vol.8, Issue No:2. Page No:35, 38-40***
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- 50. *The Best Open Source Automation Penetration Testing Tools- April 2020, Vol.8, Issue No:7. Page No: 66-71***
- 51. *An Overview of Tensorflow.js- May 2020, Vol.8, Issue No:8. Page No: 65-67***



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53. *Open Source Hyperledger Projects and How they can be Implemented-*August 2020, Vol. 8, Issue No:11. Page No: 72-75
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57. *An Introduction to Microsoft's Azure Blockchain Service-* December 2020, Vol.9, Issue No: 3. Page No: 67-71
58. *The Blockchain Consortium is Coming of Age.* – January 2021, Vol.9, Issue No: 4, Pages: 42-45
59. *How Blockchains help the Healthcare Industry.* – February 2021, Vol.9, Issue No: 5, Pages: 28-33
60. *How the Blockchain Can Help a City Get Smart.* – March 2021, Vol.9, Issue No: 6, Pages: 15-21
61. *Container Orchestration Using Kubernetes and Apache Mesos-* April 2021, Vol.9, Issue No: 7. Pages: 95-98
62. *CloudOps: Continuous Operations Using Ansible and Jenkins-* July 2021, Vol.9, Issue No: 8. Pages: 83-86
63. *Cloud Management using Apache CloudStack: An Overview-* August 2021, Vol.9, Issue No: 9. Pages: 89-93
64. *How to Manage Cloud Costs-* September 2021, Vol.9, Issue No: 10. Pages: 80-85
65. *Managing Multiple Clouds with Open Source Tools-* October 2021, Vol.9, Issue No: 11. Pages: 49-53
66. *How Open Source Tools Help to Manage Cloud Infrastructure-*November 2021, Vol.9, Issue No: 12. Pages: 80-86
67. *Terraform: The Cloud- Agnostic Solution for Infrastructure as Code.-* February 2022, Vol.10, Issue No: 4. Pages: 98-101
68. *A Quick look at Cloud Cost Management Tools.* April 2022, Vol.10, Issue No: 6. Pages: 95-99
69. *A Few Tools that help Machines to learn.* June 2022. Vol.10, Issue No:8. Pages: 47-49.

- 70. *The AI and ML Services that Microsoft Azure Offers.* July 2022. Vol.10, Issue No: 9. Pages: 84-88.**
- 71. *How companies can benefit from Amazon's Cloud Native AI and ML Services.* August 2022. Vol.10, Issue No: 10. Pages: 50-55.**
- 72. *How Google Cloud is Integrating AI and ML into its Services.* September 2022. Vol.10, Issue No: 11. Pages: 53-57.**
- 73. *Tensorflow and Tesseract OCR: Two Popular AI/ML Tools.* October 2022. Vol.10., Issue No: 12. Pages: 63-66.**
- 74. *How Contact Centers can Benefit from Artificial Intelligence.* November 2022. Vol.11., Issue No:1. Pages: 71-74**
- 75. *It's the Era of Conversational AI.* December 2022. Vol.11., Issue No:2. Pages: 75-79.**
- 76. *The Metaverse is Here to Stay.* February 2023. Vol.11., Issue No:4. Pages: 22-28.**
- 77. *What is Metaverse Made Up to?* March 2023. Vol.11., Issue No:5. Pages: 17,18, 20.**
- 78. *Metaverse: Current Status and What's to Come.* April 2023. Vol.11, Issue No: 6. Pages: 31-32**
- 79. *Data Management in the Cloud: What the Tech Giants are Offering.* May 2023. Vol.11, Issue No:7. Pages: 50-53**
- 80. *Metaverse: Immerse Yourself in a Virtual World.* May 2023. Vol. 11, Issue No: 7. Pages: 23-25**
- 81. *What Digital Twins Bring to the Metaverse.* June 2023. Vol. 11, Issue No: 8. Pages: 20-24**
- 82. *A Deep Dive into Generative AI and ChatGPT-3.* June 2023. Vol. 11, Issue No: 8. Pages: 62-66**
- 83. *Hyper Real Platforms: Making Metaverse More Real.* July 2023. Vol. 11, Issue No: 9. Pages: 20-25**

## Research Recognitions

### JOURNAL'S REVIEWER

<https://publons.com/researcher/1581823/anand-nayyar/>

- IEEE Access
- Sensors- MDPI
- Multimedia Tools and Applications- Springer
- Recent Patents on Computer Science- Bentham Science
- Evolutionary Intelligence- Springer
- Wireless Networks- Springer
- International Journal of Sensors, Wireless Communications, and Control- Bentham Science
- International Journal of Cognitive Informatics and Natural Intelligence- IGI-Global
- International Journal of Information System Modeling and Design (IJISMD)- IGI-Global
- Recent Patents on Engineering- Bentham Science
- International Journal of Communication Systems- Wiley
- Journal of Network and Computer Applications- Elsevier
- International Journal of E-Health and Medical Communications (IJEHMC)- IGI-Global
- Neural Computing and Applications- Springer
- International Journal of Computer Science, Engineering and Information Technology- AIRCC Publishers
- Sustainable Cities and Society- ELSEVIER
- IEEE Transactions on Industrial Informatics
- Computers and Electrical Engineering- Elsevier
- International Journal of Distributed Systems and Technologies (IJDST)- IGI-Global
- International Journal of Information Security and Privacy (IJISP)- IGI-Global
- International Journal of Advanced Computer Science and Applications (IJACSA)- SAI Organization
- Computers, Material and Continua -Tech Science Press

- **Journal of Big Data – Springer**
- **Peer to Peer Networking and Applications – Springer**
- **Turkish Journal of Electrical Engineering and Computer Sciences**
- **International Journal of Web-Based Learning and Teaching Technologies (IJWLTT)- IGI-Global**
- **International Journal of Network Security and its Applications**
- **SN Applied Sciences- Springer**
- **SN Computer Science- Springer**
- **Journal of King Saud University- Computer and Information Science- Elsevier**
- **Cybernetics and Information Technologies**
- **IEEE Internet of Things Magazine**
- **International Journal of Distributed Sensor Networks- Sage Publishers**
- **International Journal of Innovative Computing and Applications- Inderscience**
- **Expert Systems with Applications- Elsevier**
- **International Journal of Blockchains and Cryptocurrencies- Inderscience**
- **Journal of Computer Science- Science Publications**
- **IEEE Internet of Things Journal**
- **Wireless Communications and Mobile Computing- Hindawi**
- **Heliyon- Elsevier**
- **IEEE Network Magazine**
- **Concurrency and Computation: Practice and Experience**
- **International Journal of Ad Hoc, Sensor and Ubiquitous Computing- AIRCC**
- **International Journal of Business Intelligence and Data Mining- Inderscience**
- **International Journal of e-collaboration (IJEC)- IGI-Global**
- **Open Computer Science- De GRUYTER**
- **Complexity- Hindawi**
- **Computer Communications- Elsevier**
- **Journal of Intelligent and Fuzzy Systems- IOS Press**
- **Journal of Sensors – Hindawi**
- **Mathematical Problems in Engineering- Hindawi**

- **Applied Soft Computing- Elsevier**
- **Complex and Intelligent Systems- Springer**
- **Computational Intelligence- Wiley**
- **Computing- Springer**
- **Journal of Reliable Intelligent Environments- Springer**
- **Mobile Networks and Applications- Springer**
- **Mobile Information Systems- Hindawi**
- **Security and Communication Networks- Hindawi**
- **Security and Privacy- Wiley**
- **The Journal of Super Computing- Springer**
- **Transactions on Emerging Telecommunications Technologies- Wiley**
- **Applied Computing and Informatics- Emerald**
- **International Journal of Grid and Utility Computing- Inderscience**
- **Journal of Computer Networks and Communication- Hindawi**
- **PeerJ Computer Science**
- **Scalable Information Systems**
- **Simulation: Transactions of the Society for Modeling and Simulation International- Sage Publishers**
- **Sustainable Computing: Informatics and Systems- Elsevier**
- **Vehicular Communications- Elsevier**
- **Adhoc Networks- Elsevier**
- **Artificial Intelligence Review- Springer**
- **Cluster Computing- Springer**
- **Computer Applications in Engineering Education- Wiley**
- **Earth Science Informatics- Springer**
- **Engineering Applications of Artificial Intelligence- Elsevier**
- **IEEE Transactions on Network Science and Engineering**
- **IET Wireless Sensor Systems**
- **IETE Journal of Research**

## International Journal's Associations

- **Editor-in-Chief:** International Journal of Smart Vehicles and Smart Transportation (IJSVST). IGI-Global, USA. ISSN No: 2642-1631, EISSN: 2642-164X. DOI: 10.4018/IJSVST  
<https://www.igi-global.com/journal/international-journal-smart-vehicles-smart/222692#table-of-contents>
- **Managing Editor:** International Journal of Knowledge and Systems Science (IJKSS). IGI-Global, USA. ISSN No: 1947-8208; E-ISSN: 1947-8216. DOI: 10.4018/IJKSS  
<https://www.igi-global.com/journals/open-access/reviewers/international-journal-knowledge-systems-science/1169>
- **Editorial Board:** Wireless Networks- Springer, ISSN (Print): 1022-0038; (Online): 1572-8196  
[https://www.springer.com/journal/11276/editors?fbclid=IwAR3FPneWs\\_7H1xtVVRWvy8xiqXfAULzzBPcXR2BUQwlc7eOhpTGzaiO4WA](https://www.springer.com/journal/11276/editors?fbclid=IwAR3FPneWs_7H1xtVVRWvy8xiqXfAULzzBPcXR2BUQwlc7eOhpTGzaiO4WA)
- **Editorial Board:** Computer Communications- Elsevier, ISSN: 0140-3664  
<https://www.journals.elsevier.com/computer-communications/editorial-board/anand-nayyar>
- **Editorial Board:** International Journal of Sensor Networks (IJSNET). ISSN: 1748-1287; 1748-1279.  
<https://www.inderscience.com/jhome.php?jcode=ijsnet#edboard-content>
- **Editorial Board:** Intelligent Automation and Soft Computing (IASC)—SCIE Indexed. ISSN No: 1079-8587 (Print); 2326-005X (Online)  
<https://www.techscience.com/iasc/editors>
- **Editorial Board:** Cogent Engineering. ISSN: 2331-1916  
<https://www.tandfonline.com/action/journalInformation?show=editorialBoard&journalCode=oaen20>

- **Associate Editor:** Human Centric Computing and Information Sciences (HCIS). ISSN: 2192-1962.  
[http://hcisj.com/about/editorial\\_board.php](http://hcisj.com/about/editorial_board.php)
- **Associate Editor:** PeerJ Computer Science. <https://peerj.com/anandnayyar/>
- **Associate Editor:** IET Networks. ISSN No: 2047-4962. IET, USA. ESCI Indexed.  
<https://ietresearch.onlinelibrary.wiley.com/hub/journal/20474962/homepage/editorial-board>
- **Associate Editor:** IET Wireless Sensor Systems. ISSN: 2043-6394. IET, USA. SCOPUS, ESCI Indexed.  
<https://ietresearch.onlinelibrary.wiley.com/hub/journal/20436394/homepage/editorial-board>
- **Associate Editor:** IET Quantum Communications. ISSN: 2632-8925. IET, USA.  
<https://ietresearch.onlinelibrary.wiley.com/hub/journal/26328925/homepage/editorial-board>
- **Associate Editor:** Indonesian Journal of Electrical Engineering and Computer Science. ISSN: 2502-4752; 2502-4760  
<https://ijeecs.iaescore.com/index.php/IJECS/about/editorialTeam>
- **Series Editor:** Atlantis Highlights in Intelligent Systems. ISSN No: 2589-4919  
<https://www.atlantis-press.com/proceedings/series/ahis/publishing-info#series-editors>
- **Series Editor:** Advances in Science, Technology and Innovation. Electronic ISSN: 2522-8722; Print ISSN: 2522-8714  
<https://www.springer.com/series/15883/editors>

- **Associate Editor:** International Journal of Information Security and Privacy (IJISP)- ESCI, SCOPUS, EI, INSPEC (Indexed). ISSN No: 1930-1650; E-ISSN: 1930-1669; DOI: 10.4018/IJISP—IGI Global  
<https://www.igi-global.com/journal/international-journal-information-security-privacy/1096>
- **Associate Editor:** International Journal of Distributed Systems and Technologies (IJ DST)- ESCI, SCOPUS, EI, INSPEC (Indexed). ISSN No: 1947-3532, EISSN: 1947-6540. –IGI Global  
<https://www.igi-global.com/journal/international-journal-distributed-systems-technologies/1164#indices>
- **Associate Editor:** International Journal of Cognitive Informatics and Natural Intelligence (IJCINI)- ESCI, Scopus, Web of Science, DBLP, ACM (Indexed). ISSN No: 1557-3958; EISSN: 1557-3966—IGI-Global  
<https://www.igi-global.com/journal/international-journal-cognitive-informatics-natural/1095>
- **Associate Editor:** International Journal of Swarm Intelligence Research (IJSIR)- EI Compendex, INSPEC, Scopus, Web of Science. ISSN No: 1947-9263; 1947-9271- IGI-Global  
<https://www.igi-global.com/journal/international-journal-swarm-intelligence-research/1149#indices>



## **(Tech Events/Industry Events Associations)**

- **Mentor & Speaker: GDG Mientrung---DevFest 2018.**  
<https://devfest18.gdgmientrung.com/en/#speaker>
- **Indian Didactics Association-Virtual Global Round Table Conference- Viet Nam**  
**Topic on “Education 4.0: Pedagogy’s Role in Blended Learning”**
- **Chief Guest: SMART India Hackathon 2020.**
- **Chief Guest: Valedictory Function “AICTE Sponsored Two-Weeks FDP Program on “Artificial Intelligence and its Applications in Biomedical Engineering” being organized by Rajashri Shahu College of Engineering, Pune, India.**
- **Chief Guest: “Multidisciplinary International Conference on Futuristic Trends for Sustainable Ecosystem”—Valedictory Function, being organized by Rai University, India.**
- **Chief Guest: “Engineer’s Day”- Engineering for Sustainable Development, organized by G.H. Rasoni Institute of Business Management, Jalgoan, India.**
- **Chief Guest: Engineers Day- Engineering Empowering Nation at SIRT (Sagar Group of Institutions), Bhopal, India.**
- **Primary Evaluator: Toycathon 2021**
- **Chief Guest: International Conference on Recent Trends in Machine Learning and Computing System (RTMCS 2021) being organized by Department of Information Science and Engineering and CSE at Vidyavardhaka College of Engineering, Mysuru, India.**

## (Visiting Professor / Scientist / Consultant Associations)

- **Visiting Professor** to National Institute of Technical Teacher's Training and Research (NITTTR, Chandigarh) for Short Term Programs, Technical Lectures and Faculty Development Programs.
- **Visiting/Adjunct Professor** to Gautam Buddha University, Noida, India.
- **Visiting Scientist** to Center for Resilient and Evolving Intelligence (CREI), Kyungpook National University, Korea.

## (Conference's Invited Talk)

1. Missiles & their Attacking System- An Invited Talk in LASER-11 Conference being organized by Baba Farid Institute of Engineering & Technology.
2. Mobile Computing and Wireless Communications-An Invited talk in AISE-2012 Conference organized by Guru Ram Das Institute of Engineering and Technology, Bathinda.
3. Smartphones and Hacking- An Invited Talk cum Workshop delivered on UGC Sponsored National Conference on Internet Commerce organized by Sant Hira Dass Kanya Mahavidyalaya, Kala Sanghian, Kapurthala.
4. Artificial Intelligence and Robotics-An Invited Talk delivered on UGC Sponsored National Seminar on Social Implications of Artificial Intelligence organized by Kanya Maha Vidyalaya, Jalandhar.
5. Wireless Sensor Networks-An Invited Talk delivered on UGC Sponsored National Seminar on Emerging Trends in IT organized by Sikh National College, Banga.
6. Digital Image Processing- An Invited Talk delivered on UGC Sponsored National Seminar on Image Processing organized by RR Bawa DAV College for Girls, Batala.
7. Neuro Fuzzy Systems and its Applications-An Invited Talk delivered on UGC Sponsored National Conference on Recent Trends in Discrete and Fuzzy Mathematics organized by DAV College, Jalandhar.

8. Network Security using Firewall and Mobile Adhoc Networks- an Invited Talk delivered on 2<sup>nd</sup> National Conference on Next Generation Computing and Information Security-Emerging Trends and Challenges organized by Institute of Management Studies (IMS), Noida.
9. Wireless Sensor Networks & Its Applications cum Research Issues-An Invited Talk delivered on AICTE, CSI Sponsored International Conference on Advanced Information Communication Technology in Engineering organized by The Technological Institute of Textile & Sciences (TITS), Bhiwani, Haryana.
10. Raspberry Pi and Cloud Computing-An Invited Talk delivered on 2<sup>nd</sup> International Conference on Innovation and Sustainability Managing for Change (Management and Computer Science) organized by Hindu Institute of Management, Sonipat.
11. Cyber Security and Raspberry Pi (\$25 Computer) - An Invited Talk Delivered at International Conference on Computer Science and Information Technology: Trends, Challenges and Issues (CSIT-TCI 2015) by Rukhmani Devi Institute of Advanced Studies, New Delhi.
12. Swarm Intelligence- An Invited Talk Delivered at International Conference on Advanced Computing and Communication Technologies (ACCT15), Organized by RG Educational Society, Rohtak.
13. Swarm Intelligence and Its Simulation- An Invited Talk Delivered at UGC Sponsored National Conference on Emerging Trends in Computer Science and Information Systems (NCETCSIS 2015) at Maharaja Agrasen College, University of Delhi, New Delhi.
14. Cyber Security- An Invited Talk Delivered at DEITY, CERT, ISTE Sponsored National Conference on Emerging Trends in Information Technology: Cyber Security: A Panoramic View at Institute of Information Technology and Management cum Institute of Innovations in Technology and Management at New Delhi.
15. Business Intelligence- An Invited Talk Delivered at PCMA Sponsored 1<sup>st</sup> National Conference on Contemporary Issues in Commerce and Management at Guru Kashi University, Talwandi Sabo, Punjab.

16. Internet of Things (IoT)- An Invited Talk Delivered at International Conference on Innovative Research in Engineering Science, Information and Communication Technology (ICREICT 2015) being organized by IRD India at Lala Lajpat Rai College of Engineering and Technology, Moga, Punjab, India.
17. Swarm Intelligence and Live Demonstration of Data Glove- An Invited Talk Delivered at National Conference on Recent Trends in Mathematics and Computational Techniques at Dev Samaj Post Graduate College for Women, Ferozepur City.
18. Cloud Computing and Cyber Security- An Invited Talk Delivered at National Conference on Recent Advancements in Science, Commerce and Technology (NCRSCT 2016) at Mata Sahib Kaur Girls College, Talwandi Sabo.
19. Wireless Sensor Networks and Live Demonstration of Sensors- WSN Kit and WSN Simulation Tools- An Invited Talk Delivered at National Conference on Recent Developments in Engineering and Technology (RDET 2017) at Gurukul Vidyapeeth Institute of Engineering and Technology, Rajpura, Punjab.
20. Google Machine Learning Kit (Google ML)- An Invited Talk Delivered at Google I/O Mien Trung, Da Nang, Vietnam.

<https://io2018.gdgmientrung.com/>

21. Internet of Things & IoT in Finance- An Invited Talk Delivered at FinTech 2018 at Da Nang Software Park, FinTech 2018 Day, Da Nang, Vietnam.

<http://ictnews.vn/khoi-nghiep/fintech/da-nang-nhieu-co-hoi-tro-thanh-trung-tam-cua-cong-nghe-fintech-169194.ict>

22. Career in Programming- An Invited Talk delivered at Developer Student Club (DSC)- Duy Tan University, Da Nang, Viet Nam.
23. Transforming the Future with Internet of Things- An Invited Talk Delivered at Two Day International Conference on Data Science, Machine Learning and Blockchain (AICDMB 2020) being organized at Vidyavardhaka College of Engineering, Mysore.

**(Conference Chair/Co-Chair/Keynote Speaker/Special Guest)**

## *National Conferences*

1. *Session Chair & Session Co-Chair* in (Laser-11) Conference by Baba Farid Group of Institutions in following sessions:
  - i. Computer Science & Engineering (1 Session-Chair & 1 Session Co-Chair)
  - ii. Information Technology (1 Session Co-Chair)
2. *Session Chair* in (Raise-2012) Conference by Guru Ram Das Institute of Engineering and Technology in following session:
  - i. Computer Science and Engineering (1 Session-Chair)
3. *Keynote Speaker* in UGC Sponsored National Conference on Internet Commerce by Sant Hira Dass Kanya Mahavidyalaya, Kala Sanghian, Distt. Kapurthala.
4. *Guest of Honor cum Resource Person* in UGC Sponsored National Conference on Emerging Trends in IT being organized by Sant Hira Dass Kanya Mahavidyalaya, Kala Sanghian, Distt. Kapurthala.
5. *Guest of Honor cum Invited Guest* in UGC Sponsored National Seminar on Social Implications of Artificial Intelligence organized by Kanya Maha Vidyalaya, Jalandhar.
6. *Guest of Honor cum Resource Person* in UGC Sponsored National Seminar on Emerging Trends in IT organized by Sikh National College, Banga.
7. *Guest of Honor cum Resource Person* in UGC Sponsored National Seminar on Image Processing organized by RR Bawa DAV College for Girls, Batala.
8. *Guest of Honor cum Resource Person* in UGC Sponsored National Conference on Recent Trends in Discrete and Fuzzy Mathematics organized by DAV College, Jalandhar.
9. *Session Chair* in UGC Sponsored National Conference on Emerging Trends in Computer Science and Information Systems (NCETCSIS-2015) being organized by Maharaja Agrasen College, University of Delhi, New Delhi.

- 10. *Session Co-Chair (Technical Session –II)* at DEITY, CERT and ISTE Sponsored National Conference on Emerging Trends in Information Technology: Cyber Security: A Panoramic View at Institute of Information Technology and Management cum Institute of Innovations in Technology and Management at New Delhi.**
- 11. *Session Chair (Technical Session –I)* at PCMA Sponsored 1<sup>st</sup> National Conference on Contemporary Issues of Commerce and Management at Guru Kashi University, Talwandi Sabo, Punjab.**
- 12. *Session Chair (Technical Session- I)* at National Conference on Recent Trends in Mathematics and Computational Techniques at Dev Samaj Post Graduate College for Women, Ferozepur City, Punjab.**
- 13. *Session Chair (Technical Session-I + Judge-PPT Competition)* at National Conference on Recent Advancements in Science, Commerce and Technology (NCRSCT 2016) at Mata Sahib Kaur Girls College, Talwandi Sabo.**
- 14. *Session Co-Chair (Technical Session II)* at 8<sup>th</sup> National Conference on Innovations for Sustainable Business being organized by Apeejay School of Management, Dwarka, New Delhi.**
- 15. *Keynote Speaker* at National Conference on Recent Developments in Engineering and Technology (RDET 2017) being organized by Gurukul Vidyapeeth Institute of Engineering and Technology, Rajpura, Punjab.**
- 16. *Keynote Speaker* at National Conference on Current Trends in Computational Sciences (CTCS 2018) being organized by Annai Violet College of Arts and Science, Menambedu, Ambattur, Chennai. Topic: Industry 4.0.**
- 17. *Keynote Speaker* at 5<sup>th</sup> National Scientific Conference on Applying New Technology in Green Buildings (ATiGB 2019) being organized at The University of Da Nang- University of Technology and Education. Topic: Discussion of Green Building Trend in Viet Nam- Latest Happening and Future Directions to become Green Building Country in World.**

# ***International Conferences***

- 1. *Session Co-Chairman* in 4<sup>th</sup> International Conference on Emerging Trends in Engineering & Technology (IETET 2013) organized by Geeta Institute of Management & Technology, Kanipla, Kurukshetra.**
- 2. *Session Chair cum Resource Person* in International Conference on Advanced Information Communication Technology in Engineering (ICAICTE –2K13) organized by The Technological Institute of Textile & Sciences (TITS), Bhiwani, Haryana.**
- 3. *Chief Guest cum Session Chairman* in International Conference on Computer Science & Engineering organized by IRAJ Association in New Delhi.**
- 4. *Session Chair & Co-Chair* in 4<sup>th</sup> International Conference on Advanced Computing and Communication Technology (ACCT14) being organized by RG Educational Society-Rohtak, Haryana.**
- 5. *Chief Guest cum Session Chairman* in 3rd International IRF Conference on Computer Science & Engineering organized by IRAJ Association in New Delhi on 12 April, 2014.**
- 6. *Chief Guest cum Session Chairman* in 4<sup>th</sup> IRAJ SARC International Conference on Computer Science & Engineering organized by IRAJ Association in New Delhi on April 27, 2014.**
- 7. *Chief Guest cum Session Chairman* in 5<sup>th</sup> IRAJ SARC International Conference on Computer Science & Engineering organized by IRAJ Association in New Delhi on May 25, 2014.**
- 8. *Chief Guest cum Session Chairman* in 6<sup>th</sup> IRAJ SARC International Conference on Computer Science & Engineering organized by IRAJ Association in New Delhi on July 6, 2014.**
- 9. *Chief Guest cum Session Chairman* in 7<sup>th</sup> IRAJ SARC International Conference on Computer Science & Engineering organized by IRAJ Association in New Delhi on August 3, 2014.**
- 10. *Session Co-Chair* in 2<sup>nd</sup> International Conference on Innovation and Sustainability Managing for Change (Management and Computer Science) organized by Hindu Institute of Management, Sonipat in Jan 25, 2015.**



- 11. *Guest of Honor cum Session Chair* in International Conference on Computer Science and Information Technology: Trends, Challenges and Issues (CSIT-TCI 2015) by Rukhmani Devi Institute of Advanced Studies, New Delhi in Jan 30-31, 2015.**
- 12. *Session Chair cum Guest of Honor* at IEEE Sponsored 5<sup>th</sup> International Conference on Advanced Computing and Communication Technologies (ACCT15), Organized by RG Educational Society, Rohtak in Feb 20-21, 2015.**
  - a. Sessions Chaired: Advanced Computing, Computer Vision, Wireless Sensor Networks, and Artificial Intelligence.**
- 13. *Session Chair cum Guest of Honor* in International Colloquium on Contemporary Issues in Language Learning, Teaching, Literature, Media and Culture organized by Indo Global Chamber of Commerce, Industries and Agriculture in Association with Confederation of Indian Universities (CIU) at India International Center on March 15, 2015.**
  - a. Session Chaired: Engineering and Management-Technical Session.**
- 14. *Keynote Speaker cum Session Chair* in International Conference on Innovative Research in Engineering Science, Information and Communication Technology (ICREICT 2015) being organized by IRD India at Lala Lajpat Rai College of Engineering and Technology, Moga, Punjab, India.**
  - a. Session Chaired: Computer Science and Information Technology**
- 15. *Session Chair* in International Conference on Green Computing and Internet of Things (ICGCIoT 2015) being organized by Galgotia College of Engineering and Technology, Greater Noida, India.**
  - a. Session Chaired: Wireless Communication Engineering and Technology**
    - a. Eco-Friendly Computing and Communication Resources**
- 16. *Session Chair and Guest of Honor* in Sixth International Conference on Advanced Computing and Communication Technologies (ACCT16) organized by RG Education Society, Rohtak.**
- 17. *Session Chair and Guest of Honor* in International Conference on Communication and Computing Systems (ICCCS2016) at Dronacharya College of Engineering, Gurgaon.**



18. **Keynote Speaker** in International Conference on Recent Innovations in Engineering, Science, Humanities and Management (ICRIESHM-17) at Dev Samaj College for Women, Ferozepur, India.
19. **Keynote Speaker** in International Conference on International Business-Emerging Trends, Opportunities and Challenges (CIB 2017) at Apeejay School of Management, Dwarka, New Delhi. *Talk on “Internet of Things (IoT)”*.
20. **Keynote Speaker** in 8<sup>th</sup> International Conference on Engineering and Advancement in Technology (ICEAT 2018) at Shri Krishna College of Technology, Coimbatore. *Talk on “Flying Adhoc Networks”*.
21. **Keynote Speaker** in International Conference on Advances in Big Data, Computing and Data Communication Systems (icABCD 2018) being organized at Durban, South Africa. *Talk on “Modern Scenario of Drones”*.
22. **Keynote Speaker cum Session Chair** in 7<sup>th</sup> International Conference on Frontiers of Intelligent Computing: Theory and Application (FICTA 2018) being organized at Duy Tan University, Da Nang, Vietnam. *Talk on “Internet of Drone Things (IoDT)”*

Session Chaired: Fuzzy Systems, Artificial Intelligence and Machine Learning; Trends in Big Data and Web Technologies.

23. **Keynote Speaker** in 2018 International Conference on Intelligent & Innovative Computing Applications (ICONIC 2018) being organized at Holiday Inn, Plaine Magnien, Mauritius. *Talk on Blockchain, Bitcoin and Next...?*
24. **Keynote Speaker cum Session Chair** in 3<sup>rd</sup> International Conference on Data Management, Analytics and Innovation (ICDMAI 2019) being organized at Kuala Lumpur, Malaysia. *Talk on “Industry 4.0”*

Session Chaired: Track 1: Data Management & Smart Informatics

25. **Keynote Speaker** in International Virtual Conference on “Recent Developments in Computer Vision and Its Emerging Applications (IVCRCVE 2019)”. *Talk on “Machine Vision for Intelligent Drones”*
26. **Keynote Speaker** in International Virtual Conference on “Advances in Computing and Information Technology (IVACIT-2019)”. *Talk on “Industry 4.0 and Smart Industries Transformation”*.
27. **Keynote Speaker** in Blockchain Society Seminar. *Talk on “Blockchain Technology”*.

28. **Keynote Speaker** in International Virtual Conference on “Current Trends in Artificial Intelligence and Information Security (IVCCTAIS-2019)”. Talk on “*Artificial Intelligence in Cyber Security*”.
29. **Keynote Speaker cum Chief Guest** in Two Day “International Conference on Data Science, Machine Learning and Blockchain (AICDMB 2020)”. Talk on “*Transforming Future with Internet of Things*”.
30. **Keynote Speaker cum Conference Chair, Session Chair, Session Co-Chair, Chief Guest** in Two Day “2020 5<sup>th</sup> International Conference on Intelligent Information Technology (ICIIT 2020)” at Hanoi, Viet Nam. Talk on “*Industry 4.0- Transforming Traditional Industries to Smart Manufacturing Industries*”.
31. **Session Chair** in 1<sup>ST</sup> International Conference on Computer Science, Communication and Security (COMS2-2020) being organized by Ganpath University, Gujarat, India.
32. **Keynote Speaker** in 6<sup>th</sup> International Conference on Optimization and Applications (ICOA 2020) being organized at Morocco. Talk on “*Industry 4.0: Transformation of Traditional Industries to Smart Manufacturing*”.
33. **Session Chair and Panellist** in 1<sup>st</sup> Online International Conference on Rebuilding Bharat with Artificial Intelligence Interventions After COVID-19 Pandemic: Opportunity and Challenges being organized by Department of Computer Science and Engineering, University School of Information and Communication Technology, Gautam Buddha University, Noida.
34. **Session Chair** at International Conference on Recent Trends in Science and Technology (ICRTST 2020) being organized at ATME College of Engineering, Mysore.
35. **Keynote Speaker cum Chief Guest** in Virtual Conference on “Mechatronics, Automation and Cyber Physical Systems (MAC 2020)” being organized by Vellore Institute of Technology (VIT), Vellore and Cyber Physical System Research Group. Talk on “*Cyber Physical Systems and Security in Cyber Physical Systems*”.
36. **Keynote Speaker** in “The 2<sup>nd</sup> International Conference on Industrial Control Network and System Engineering Research” being organized in Kuala Lumpur, Malaysia. Talk on “*Deep Dive into Blockchain, Bitcoins, Smart Contracts, Cryptocurrencies and Security? The Most Disruptive Tech in Years.*”

37. **Keynote Speaker cum Chief Guest** in “Third International Virtual Conference on Data Science- A Future of Digital Transformation (DST 2020)” being organized by School of Information Technology and Engineering, Department of Digital Communications, Vellore Institute of Technology (VIT), Vellore, India.
38. **Keynote Speaker** in “International Virtual Conference on recent trends in Mechanical, AI and IoT Applications” by NAFE Malaysia. Talk on “*Artificial Intelligence in Medical Field*”.
39. **Keynote Speaker** in “International Virtual Conference on Emerging Trends and Challenges in Circuit to System Design (IETCCSD-2020)” by Vellore Institute of Technology (VIT), Vellore. Talk on “*Internet of Vehicle*”.
40. **Guest of Honor** in “International Conference on Communication, Optical, and Microelectronics: The Emerging Trends (ICCOMET-2020)” by Jaipur Engineering College and Research Center, Co-Associated with Rajasthan Technical University, Kota.
41. **Keynote Speaker** in “2020 International Conference on Intelligent and Innovative Computing Applications (ICONIC 2020)” at Mauritius. Talk on “*Internet of Drone Things*”
42. **Keynote Speaker** in “1<sup>ST</sup> International E-Conference on Recent Developments in Science, Engineering and Information Technology (ICRDSEIT 2020), being organized by Madhurai Kamraj University, India. Talk on “*Industry 4.0*”
43. **Keynote Speaker** in “2<sup>nd</sup> International Conference on Computing, Communication and Cyber Security (IC4S 2020)” being organized by Department of Electronics and Communication Engineering, KEC Ghaziabad, India. Talk on “*LoRaWAN Technologies: Issues, Challenges and Applications*”.
44. **Keynote Speaker** in “Smart City 360° The Gateway to Innovation” by EAI. Talk on “*Future Autonomous Transportation in Smart Cities*”
45. **Keynote Speaker cum Session Chair** in “International Conference on Computational Techniques and Intelligent Machines” being organized by Baba Farid College, Punjab, India. Talk on “*Industry 4.0: Transforming Traditional Industries into Smart Factories*” and “*Cobotics: The Future Robotics for Industry 4.0*”.
- a) *Track on Advances in Computational Intelligence and its applications*
  - b) *Advances in Ambient Intelligence and its Applications*

**46. Session Chair** in “2<sup>nd</sup> International Conference on Artificial Intelligence and Speech Technology (AIST 2020) being organized by Indira Gandhi Delhi Technical University for Women (IGDTUW), New Delhi, India.

**47. Keynote Speaker** in “5G<sup>AI</sup> INSAI Connected Global Forum and 2<sup>nd</sup> International Conference on Artificial Intelligence and Advanced Manufacturing (AIAM 2020) being organized in China.

*Talk on “Foundations of Cyber Physical Systems”*

**48. Keynote Speaker cum Session Chair** in Fourth International Conference on Advanced Informatics for Computing Research (ICAICR-2020), India.

*Talk on “Technologies and Advancements in Smart Grids and Intelligent Sensors”*

*Session Chair Track: Technical Session 1, 2.*

**49. Keynote Speaker cum Session Chair** at IEEE ICOT 2020 at Kyungpook National University, South Korea.

*Talk On “ Deep Dive into Blockchain, Bitcoins, Smart Contracts, Cryptocurrencies and Security? The Most Disruptive Tech in Years  
Session Chair: Technical Session 1-6.*

**50. Keynote Speaker** at International Conference on Electronics, Circuits and Information Engineering (ECIE 2021) being organized in Zhengzhou, China.  
*Topic: Industry 4.0- Transforming Industries and Digital Revolution.*

**51. Keynote Speaker cum Session Chair** at The 2021 International Conference on Digital Technologies and Applications (ICDTA 2021) being organized at Fez, Morocco.  
*Topic: Industry 4.0- Transforming Industries and Digital Revolution.*

**52. Keynote Speaker** at Second Annual International Conference on Data Science, Machine Learning and Blockchain Technology (AICDMB-2021) being organized at Vidyavardhaka College of Engineering, Mysuru, India.  
*Topic: Digital Twin: Myths Vs Reality*

**53. Guest of Honor and Session Chair** at International Conference on Advances in Material Science, Communication and Microelectronics (ICAMCM 2021) being organized by Department of Electronics and Communication Engineering, Jaipur Engineering College and Research Center, Jaipur, India.

**54. Session Chair** at International Conference on Artificial Intelligence and Sustainable Computing for Smart Cities (AIS2C2: 2021) being organized by Department of Computer Science and Engineering at Gautam Buddha University, Noida, India.

**55. Keynote Speaker** at 2021 Workshop on Algorithm and Big Data (WABD 2021) being organized by Transdisciplinary Information Sciences Conference series.

*Title of Talk: Industry 4.0 Making Traditional Industries to Super and Smart Factories of Future*

**56. Keynote Speaker** at 2<sup>nd</sup> International Conference on Machine Learning Applications (MLA 2021) being organized by ENSA, Kenitra.

**57. Keynote Speaker** at 3<sup>rd</sup> International Conference on Advances in Engineering, Science and Technology- 2021 (ICAEST 2021) being organized by Uttaraanchal Institute of Technology, Dehradun, India.

*Title of Talk: Industrial Internet of Things*

**58. Keynote Speaker** at Virtual International Conference on “Innovation and Technological Developments in Electronics, Computers and Communication” (ITDECC-2021) being organized at SRM Institute of Science and Technology, Chennai, India.

**59. Keynote Speaker** at International Conference on Artificial Intelligence and Big Data Applications (ICAIBD 2021) being organized in Chengdu, China.

**60. Keynote Speaker** at The First International Conference on Smart and Sustainable Agriculture (SSA 2021) being organized in Paris, France.

*Title of Talk: IoT in Agriculture*

**61. Keynote Speaker** at International Conference on Artificial Intelligence and Energy Systems (ICAIES 2021) being organized by Institute of Technical and Scientific Research, India (Cyberspace).

*Title of Talk:” Smart Grids and Intelligent Systems*

**62. Keynote Speaker cum Chief Guest** at International e-conference on Green Technologies for Power Generation, COMMUNICATION AND Healthcare (ICGPC 2021) being organized at St. Peter’s Institute of Higher Education and Research, Avadi, Chennai, India.

*Title of Talk: Green Technologies*

- 63. Keynote Speaker at International Conference on Data Science, Machine Learning and Applications-2021 (ICDSMLA 2021) being organized at Rabindranath Tagore University, Rajasthan and Institute for Engineering Research and Publications (IFERP).**  
*Title of Talk: Robotic Process Automation*
- 64. Keynote Speaker at 2021 International Conference on Intelligent Computing, Automation and Applications (ICAA 2021) being organized at China.**  
*Title of Talk: Futuristic Smart Intelligent Transportation System*
- 65. Session Chair cum Keynote Speaker at International Conference on Computational Intelligence and Communication Technologies (CCICT 2021) being organized by B.M. Institute of Engineering and Technology, India and The Karkonosze State University of Applied Sciences Poland.**  
*Title of Talk: Internet of Vehicles*  
*Session Chair: Internet of Everything and Wireless Sensor Networks.*
- 66. Keynote Speaker at International Conference on Intelligent Systems and Internet of Things (ISIOT 2021) being organized at China.**
- 67. Keynote Speaker at 3<sup>rd</sup> International Conference on Advances in Engineering, Science and Technology (ICAEST 2021) being organized by Uttaranchal Institute of Technology, India.**  
*Title of Talk: Industrial IoT*
- 68. Keynote Speaker at AICTE Sponsored International Colloquium on Recent Trends in Computer Science (ICRTCS-2021) being organized by Vidyavardhaka College of Engineering, India.**  
*Title of Talk: Explainable AI in Industry*
- 69. Keynote Speaker and Session Chair at 3<sup>rd</sup> Annual International Conference on Innovative Engineering Intelligent System Integration (ICISI 2021) being organized by School of Engineering, Ajeenkya DY Patil University, Pune, India.**  
*Title of Talk: Internet of Vehicles: Future Smart Transportation System*  
*Session Chair Track: Track 3A: Intelligent Computing*
- 70. Session Chair at 2<sup>nd</sup> Congress on Intelligent Systems (CIS 2021) being organized by Christ University, Bangalore, India.**  
**Session: TS05: Big Data Analytics**



- 71. Keynote Speaker and Session Chair at 2<sup>nd</sup> International Conference on Intelligent Computing Techniques for Smart Energy Systems (ICTSES 2021) being organized by Manipal University, Jaipur**  
*Title of Talk: Industrial Robotics and Internet of Robotic Things: Concepts, Architecture and Road ahead of Future*
- 72. Keynote Speaker at 3<sup>rd</sup> International Conference on Communication, Devices and Computing (ICCDC 2021) being organized by Department of Electronics and Communication Engineering, Haldia Institute of Technology, West Bengal, India.**  
*Title of Talk: Explainable AI in Industry*
- 73. Keynote Speaker at 2020 International Conference on Computer Engineering and Artificial Intelligence (ICCEAI 2021) being organized at Shanghai, China.**  
*Title of Talk: Industry 4.0 Transforming Traditional Industries to Next Generation Smart Factories*
- 74. Keynote Speaker at International Conference on Emerging Technologies for Computing, Communication and Smart Cities (ETCCS 2021) being organized by Baba Farid College of Engineering and Technology, Bathinda, Punjab, India.**  
*Title of Talk: Internet of Robotic Things: Applications, Challenges and Research Direction*
- 75. Keynote Speaker at 1<sup>st</sup> International Conference on Applied Mathematics, Modeling and Simulation in Engineering (AMSE 2021) being organized at Stanley College of Engineering and Technology for Women, Hyderabad, India.**  
*Title of Talk: Future Smart Transportation Systems*
- 76. Keynote Speaker at 7<sup>th</sup> Annual International Conference on Network and Information Systems for Computers (ICNISC 2021) being organized at Guiyang, China.**  
*Title of Talk: Future Wireless Communications Standards for IoT.*
- 77. Keynote Speaker cum Session Chair at 4<sup>th</sup> International Conference on Computational Intelligence and Data Engineering (ICCIDE 2021) being organized by School of Computer Science and Engineering (SCOPE), VIT – AP University, Amaravati, Andhra Pradesh, India.**

**78. Keynote Speaker cum Session Chair at Third International Conference on Computing, Communication and Cyber Security (IC4S 2021) being organized by Department of Electronics and Communication Engineering, Krishna Engineering College, Ghaziabad, U.P., India.**

*Title of Talk: Quantum Computing*

*Track Session: Communication and Networking Technologies*

**79. Session Chair at The 7<sup>th</sup> International Conference on Fuzzy Systems and Data Mining (FSDM 2021) being organized at Xiamen, China.**

*Track Session: Session 3: Fuzzy Application*

**80. Keynote Speaker at International Conference on Artificial Intelligence and Applications (ICAIA 2021) being organized at Suzhou, Jiangsu, China.**

**81. Keynote Speaker at 2021 International Conference on Communication Technology and Information Technology (ICCTIT 2021) being organized at Guangzhou, China.**

*Title of Talk: Future Wireless Communication Technologies: LoRaWAN*

**82. Session Chair at 4<sup>th</sup> International Conference on Futuristic Trends in Networks and Computing Technologies (FTNCT 2021) being organized by Department of Computer Science and Engineering, Institute of Technology, Nirma University, Gujarat, India.**

**83. Keynote Speaker at Two Days CSIR Seminar on Recent Trends in Machine Learning for Neuro Imaging organized by IFET College of Engineering, Villupuram, India.**

*Title of Talk: Deep Learning for Medical Imaging.*

**84. Keynote Speaker at e-Conference on IoT-SIAC (IoT in Social, Industry, Analytics and Communication) being organized by Department of Electronics Engineering, Thakur College of Engineering and Technology, Mumbai, India.**

*Title of Talk: Internet of Drone Things/Trends in Latest Drone Technology.*

**85. Keynote Speaker at 6<sup>th</sup> International Conference on Computing, Control and Industrial Engineering (CCIE 2022) being organized by China University of Geosciences and the Jiangnan University, China.**

*Title of Talk: 6G the Next Frontier: Vision, Roadmaps and Technologies.*



- 86. Keynote Speaker cum Session Chair at 5<sup>th</sup> International Conference on Advance Informatics for Computing Research (ICAICR 2021) being organized at Gurugram, India.**  
*Session Chaired: Technical Session-1*  
*Title of Talk: 6G the Next Frontier: Vision, Roadmaps and Technologies.*
- 87. Keynote Speaker at 6<sup>th</sup> International Conference on Advanced Computing and Intelligent Engineering (ICACIE 2021) being organized at Bhubneshwar Institute of Technology, Bhubneshwar, India.**
- 88. Plenary Session cum Session Chair at International Conference on Digital Technologies and Applications (ICDTA 2022) being organized by USMBA, Fez, Morocco.**  
*Plenary Session: Session 2*  
*Session Chair: Session 15 (Blockchain and Security)*
- 89. Keynote Speaker cum Session Chair at 12<sup>th</sup> International Conference on Cloud Computing, Data Science and Engineering (CONFLUENCE 2022) being organized at Amity University, Uttar Pradesh, India.**  
*Keynote Talk: 6G Wireless Communications*  
*Session Chaired: Computer Network and Sensors*
- 90. Keynote Speaker at Third Annual International Conference on Data Science, Machine Learning and Blockchain Technology (AICDMB 2022) being organized at Vidyavardhaka College of Engineering, Mysuru, India.**  
*Keynote Talk: Mobile Edge Computing: Architecture, Use-Cases and Applications.*
- 91. Keynote Speaker at 7<sup>th</sup> International Conference on Cyber Security and Information Engineering (ICCSIE 2022) being organized at Brisbane, Australia.**
- 92. Session Chair at 3<sup>rd</sup> International Conference on Computing Science, Communication and Security (COMS-2022) being organized at Ganpat University, Gujarat, India.**
- 93. Keynote Speaker at International Symposium on Applications and Innovations with Intelligent Systems being organized at Department of Computer Science, Amrita University, Mysuru.**  
  
*Keynote Talk: Artificial Intelligence in IoT*

**94. Session Chair at 4<sup>th</sup> International Conference on Machine Intelligence and Signal Processing (MISP 2022) being organized at Department of Computer Science and Engineering, National Institute of Technology, Raipur, India.**

*Session Title: Nature Inspired Algorithms for Real World Optimization*

**95. Keynote Speaker at 3<sup>rd</sup> IEEE International Conference on Advances in Electrical Engineering and Computer Applications (AEECA 2022) being organized at Dalian, China.**

**96. Keynote Speaker at 1<sup>st</sup> GEAST International Conference on “Machine Learning and Blockchain Technologies” (MLBT 2022) being organized at CIIR, SANSKRIT University, India.**

*Topic of Talk: Introduction to Machine Learning and Related Technologies, ML in Healthcare.*

**97. Keynote Speaker at 2<sup>nd</sup> International Conference on Recent Developments in Science, Engineering and Information Technology (ICRDSEIT 2022) being organized at Madhurai Kamraj University, Madhurai, India.**

*Topic of Talk: Software Defined Networking*

**98. Resource Person / Plenary Speaker / Keynote Speaker at International Conference on Advanced Computing and Communication Technology (ICACC 2022) being organized at Santhigiri College of Computer Sciences, Vazhithala, India.**

*Topic of Talk: Internet of Robotic Things*

**99. Keynote Speaker at International Conference on Innovative Development in Virtual and Rapid Prototyping (IDVRP 2022) being organized at Uttaranchal University, India.**

*Topic of Talk: Software Defined Networking*

**100. Keynote Speaker at 2022 IEEE International Conference on Advances in Electrical Engineering and Computer Applications being organized at Dalian, China.**

- 101. Session Chair at 2022 International Conference on Innovations and Development of Information Technologies and Robotics (IDITR 2022) –Virtual Conference.**

*Name of Session: Poster Session*

- 102. Keynote Speaker at 2022 International Conference on Computer Networks and Communications (ICCNC2022) being organized at Hangzhou, Zhejiang, China.**

*Topic of Talk: 6G: Architectures, Vision, Challenges and Real Time Case Studies*

- 103. Keynote Speaker cum Session Chair at International Conference on Computational Intelligence Communication Technologies (CCICT 2022), organized by B.M. Institute of Engineering and Technology, Sonapat in Collaboration with WSG University, Bydgoszcz, Poland and ABES Engineering College, Ghaziabad, India.**

*Topic of Talk: 6G Wireless Communications*

*Name of Session: IoT, Sensor Networks, NLP and Blockchain Technologies*

- 104. Keynote Speaker cum Session Chair at 5<sup>th</sup> International Conference on Control and Computer Vision (ICCCV 2022) being organized online/**

*Topic of Talk: Autonomous Vehicles: Future Transportation System*

*Name of Session: Session 6: Pattern Recognition and Image Analysis*

- 105. Keynote Speaker at 2022 4<sup>th</sup> International Conference on Artificial Intelligence and Computer Science (AICS 2022) Joint with 2022 3<sup>RD</sup> International Conference on Computer Science and Communication Technology (ICCSCT 2022) being organized at Beijing, China**

*Topic of Talk: Internet of Everything*

- 106. Session Chair at 3<sup>rd</sup> Congress on Intelligent Systems (CIS 2022) being organized at Christ University, India.**

*Name of Sessions: TS10: Emerging Technologies; TS11: Intelligent Systems*

- 107. Keynote Speaker at 7<sup>th</sup> International Conference on Cyber Security and Information Engineering (ICCSIE 2022), Sponsored by International Association of Applied Science and Technology (IAAST) at Beijing University of Technology, China.**

*Title of Talk: 6G Wireless Communications: Architecture, Technologies and Real Time Discussions*

108. **Keynote Speaker cum Chief Guest** at One Month Internship on “Robotics, Computer Vision, Data Science and IoT Applications” being organized by IEEE Information Theory 9ITS), Bangalore, India.
109. **Keynote Speaker cum Session Chair** at “International Conference on Intelligent Computing Systems and Applications (ICICSA 2022)” being organized by National Institute of Technology, Silchar, India.  
*Title of Talk: Internet of Medical Things and Artificial Intelligence Things*  
*Name of Session: Intelligent Systems*
110. **Keynote Speaker** at “2022 International Conference on Artificial Intelligence, Big Data, and Computer Applications (AIBDC 2022) being organized Virtually in China.  
*Title of Talk: Metaverse: Next Generation Augmented Reality*
111. **Keynote Speaker** at “8<sup>th</sup> Annual International Conference on Network and Information Systems for Computers (ICNISC 2022), 2022 International Conference on Intelligent Automation and Soft Computing (IASC 2022)” being organized Virtually in China.  
*Title of Talk: Internet of Medical Things and Metaverse: Next Generation Augmented Reality.*
112. **Keynote Speaker** at “2022 International Conference on Informatics, Networking and Computing (ICINC 2022) being organized AEIC Academic Exchange Information Center virtually.  
*Title of Talk: Internet of Vehicles: Future Envision of Smart Transportation*
113. **Keynote Speaker** at “2<sup>nd</sup> International Conference on Robotics, Automation and Intelligent Control (ICRAIC 2022)” being organized at Changshu, China.  
*Title of Talk: Internet of Robotic Things*
114. **Keynote Speaker** at 2022 Euro-Asia Conference on Frontiers of Computer Science and Information Technology (FCSIT 2022) being organized at Beijing, China.  
*Title of Talk: Industrial Internet of Things*
115. **Keynote Speaker** at 3<sup>rd</sup> International Conference on Adaptive Computational Intelligence (ICACI 2022) being organized at GSSS Institute of Engineering and Technology for Women, Mysuru, India.  
*Title of Talk: Internet of Medical Things and Artificial Intelligence of Things*

116. **Keynote Speaker** at International Conference on Data Intensive Applications and their Challenges (Computatia – X) being organized at VGU Campus, Rajasthan, India.  
*Title of Talk: Internet of Vehicles*
117. **Session Chair** at 2<sup>nd</sup> Online International Conference on Artificial Intelligence and Sustainable Computing for Smart Cities (AISC2 2022) being organized by Gautam Buddha University, India.  
*Title of Session: Session-1*
118. **Keynote Speaker** at 4<sup>th</sup> International Conference on Advances in Soft Computing Technologies-2022 (ICASCT 2022) being organized at Uttaranchal Institute of Technology, Uttaranchal University, Dehradun.  
*Title of Talk: 6G Wireless Communications*
119. **Keynote Speaker cum Session Chair** at 4<sup>th</sup> International Conference on Computing, Communications and Cyber Security (IC4S 2022) being organized at Nirma University, Gujarat, India.  
*Title of Talk: Autonomous Vehicles*  
*Session Number: Session: 6*
120. **Keynote Speaker** at International Conference on Communication, Security and Artificial Intelligence (ICCSAI 2022) being organized at Galgotias University, India.  
*Title of Talk: Metaverse: Next Generation Augmented Reality*
121. **Keynote Speaker** at 2022 Euro-Asia Conference on Frontiers of Computer Science and Information Technology (FCSIT 2022) being organized Virtually in China.  
*Title of Talk: Industrial Internet of Things*
122. **Keynote Speaker** at 6<sup>th</sup> 2022 International Conference on Wireless Communications, Networking and Applications (WCNA 2022) being organized at Wuhan, Hubei, China.  
*Title of Talk: 6G Wireless Communications*
123. **Keynote Speaker** at 13<sup>th</sup> International Conference on Cloud Computing, Data Science and Engineering (Confluence 2023) being organized at Amity University, Uttar Pradesh, Noida.  
*Title of Talk: 6G The Next Frontier: Vision, Roadmaps and Technologies*

124. **Keynote Speaker cum Session Chair** at International Conference on Digital Technologies and Applications (ICDTA 2023) being organized at Sidi Mohamed Ben Abdellah University, USMBA, Fez, Morocco.  
*Title of Talk: Autonomous Vehicles.*  
*Session Chair: Blockchain and Security*
125. **Keynote Speaker** at First International Interdisciplinary Conference on Energy, Nanotechnology and Internet of Things (ENT 2023) being organized by National Institute of Technology, Puducherry, Karaikal, India.  
*Title of Talk: Metaverse: Next Generation Augmented Reality*
126. **Keynote Speaker** at International Conference on “Recent Developments in Engineering, Science and Management (RDESM 2023)” being organized at Bhagwant Institute of Technology, India.  
*Title of Talk: Future Augmented Reality*
127. **Keynote Speaker** at 2023 International Conference on Advanced Sensing and Intelligent Systems (ICASIS 2023) being organized at Kunming, China.  
*Title of Talk: LoRaWAN Technology: Next Generation Wireless Communication Networks*
128. **Keynote Speaker** at 8<sup>th</sup> International Conference on Cyber Security and Information Engineering (ICCSIE 2023) being organized at Brisbane, Australia
129. **Keynote Speaker** at International Conference on Creativity, Innovation, Growth and Sustainability : Future Perspectives being organized by School of Business and Economics, Admas University, Kolkata.  
  
*Title of Talk: Blockchain Technology in Supply Chain Management*
130. **Keynote Speaker** at 2023 Asia Pacific Conference on Image Processing, Electronics and Computers (IPEC 2023) being organized in Dalian, China.  
*Title of Talk: Internet of Everything*
131. **Session Chair** at 2023 5<sup>th</sup> International Conference on Advances in Computer Technology, Information Science and Communications (CTISC 2023) bring organized Virtually.  
*Session I and II*
132. **Keynote Speaker** at 2<sup>nd</sup> International Conference on Mechantronics and Mechanical Engineering (ICMME 2023) being organized Virtually in China.  
*Title of Talk: Internet of Robotic Things*

- 133. *Keynote Speaker* at 3<sup>rd</sup> International Conference Data Science and Big Data Analytics (IDBA-ACMWIR 2023) being organized at Sri Aurobindo Institute of Technology and Namibia Institute of Science and Technology.  
*Title of Talk: ChatGPT and Large Language Models (LLM)***
- 134. *Keynote Speaker* at 2023 International Conference on Intelligent Computing, Automation and Applications (ICAA 2023) being organized Virtually in China.  
*Title of Talk: ChatGPT and Reinforcement Learning***
- 135. *Keynote Speaker* at International Conference on Recent Developments in Cyber Security (ReDCySec-2023) being organized at Sharda University, India.  
*Title of Talk: Security in Autonomous Vehicle***
- 136. *Session Chair* at International Conference on Low Energy Digital Devices and Computing (ICLED 2023) being organized at National University of Singapore, Singapore.**
- 137. *Session Chair* at International Conference on Intelligent and Smart Computation (ICIASC 2023) being organized at Chandigarh University, India.  
*Session Name: Technical Session TS1.1***

## **International Citations & Indexing**

- **Cited in Research.com (9<sup>TH</sup> Edition: Computer Science): National Rank: 2; World Rank: 9867; Citations: 4263; D-Index: 31**
- **Cited in A D Index 2021. University Rank: 1 (Computer Science); Viet Nam: 1 (Computer Science); Asia: 517; World: 2500;**
- **Biography Cited in Marquis Who's who in the world 2014/2015/2016/2017/2018/2019/2020/2021/2022/2023.**
- **Biography Cited in Asia Pacific: Who's Who Men and Women of Achievement 2013 by Rifacimento International, New Delhi.**
- **Biography Cited in Marquis Who's Who in Asia 2017.**
- **World Book of Researchers 2018.**

**<https://bookofresearchers.com/2018/anand-nayyar/>**



## **Research Supervision Experience**

**Total Students Completed: 7**

### **M.Tech (ECE) Supervision**

**Supervision Completed: 2**

**Supervision Undergoing: xxx**

- 1. Sandeep Kumar Arora: An Intrusion Detection System (IDS) & Traffic Analysis, M.Tech (ECE) from Lovely Professional University, Punjab. Reg No: 40900113. Thesis Defended on May 23, 2012.**
- 2. Vicky Kumar: Zero Packet Loss Hand off Mechanism in SIP Based Wireless Networks, M.Tech (ECE) from Lovely Professional University, Punjab. Reg No: 11011411. Thesis Defended on May 23, 2012.**

### **M.Tech (CSE) Supervision**

**Supervision Completed: 5**

**Supervision Undergoing: 0**

- 1. Tejinderdeep Singh Kalsi: Detection and Correction of Sinkhole Attack with Novel Method in WSN using NS2 Tool, M.Tech (CSE) from Punjab Technical University, Punjab. Reg No: 96436582706. Thesis Defended on May 15, 2013.**
- 2. Naveen Sharma: Enhancement in DDCSA for improving Power Consumption and Network Lifetime of Wireless Sensor Networks using Geographical Forwarding and Face Routing Technique, M.Tech (CSE) from Punjab Technical University, Punjab. Reg No: 1290120223. Thesis Defended on September 1, 2014.**
- 3. Shuchi Sharma: Combating Congestion in TADR via Combined Dominating Set (CDS) Technique in Wireless Sensor Network (WSN), M.Tech (CSE) from Punjab Technical University, Punjab. Reg No: 1290122235. Thesis Defended on September 12, 2014.**

4. **Manjot Kaur: A Novel Defense Mechanism for Counterfeiting and Combating Jelly Fish Attack in Mobile Adhoc Networks (MANETS), M.Tech (CSE) from Punjab Technical University, Punjab. Reg No: 1290120218.**

**Thesis Defended on October 1, 2014.**

5. **Agam Gupta: Improved Energy Efficiency and Reduced Delay using Self Knowledge with SCHP in Wireless Sensor Networks (WSN), M.Tech (CSE) from Punjab Technical University, Punjab. Reg No: 1290120201.**

**Thesis Defended on December 18, 2014.**

### **M.S. (CS) Supervision**

**Supervision Completed: 2**

1. **Vo Mai Huong: K14MCS: Performance comparison of Web App Testing via Manual Testing Methodology v/s Automation Testing Tool.**
2. **Ngo Ding Cuong: K14MCS: Implementing Serverless Compute Using Amazon Web Services and Private Cloud based SaaS Solution.**

### **MCA Project Guidance**

**Supervision Completed: 30**

**(2013 Batch) (Project Defended on May 24, 2013)**

**No of Students: 3**

1. **Mandeep Kaur: Web Penetration Testing and Cyber Security, Batch: 2010-13. Roll No: 104762183597**
2. **Kalyani Sharma: Website Penetration Testing, Batch: 2010-13. Roll No: 104762183595**
3. **Jasleen Kaur Reehal: Article Submission Application, Batch: 2010-13. Roll No: 10476183594**

**(2014 Batch) (Project Defended on May 2, 2014)**

**No of Students: 5**

- 1. Kalpana: Website Development of Friends\_Buzz.com (Online Social Networking Website), Batch: 2011-14. Roll No: 1178259**
- 2. Jyoti Mehta: ONLINEKCLMCA.COM, Batch: 2011-14. Roll No: 1178258**
- 3. Manpreet Kaur: B2BMART.COM, Batch: 2011-14. Roll No: 1178268**
- 4. Devinder Kaur: B2BFAIR.COM, Batch: 2011-14. Roll No: 1178246**
- 5. Neha Dutt: Web Shoppie, Batch: 2011-14. Roll No: 1178274**

**(2015 Batch) (Project Defended on May 21, 2015)**

**No of Students: 9**

- 1. Sarabjit Kaur: To Access Applications Using Web Access Through Terminal Server, Batch: 2012-15. Roll No: 1278258**
- 2. Tanvi: Deploying Personal Virtual Desktops by using Remote Desktop Web Access (Cloud Computing), Batch: 2012-15. Roll No: 1278269**
- 3. Manpreet Singh: Mobile Bazaar, Batch: 2012-15. Roll No: 1278244**
- 4. Kanika Malhotra: Perfect Match.com, Batch: 2012-15. Roll No: 1278238**
- 5. Lakhbir: Swipe-Run, Batch: 2012-15. Roll No: 1278242**
- 6. Anjali Kohli: Cleartax.com, Batch: 2012-15. Roll No: 1334395**
- 7. Harinderjit Singh: Getjobs.com, Batch: 2012-15. Roll No: 1334404**
- 8. Navneet Kaur: Programminger.in, Batch: 2012-15. Roll No: 1278248**
- 9. Raju: Online Bid Management Website, Batch: 2012-15. Roll No: 1334435**

**(2016 Batch) (Project Defended on June 2, 2016)**

**No. of Students: 6**

- 1. Amit Kumar: Android Gladys Chat, Batch: 2014-16. Roll No: 1434141**
- 2. Kriti Grover: Outside 9 to 5, Batch: 2014-16. Roll No: 1434166**
- 3. Nidhi Duggal: E-Movies, Batch: 2014-16. Roll No: 1434178**
- 4. Satinder Kaur: Easy Bargains, Batch: 2014-16. Roll No: 1434192**
- 5. Satvir Kaur: Women Security App, Batch: 2014-16. Roll No: 1434193**
- 6. Satwinder Pal Singh: Spying Application, Batch: 2014-16. Roll No: 1434194**

**(2017 Batch) (Project Defended on May 26, 2017)**

**No of Students: 7**

- 1. Harmanjeet Kaur: Event Management Website, Batch: 2015-17. Roll No: 1523800**
- 2. Harpreet Kaur: Virasat Punjab, Batch: 2015-17. Roll No: 1523801**
- 3. Harwinder Kaur: Health Insurance, Batch: 2015-17. Roll No: 1523803**
- 4. Heena: Ganpati Modern Automation, Batch: 2015-17. Roll No: 1523804**
- 5. Hemneter: Total Fitness, Batch: 2015-17. Roll No: 1523805**
- 6. Jasdeep Kaur: Dance Academy, Batch: 2015-17. Roll No: 1523806**
- 7. Jatinder Kumar: Just Jalandhar, Batch: 2015-17. Roll No: 1523808**

## **Research Grants/Grassroot Projects**

### **Research Grants**

#### **Completed: 2**

- **IRAJ- (Institute of Research and Journals) - Grant worth Rs 1.5 Lakhs for Ph.D. Research in the area of Wireless Sensor Networks and Swarm Intelligence.**

**Letter No: 01/056**

**(Project Completed and Submitted on: 1 June, 2017)**

- **Gill Instruments- Grant worth Rs 2 Lakhs as MSP430 Wireless Sensor Network Kit (1 Gateway, 3 Sensor Nodes, Emulator, IAR Software) for Live Protocol Implementation of Ph.D. Research.**

**(Project Completed and Submitted on: 1 June, 2017)**

### **Grassroot Project**

#### **Completed: 1**

- **A Novel Design, Implementation of Electricity Data Collection for Smart Grids- Smart PDM V1.0**

**Letter No: 3800/QD-DHDT. Project Defended on : March 2021.**

#### **Undergoing: 1**

- **ASEAN- India Collaborative R&D Scheme under ASEAN-India S&T Development Fund (AISTDF), Sponsored by Department of Science and Technology, Government of India. File No: CRD/2020/000284**

**Title: "Environmental Monitoring in Underground Mines using Sensor-enabled Internet of Things"**

## **Ph.D Thesis Evaluations**

**Total Evaluations: 28**

1. **Kamali Gupta, Adaptive and Dynamic Management of Cloud Data Centers. Department of Computer Science and Engineering, Maharishi Markandeshwar University (MMU), Ambala, Haryana, India. Reg No: 09-ECM-1807**
2. **Parteek Agarwal, A Machine Translation System for Sanskrit to Hindi Language. Department of Computer Science and Engineering, Punjab Technical University (PTU), Kapurthala, Punjab, India. Registration Number: 1303087**
3. **Harsimranjit Singh Gill, Mitigation of Security Issues in Next Generation Passive Optical Networks. Department of Electronics and Communication Engineering, Punjab Technical University (PTU), Kapurthala, Punjab, India. Registration Number: 1405013**
4. **Pertik Garg, Restoration Technique to Optimize Recovery Time for Efficient OSPF Network. Department of Computer Science and Engineering, Punjab Technical University, Kapurthala, Punjab, India. Registration Number: 1103028**
5. **Arun Kumar, Design of Innovative and Efficient Algorithms for Efficient Fruit Quality Assessment. Department of Computer Science and Engineering, Visvesvaraya Technological University, India. Seat Number: 2G112PEN03**
6. **Parveen Kakkar, Detection & Mitigation of DDoS Attacks in Mobile Adhoc Networks. Department of Computer Science and Engineering, Punjab Technical University, Kapurthala, Punjab, India. Registration Number: 1003007**
7. **S Subalakshmi, Performance Analysis of EER-LEACH Protocol for Body Sensor Network. Department of Computer Science, Bharathiar University, Coimbatore. Registration Number: Ph.D-CB-DEC2013-0741**
8. **Kapil Sethi, Development of Machine Learning based Support system to select subject for subjects. Faculty of Engineering and Technology, Shoolini University of Biotechnology and Management Sciences, Solan, H.P. Registration Number: 151092**
9. **Gaurav Gupta, Development of Android Assistive toolkit for Alzheimer Patients and Prediction of Alzheimer Associated Protein Using Machine Learning. Faculty of Engineering and Technology, Shoolini University of Biotechnology and Management Sciences, Solan, H.P. Registration Number: 151191**
10. **Sudhakar K.N, Load Balancing in Self Organized Wireless Sensor Networks. Department of Electronics and Communication. Visvesvaraya Technological University, India. Seat Number: 1CR13PEN05.**

11. N. Poornima, Semantic Enriched Lecture Video Retrieval using Machine Learning Techniques, School of Computing Science and Engineering, Vellore Institute of Technology, India. Registration Number: 14PHD1104.
12. Abhay Sharma, Image Segmentation Using Firefly Algorithm, Department of Computer Science and Engineering, Amity University, Rajasthan, India. Registration Number: A20436414004.
13. Sudha M, Development of Efficient Fault Tolerant Methods and Practices for Cloud Computing Environment, Department of Computer Science, Visvesvaraya Technological University, India. USN: 1RV12PEN04.
14. Rubeena, Object Based Classification Using Multi-Resolution Image Fusion, Department of Civil Engineering, Delhi Technological University, India. Registration Number: 2K13/PHDCE/03.
15. Ramesh Arjun Medar, Design of Novel Crop Yield Prediction Methods Using Machine Learning Techniques, Department of Computer Science and Engineering, Visvesvaraya Technological University, India. USN: 2GI15PEJ12.
16. Sachin Sharma, Data Dissemination and Optimization of Processes for Business Data Analytics, Department of Computer Science and Engineering, Maharishi Markandeshwar University, Ambala, India. Reg No: 12-ECM-1396
17. Gaindi Lal Saini, Software Quality Prediction of Open Source Software Using Computational Intelligence, Department of Computer Science and Engineering, Amity University, Rajasthan, India. Reg No: A20436415013
18. Alok Katiyar, A Security Context Aware Service Discovery (SCASD) Model in Pervasive Computing Environment, Department of Computer Science and Engineering, Sharda University, Greater Noida, India. Reg No: 2010002604
19. K. Chidananda Murthy, Generation of Chaotic Binary Sequences for Cryptographic Applications, Department of Electronics and Communication, Visvesvaraya Technological University, India. Reg No: 1DA15PEJ04
20. Shyla M K, Image Steganography for Secure Data Communications, Department of Electronics and Communications Engineering, Sri Siddhartha Academy of Higher Education, India. Reg No: 15PH4EC008
21. Vinisha Sumra, An Adaptive Malware Detection Mechanism for Smart Phone, Department of Computer Science and Engineering, Maharishi Markandeshwar University (MMU), Ambala, Haryana, India. Reg No: 15-Ph.D-023
22. Neha Sharma, Image Optimization Through Genetically Intelligent Steganography for Enhancing Cyber Security, School of Engineering and Sciences, GD Goenka University, Gurugram, Haryana, India. Reg No: 160020601006

- 23. U. Gomathi, The Unified Framework for Distributed Multi Constrained Channel Access Mechanism for Mobile Adhoc Network, Department of Computer Science, Bharathiar University, India.**
- 24. A. Uma Maheshwari, DESIGN AND DEVELOPMENT OF EFFECTIVE INFORMATION RETRIEVAL ARCHETYPE FOR DISCERNMENT OF SEMANTICDRIFT IN NLP, Bharathiar University, India.**
- 25. Devika G, “Computational Intelligence Based Optimization of Energy Aware Routing in WSN”, Department of Computer Science and Engineering, Sri Siddharatha Academy of Higher Education, India.**
- 26. P Deepika, “Development of Effective Design for Cardiovascular Disease Classification Through Novel Feature Selection and Hybrid Optimization Machine Learning Techniques”, Bhartiya University, India.**
- 27. S. Nandhini, “A Framework for Detection and Classification of Plant Leaf Diseases Using CNN Optimized by Evolutionary Methods”, Sathyabama Institute of Science and Technology. Registration Number: 2018191121**
- 28. Safira Begum, “Recommendation System for evaluating student performance using predictive analysis”, Visvesvaraya Technological University, India. Registration Number: 5VW16PEJ99**



## **(SEMINARS/WORKSHOPS/TECHNICAL LECTURES DELIVERED)**

### **(Seminars/Webinars Delivered)**

1. Organized Seminar on “Career in Networking & Internet Terminology” at Quest Infosys, Regional Center Punjab Technical University, Ludhiana
2. Organized Seminar on “Database Administration-Oracle & Internet Security” in Punjab Technical University Center (460) in Sirhind, Fatehgarh Sahib.
3. Organized seminar on “Wireless Networking & Securing Networks” at Quest Infosys, Regional Center Punjab Technical University, Ludhiana
4. Organized seminar on “Data Recovery: Mechanisms and Techniques” at Quest Infosys, Regional Center Punjab Technical University, Ludhiana.
5. Organized seminar on “Career and Futuristic Impact of Information Technology in career of India + Programming Aspects of Java & .net” at Quest Infosys, Regional Center Punjab Technical University, Ludhiana.
6. Organized 3 Days International Online Faculty Development Program on “AI and IoT for Medical Applications” by GMR Institute of Technology, Andhra Pradesh, India. (June 1- June 3, 2020)
7. Organized 1 Day Webinar on “Internet of Medical Things + Artificial Intelligence Internet of Things” at Career Point University, Kota, Rajasthan, India. (June 10, 2020)
8. Organized International Workshop on IoT, AI and Machine Learning for Engineering on “Internet of Everything”. (June 13, 2020)
9. International Webinar on Strategies against the Covid-19 Pandemic, Delivered Talk on “Artificial Intelligence on Healthcare + Case Study on Covid-19” at Department of Biotechnology, Kumaun University, Nainital, India. (June 18, 2020)
10. International Webinar on Future of Technology using Cloud Computing and Industry 4.0, Delivered talk on “Industry 4.0” at Sant Baba Bhag Singh University, Punjab. (June 18, 2020)

11. **Organized 2-Days Online Webinar on “Tips to formulate Research Project Proposals and Write Technical Papers” at Department of Electronics and Communication Engineering, GMR Institute of Technology, Andhra Pradesh, India. (June 21-22, 2020)**
12. **Organized International Webinar on “Internet of Vehicles” at Department of Electronic and Telecommunication Engineering, MGM’S College of Engineering, Nanded, India. (June 28, 2020)**
13. **Organized 1 Day International Webinar on “Cyber Physical Systems and Real Time Case Study on Internet of Underwater Things” at Department of Electrical Engineering, Narula Institute of Technology, Kolkata, India. (June 28, 2020)**
14. **Organized 1 Day International Webinar on “Brain Computer Interface and its Applications, Research Issues” at Department of Electronics and Communication Engineering, Brainware University, Kolkata. (June 30, 2020).**
15. **Organized 1 Day International Webinar on “Research in Higher and Technical Education” at One Day International Webinar on Learners Never Stop Learning- Risk Management for Students and their future. Organized by BITT Polytechnic College, Jharkhand, India. (June 30, 2020).**
16. **Organized 1 Day International Webinar on “Internet of Autonomous Vehicles” at Hindustan College of Engineering and Technology, Coimbatore, India. (July 6, 2020)**
17. **Organized 1 Day International Webinar on “Blockchain Technology” at Department of Computer Science and Engineering, Faculty of Engineering and Technology at Khaja Bandanawaz University, Mumbai, India. (July 7, 2020)**
18. **Organized 1 Day International Webinar on “Introduction to Internet of Things (IoT) and Its Application” at Mandsaur University, Mandsaur, India. (July 7, 2020)**
19. **Organized 1 Day International Webinar on “Industry 4.0 Cyber Physical Systems and Real Time Cases” at JSPM’s Imperial College of Engineering and Research, Wagholi, Pune, India. (July 10, 2020)**
20. **Organized 1 Day International Webinar on “6G Technologies” at Hindustan College of Arts and Sciences, Coimbatore, India. (July 16, 2020)**

21. Organized 1 Day International Webinar on “Industry 4.0” at Jeppiaar Engineering College, Chennai. (July 20, 2020)
22. Organized 1 Day International Webinar on “Artificial Intelligence for Healthcare” at Vidyavardhaka College of Engineering, Wireless Inter Networking Group, Mysuru, India. (July 23, 2020)
23. Organized 1 Day International Webinar on “Research Methodology- Paper Writing and Online Tools” at Department of Electrical Engineering, Sobhasaria Group of Institutions, Sikar, Rajasthan. (July 24, 2020)
24. Organized 1 Day International Webinar on “Leveraging Artificial Intelligence in Healthcare-Special Reference to COVID-19 Pandemic” at Amar Singh College, Srinagar, India. (July 28, 2020)
25. Organized 2 Days International Webinar on “High Quality Research- Approach, Design and Publishing” at Bangalore Institute of Technology, Bengaluru, India. (August 5, 6, 2020)
26. Organized 1 Day International Webinar on “Artificial Intelligence in Healthcare” at SNS College of Technology, Chennai, India. (August 7, 2020)
27. Organized 1 Session at IEEE Virtual Talk Series-2020 on “Online Research Tools for Effective Research+Tips for Writing an Effective SCIE Paper+Tips for Acceptance” at IEEE ACSIR-CSIO-Student Branch, Chandigarh, India. (August 10, 2020)
28. Organized 1 Day International Webinar on “Internet of Drone Things (IoDT)” AT Gandhipathy Tulsi’s Jain Engineering College, Vellore, Tamil Nadu, India. (August 11, 2020)
29. Organized 1 Session at International Webinar on “Wireless Communication (6G) and IoT” at Shri Sant Gajanan Maharaj College of Engineering, Shegaon, India. (August 12, 2020)
30. Organized 1 Session at International Webinar on “Industry 4.0” at IETE Mysuru Center, India. (August 16, 2020)
31. Organized 1 Session at BPB Publications on “Industry 4.0: Transforming Industries to Smart Industries in Near Future” (September 5, 2020)
32. Organized 1 Session at Sardar Vallabhbhai Patel Institute of Technology-VASAD, India on “Blockchain and Its Applications” (September 12, 2020)

33. Organized 1 Session at Bharati Vidyapeeth's College of Engineering, New Delhi India on "Career in Programming" (October 6, 2020)
34. Organized 2 Days Webinar at Vaagdevi Engineering College, Warangal, India on "Artificial Intelligence for Health Applications" (October 6, 7, 2020)
35. Organized 1 Day Webinar at Surya Engineering College, Erode, Tamil Nadu on "Internet of Drone Things" (October 27, 2020)
36. Organized 1 Day Webinar at Center for Development of Advanced Computing (CDAC), Mohali, India on "LoRaWAN" (October 29, 2020)
37. Organized 1 Day Webinar at VIT, Vellore, India on "Introduction to LoRaWAN Technology and Research Opportunities" (November 28, 2020)
38. Organized 1 Day Webinar at Raj Kumar Goyal Institute of Technology, India on "Cobotics" (December 22, 2020)
39. Organized 1 Day International Webinar at Shri Neeljanteshwar Government P.G. College, India on "Autonomous Vehicles: Future Transportation for Smart Cities" (January 5, 2021)
40. Organized 1 Day Webinar on One Day International workshop on E-Waste : Awareness and its Management at Science College, Nanded, Mumbai, India on "E-WASTE MANAGEMENT AND ITS EFFECTS" (January 9, 2021)
41. Organized 1 Day Webinar on Career Opportunities in Machine Learning and AI at Jagannath University, Rajasthan, India on "Career Opportunities in Machine Learning and AI" (February 11, 2021)
42. Organized 1 Day Webinar at Chandigarh University, Chandigarh, India on "*Internet of Everything: Critical Applications and Real Time Implementations*" (19<sup>th</sup> April, 2021)
43. Organized 1 Day Webinar at Imperial College of Engineering and Research on "*Digital Twin Technology*". (Date: May 8, 2021)
44. Organized 1 Day Webinar at Model Institute of Engineering and Technology on "*Smart Grid Technology*". (Date: May 29, 2021)
45. Organized 1 Day Webinar at Muthayammal Engineering College, Tamil Nadu on "*Explainable Artificial Intelligence in Industry*". (Date: 10<sup>th</sup> June, 2021)

46. **Organized 1 Day Webinar at Government College of Arts, Science and Commerce, Goa on “*Exploring Data Science for Non Data Scientists in Economics and Banking Management*”. (Date: 21<sup>st</sup> June, 2021)**
47. **Organized 1 Day Webinar/Guest Lecture at International Symposium Information Technology and Multimedia on “*Reimagining Learning and Transforming Education*” by International Unit, Politeknik METrO Tasek Gelugor, Penang, Malaysia. (Date: 28<sup>th</sup> August, 2021)**
48. **Organized 1 Day Webinar on “*Smart Vehicle in Smart City*” at Stekom University, Indonesia. (Date: 28<sup>th</sup> September, 2021)**
49. **Organized 1 Day International Seminar on “*Artificial Intelligence in Healthcare Informatics: From Hype to Impact*” at VIT, Bhopal, India. (Date: November 27, 2021)**
50. **Organized 1 Day Webinar on “*Mobile Edge Computing: Architectures, Applications and Challenges*” at APNG Association, Viet Nam. (Date: 16<sup>th</sup> April, 2022)**
51. **Organized 1 Day Webinar on “*Digital Twins: Transforming Change in Industries*” at International Virtual Lecture on Adapting to Change Through Innovation and Technology at Bukidon State University, Bukidon, Philippines. (Date: 25<sup>th</sup> May, 2022)**
52. **Organized 1 Day Technical Talk on “*Internet of Drone Things (IoDT)*” at Techtonic 2022, Wipro Technologies (Date: 9<sup>th</sup> June, 2022)**
53. **Organized 1 Day Webinar on “*Internet of Robotics and Futuristic Drone Technology*” at IEEE Robotics and Automation Society, India. (Date: 23<sup>rd</sup> September, 2022)**
54. **Organized 1 Day Webinar on “*Internet of Medical Things*” at Asansol Engineering College, India (Date: 14<sup>th</sup> October, 2022)**
55. **Organized 1 Day Webinar on “*Industry 4.0 and Cyber Physical Systems: Future Industrial Transformation*” at Shri Vishwakarma Skill University, India (Date: 29<sup>th</sup> November, 2022)**
56. **Organized 1 Day Webinar at Akal University, Punjab on “*Discover the Future of Healthcare: Internet of Medical Things*” (Date: 14<sup>th</sup> March, 2023)**

- 57. Organized 1 Day International Level Webinar at Medi Caps University on “*Internet of Everything*”. (Date: 30<sup>th</sup> March, 2023)**
- 58. Organized 1 Day International Webinar at VELS University on “*6G Wireless Communication*”. (Date: 27<sup>th</sup> April, 2023)**
- 59. Organized 1 Day International Webinar at University of Turbat on “*Internet of Drone Things (IoDT)*”. (Date: 17<sup>th</sup> May, 2023)**

## **(Special Invited Technical Lectures)**

1. Technical Lecture delivered on “Career in Networking, Database and Software Engineering. Trends in Latest Technologies like Android and 3G Networks” being organized by Rayat Bahra college of Engineering and Nanotechnology for Women, Hoshiarpur.
2. Technical Lecture delivered on “Cloud Computing and Future Trends in Cloud Computing” being organized by Rayat Bahra College of Engineering and Nanotechnology for Women, Hoshiarpur.
3. Technical Lecture delivered on “Computer Networks and Network Security” being organized by Sant Hira Dass Kanya Mahavidyalaya, Kala Sanghian, Distt. Kapurthala.
4. Technical Lecture delivered on “Research Methodology and Cyber Security” being organized by CGC Landran Group of Colleges, Chandigarh.
5. Technical Lecture delivered on “Innovations in Research and Wireless Sensor Networks” being organized by Global Institute of Engineering and Emerging Technologies, Amritsar.
6. Technical Lecture delivered on “Current and Future Medical Technologies” being organized by Punjab Institute of Medical Studies (PIMS), Jalandhar.
7. Technical Lecture delivered on “MOSIX OS, Red Hat Linux Administration and Windows 2012 Administration” in Department of Computer Science being organized by CGC Landran Group of Colleges, Chandigarh.
8. Technical Lecture delivered on “Computing Technologies” in Department of Computer Science being organized by S.G.G.S. Khalsa College, Mahilpur, Hoshiarpur.
9. Technical Lecture delivered on “HR Interview-Preparation” in Department of Computer Science & Engineering being organized by Lyallpur Khalsa College of Engineering, Jalandhar.

10. Technical Lecture delivered on **“Wireless Sensor Networks- Live Demonstration of Sensor Nodes and Issues on WSN”** in Department of Computer Science being organized by Desh Bhagat University, Mandi Gobindgarh.
11. Technical Lecture delivered on **“Security Issues and Recent Advancements of IoT in Healthcare”** in VIT University, Vellore, India.
12. Technical Lecture delivered on **“Internet of Drone Things (IoDT)”** in VIT University, Vellore, India.
13. Technical Lecture delivered on **“Industry 4.0”** in DAV Institute of Engineering and Technology, Punjab, India.
14. Technical Lecture delivered on **“Blockchain and Bitcoins”** in Bharti Vidyapeeth College of Engineering, New Delhi, India.
15. Technical Lecture delivered on **“Trends in Cloud Computing towards Industry Oriented Concepts”** in IILM, Noida, India.
16. Technical Lecture delivered on **“Future Trends in Networking and Communication”** at Dr. Akhilesh Das Gupta Institute of Technology and Management (Formerly Northern India Engineering College) at New Delhi, India.
17. Technical Lecture delivered on **“Futuristic Artificial Intelligence Direction Towards the Internet of Vehicles and Cyber Security”** in School of Information and Communication Technology, Gautam Buddha University, Noida, India.
18. Technical Lecture delivered on **“Artificial Intelligence in Wireless Networks”** in Department of Telecommunication Engineering at Sri Siddhartha Institute of Technology, Tumakuru.
19. Technical Lecture delivered on **“Career in Programming and Latest Trends 2020 in Technology”** in Department of ECE, CSE at Vidya Vikas Institute of Engineering and Technology, Mysore, Karnataka.



20. Technical Lecture delivered on “6G Wireless Technology, Panel Discussion on General Research, IoT, IoT Lab Development and Research Methodology” in Department of ECE, CSE at Vidyawardhaka College of Engineering, Mysore, Karnataka.
21. Technical Lecture delivered on “Career in Programming” in Department of ECE at GSSS Institute of Engineering and Technology for Women, Mysore, Karnataka.
22. Technical Lecture delivered on “Internet of Drone Things (IoDT)” in Department of ECE at SJB Institute of Technology, Bengaluru, India.
23. Technical Lecture delivered on “Bitcoins, Blockchains and Cryptocurrencies” in Online Lecture Series organized by Amity Institute of Information Technology (AIIT), Amity University, Noida, India.
24. Technical Lecture delivered on “Industry 4.0” in Online Lecture Series organized by Amity Institute of Information Technology (AIIT), Amity University, Noida, India.
25. Technical Lecture delivered on “Transforming Traditional Industries to Smart Manufacturing via Industry 4.0” in Department of Computer Science and Engineering, University School of Information and Communication Technology, Gautam Buddha University, Noida, India.
26. Technical Lecture delivered on “How to Use Cloud Computing Effectively (Theory to Practise)” in Department of Computer Science and Engineering, Sathyabama Institute of Science and Technology, Chennai, India.

## **Seminar's/Workshop's/Faculty/Staff Development Programs (FDP/SDP Attended)**

**Total FDP'S Attended: 25**

### **28 Days FDP Programs**

- 28 Days Faculty Development Program on “How to Clear Patent Agent Examination” organized by IP EVER LLP. Dates: 6<sup>th</sup> December, 2021 to 12<sup>th</sup> January, 2022.

### **16 Days FDP Programs**

- 16 Days Faculty Development Program on “Deep Learning and Computer Vision in Image and Video Data Analysis” organized by EduxLabs in Association with E-CELL IIT Hyderabad. Dates: 12-27 July, 2021

### **14 Days FDP Programs**

- 12 Days (2-Weeks) Faculty Development Program on “Blockchain Technology and its Applications” organized by EduxLabs in Association with Mechanica IIT Madras. Dates: 22<sup>nd</sup> August – 6<sup>th</sup> September, 2022

### **12 Days FDP Programs**

- 12 Days Faculty Development Programme on “Advanced Optimization Techniques and Hands on with MATLAB/SCILAB” being jointly organized by Electronics and ICT Academy, MNIP Jaipur; NIT Patna; PDPM IIT DM Jabalpur. Dates: 13-24 July 2020

## **8/7 Days FDP Programs**

- **7 Days National Workshop on “Computer Networks and Computing Technologies (CNCT-2011)” at Apeejay Institute of Fine Arts, Jalandhar. Dates: 22-28 December, 2011**
- **8 Days PTU Sponsored Workshop on “Human Values and Professional Ethics (HVPE)” at Swami Paramanand Institute of Engineering and Technology, Lalru, Mohali. Dates: 30 Apr-7 May, 2012**
- **7 Days IGCCIA & IRD Sponsored Workshop on “Emerging Trends & Challenges in Management and IT Education” at KCL Institute of Management and Technology, Jalandhar. Dates: 14 Dec-20 Dec, 2015.**

## **5 Days FDP Programs**

- **5 Days AICTE Sponsored Staff Development Programme (SDP) on Research Methodology and Data Analysis using SPSS 18.0 at Bhai Gurdas Institute of Engineering and Technology, Sangrur. Dates: 21-25 May, 2012.**
- **5 Days Short Term Course (STC) on Recent Trends in Optical Communication Systems and Networks at Thapar University, Patiala, Punjab. Dates: 24-28 Dec, 2012.**
- **5 Days Computer Society of India (CSI) Sponsored National Workshop on Network Simulator 3 (NS-3) ‘Simulation for Network Protocols on a Complex Innovation Network (Sim4Net 2016) at Amity University, Jaipur, Rajasthan. Dates: 19-23 December, 2016.**
- **5 Days FIRST Sponsored Training Workshop on “Fundamentals on High Spectral Efficiency Communications” at University of Da Nang, Da Nang, Vietnam. Dates: May 28 to June 1, 2018.**

- **5 Days Online Training on “Industrial IoT using LoRaWAN Technology” being organized by Enthu Academic Solutions (An Academic Division of Enthu Technology Solutions, India Pvt. Ltd.). Dates: April 27, 2020 to May 1, 2020. Certificate No: EAS202104A036**

### **3 Days FDP Programs**

- **3 Days Faculty Development Program on “Learn Arduino Step by Step” being organized by GMR Institute of Technology, Kakinada. Dates: 15<sup>th</sup> May, 2020 to 17<sup>th</sup> May, 2020**

### **2 Days FDP Programs**

- **2 Days PTU Sponsored Workshop on Advancements in Wireless Technology (AWT) at Bahra Group of Institute, Patiala Campus, Patiala. Dates: 18-19 May, 2012.**
- **2 Day’s Workshop on Cloud Computing- “Amazon, Google Cloud and Microsoft Azure” being organized by Punjab Technical University (PTU) in association with IFC3 India and Neuromacers IIT Bhubaneshwar. Date: 31 October, 2015 & 1<sup>st</sup> November, 2015.**
- **2 Day’s Training Course on “Case & Effect Graphing Testcase Design Method for Software Safety” being organized by ThinkforBL at Da Nang Software Park, Da Nang, Viet Nam.**
- **2 Day’s Online Training Course on “Understanding Citations and Tips to Improve H-Index” being organized by “Learning with Chandan” and “Voice of Environment” on 6-7<sup>th</sup> May, 2020.**
- **2 Day’s Online International Workshop on “Future Communications” being organized at Singapore University of Technology and Design (SUTD) on 23-24<sup>th</sup> June, 2021.**
- **2 Day’s 2022 IEEE Sensors Council’s Summer School being organized at UNICAMP/FEEC on 12-13<sup>th</sup> December, 2022.**

## **1 Day FDP Programs**

- **1 Day Workshop on Research Paper Writing being organized at Rayat Bahra College of Education, Sahauran, Mohali, Punjab. Date: 16 November 2012.**
- **1 Day Workshop on Case Study Analysis and Skill Development being organized at KCL Institute of Management and Technology, Jalandhar. Date: 7 April 2014.**
- **1 Day Workshop on Embedded Systems- “PIC Microcontroller- PIC 16F877A” being organized at Lovely Professional University (LPU), Phagwara. Date: 9 August 2014.**
- **1 Day Workshop on “LaTeX”- Research and Report Writing Tool being organized at CT Institute of Technology and Research (CTITR), Maqsudan, Jalandhar. Date: 17 November 2015.**
- **1 Day Workshop on Financial Planning in Collaboration with Investor Awareness Division, SEBI being organized at KCL Institute of Management and Technology, Jalandhar. Date: 1 February 2017.**
- **1 Day Workshop on “PHP” being organized by KCL Institute of Management and Technology, Jalandhar. Date: 18 February, 2017.**
- **1 Day Workshop on “Case Analysis” being organized by KCL Institute of Management and Technology, Jalandhar. Date: 29 March, 2017.**
- **1 Day Online Workshop on “Python Programming” being organized by Department of Computer Science and Engineering, University School of Information and Communication Technology, Gautam Buddha University, Noida. Date: 25<sup>th</sup> April, 2020.**
- **1 Day Online Workshop on “How to Catch Fake/Predatory/Cloned Journals in Academic” hosted by Library of DAV College, Chandigarh. Date: 30<sup>th</sup> June, 2020**

- 1 Day Online Webinar on “Guidelines for Getting Funding for Projects from Various Funding Agencies” hosted by Punjabi University, Patiala. Date: 9<sup>th</sup> June, 2023

## (Workshop / Faculty Development Program's) (Resource Person)

1. Delivered 2 Day Workshop on Microsoft Windows XP Administration: Networking and Security Issues in Quest Infosys, Ludhiana as Faculty Development Program.
2. Delivered 1 Day Workshop-ISTE Student Chapter Sponsored Workshop on Futuristic Trends in Communication Systems at Rayat Bahra College of Engineering and Nano Technology for Women, Hoshiarpur.
3. Delivered 1 Day Student Workshop on Network Security in PCMSD College, Jalandhar.
4. Delivered 1 Day (2 Sessions) on ISTE & PTU Sponsored Faculty Development Workshop titled “Emerging Computer Trends and Technologies in Industry” at RIMT, Mandi Gobindgarh.

(Topic: Research Methodology, Cloud Computing, Wireless Sensor Networks)

5. Delivered 2 Day (4 Sessions) on PTU Sponsored Faculty Development Workshop on “Cloud Computing Algorithms & Architectures” at CGC College of Engineering, Chandigarh.

(Topic: Cloud Simulators, Cloud Servers and Online Cloud O/s)

6. Delivered 1 Day (3 Sessions) at MSME Govt. Sponsored Faculty Development Programme on “Scientific Research Methodology Using MATLAB” at Rukmini Devi Institute of Advanced Studies, Rohini, New Delhi

(Topic: Research Methodology and Live Wireless Sensor Network Implementation)

7. Delivered 1 Day (2 Sessions) at TEQIP FDP on “Soft Computing” at Deenbandhu Chottu Ram University of Science and Technology (DCRUST), Murthal.

(Topic: Innovations in Research Practices and Swarm Intelligence)

8. Delivered 1 Day (3 Sessions) at Short Term Course on “Wireless Communications” at National Institute of Technical Teachers Training and Research (NITTTR, Chandigarh)

(Topic: Live Demonstration of Wireless Sensor Networks, Live Hands on OMNeT++ and Raspberry Pi)

9. Delivered 1 Day (3 Sessions) at Short Term Course on “Big Data Analytics” at National Institute of Technical Teachers Training and Research (NITTTR, Chandigarh)

(Topic: Big Data, Apache Hadoop, Pig and Hive)

10. Delivered 1 Day (2 Sessions) at Short Term Course on “Digital Repository and Storage Management” National Institute of Technical Teachers Training and Research (NITTTR, Chandigarh)

(Topic: Concept of Digital Repository, How to Formulate Digital Repository, Coverage towards various Digital Repositories in World)

11. Delivered 1 Day (3 Sessions) at Workshop on Internet of Things (IoT 2016) Learn Design and Development Internet of Things Systems at Dronacharya College of Engineering, Gurgaon.

(Topic: Raspberry Pi, Awareness of Pi 1/2/3, Making Pi as Web Server, Kali Linux Server, Cloud Computing Server and Many More)

12. Delivered 1 Day (2 Sessions) at Seminar on “Quality Education” at Dev Samaj College for Women, Ferozepur

(Topic: Indian Education System, Education System Problems, Issues and Solutions to Engineering in Technical Institutes of India).

**13. Delivered 1 Day (3 Sessions) at Two Weeks Faculty Development Programme on “Emerging Research Trends in Computer Science and IT” at Bharti Vidyapeeth Institute of Computer Applications (BVICAM), New Delhi in Collaboration with IEEE Delhi Section, IEEE Computer Society- Delhi Section, AICTE, CSI Delhi Chapter and ISTE Delhi Section.**

**Topics Delivered: Wireless Sensor Networks, Hands on Sensors and Wireless Sensor Network- Real Time Environmental Monitoring, NS-3 Simulator, Raspberry Pi.**

**14. Delivered 1 Day (4 Sessions) at 1 Day Faculty Development Programme on “Emerging Trends in Networks & IoT” at Maharaja Agrasen Institute of Technology (MAIT), Rohini, New Delhi.**

**Topic Covered: Wireless Sensor Networks- Research Issues and Simulations, Internet of Things, Cup Carbon Simulator, Research Methodology and Hands on Raspberry Pi.**

**15. Delivered 4 Days (8 Sessions) at 4 Day Faculty Development Programme at Vellore Institute of Technology (VIT) Vellore, Tamil Nadu. (*ACM Distinguished Speaker Coverage*)**

**Topics Covered: Trends in Cloud Computing, Cloud Services and Security Enhancements- 19<sup>th</sup> August, 2019. Industry 4.0 and Transformation of Smart Industries to Industry 5.0/X.0- 20<sup>th</sup> August, 2019. Industrial Internet of Things and Technologies Surrounding and Powering Internet of Things- 21<sup>st</sup> August, 2019. Exploring Hidden Secrets of writing Research Paper and Effective Policies of becoming Scientific Researcher- 22<sup>nd</sup> August, 2019.**

**16. Delivered 1 Day (1 Session) at 1 Day Faculty Development Programme on “Industry 4.0” at Shri Sai Rai Institute of Technology (SAIRAMIT), Tambaram, Chennai.**

**17. Delivered 1 Day (2 Sessions) at 1 Day Faculty Development Programme on “Industry 4.0 and Blockchain Technology” at Vellore Institute of Technology (VIT), Chennai.**

**18. Delivered 1 Day (1 Session) at 5-Day Global E-Symposium on “Global Pandemic Outbreak: Role of Technology and Automation (GPORTA)” at JSSATE, Noida**

**Topic Covered: Artificial Intelligence in Healthcare and Role of Artificial Intelligence in COVID-19.**



**19. Delivered 2 Day (2 Sessions) at 2-Day Faculty Development Program on “Internet of Vehicles” at KPR Institute of Engineering and Technology, Chennai, India. (June 4-5, 2020)**

**Topics Covered: Internet of Vehicles, Autonomous Technologies for Smart Vehicles, Security for Connected Car**

**20. Delivered 3 Days (6 Sessions) on Faculty Development Programme on “AI and IoT for Medical Applications” at GMR Institute of Technology, Andhra Pradesh, India (June 1 to June 3, 2020)**

**Day 1: Artificial Intelligence in Healthcare; Internet of Medical Things**

**Day 2: Cryptocurrency and Blockchain**

**Day 3: Brain Computer Interface and Industry 4.0**

**21. Delivered 1 Day (2 Sessions) on Faculty Development Programme on Recent Trends in Wireless Communications organized by R.C. Patel Institute of Technology, Shirpur, Mumbai. (June 7, 2020)\_**

**Talk's on:**

**Artificial Intelligence in Wireless Communications**

**6G Communications**

**22. Delivered 2 Days (2 Sessions) on Faculty Development Programme on Artificial Intelligence in Healthcare being organized by R.C. Patel Institute of Technology, Shirpur (June 10-11, 2020)**

**Talks on:**

**1. Artificial Intelligence in Healthcare + Hands on Session on COVID-19**

**2. Robotic Process Automation in Healthcare**

**23. Delivered 3 Days (3 Sessions) on Faculty Development Programme on Future Advancements and Applications of Internet of Things (IoT) at Sandip Institute of Engineering and Management, Nashik, Mumbai (June 12-14, 2020)**

**Talks on:**

**1. Internet of Things Lab + Internet of Medical Things + Artificial Intelligence in Healthcare**

**2. Research Methodology**

**3. Internet of Underwater Things + Internet of Robotic Things + Internet of Drone Things**

**24. Delivered 2 Days (2 Sessions) on International Workshop on “The Craft of Research” in Department of Mathematics at SRM Institute of Science and Technology, Ramapuram Campus, India. (July 2-3, 2020)**

**Talks on:**

- 1. Writing Scientific Paper and Tips for Acceptance**
- 2. Writing Teaching and Research Statement**
- 3. Avoiding Rejections on Paper and Predatory Journals.**
- 4. How to get Grants on Projects**

**25. Delivered 3 Days (3 Sessions) Faculty Development Program on “Research Methodology and Techniques at Sandip Institute of Engineering & Management (SIEM), Maharashtra, India. (July 4-6, 2020)**

**Topics: Writing Research Paper, Getting Grant, How to Read Research Paper, Mistakes to Avoid in Paper, Writing Teaching and Research Statement, Research Tools and Techniques and, How to effectively write Scientific Paper.**

**26. Delivered 1 Session Faculty Development Program titled “Exposure & Rejuvenation of Technologies in Changed Era of The World” by Raj Kumar Goel Institute of Technology, Ghaziabad, India. (July 7, 2020)**

**Talk on “Internet of Drone Things”**

**27. Delivered 1 Session Short Term Training Programme Program on “Research Methodology” by Gautam Buddha University, Greater Noida, U.P. Noida. (July 9, 2020)**

**Talk on “How to do Research, How to do Academic Paper Writing + Common Mistakes to Avoid)**

**28. Delivered 1 Session on 1 Week Faculty Development Program on “Research Avenues in Electrical Engineering” by Karpagam College of Engineering, Coimbatore. (July 10, 2020)**

**Talk on “Research Avenues in Smart Grids”**

**29. Delivered 2 Sessions on International Faculty Development Program titled “World of Cyber Physical Systems and Future Robotics of Industry: Cobotics” by R.C. Patel Institute of Technology, Shirpur, Mumbai. (July 11, 12, 2020)**

**Topics: “World of Cyber Physical Systems”**

**“Future Robotics of Industry: Cobotics”**

**30. Delivered 1 Session Short Term Training Programme Program on “Research Methodology” by Gautam Buddha University, Greater Noida, U.P. Noida. (July 13, 2020)**

**Talk on “How to do Write Thesis and How to write Scientific Paper + Get Published in ISI Journals)**

31. Delivered 1 Session on Faculty Development Programme on “Exploring the Nuances of Deep Learning for Research Applications- A Deeper Experience” by Karunya Institute of Technology and Sciences, Coimbatore, India. (July 13, 2020)  
Topic: Practical Points of Deep Learning for Medical Imaging”
32. Delivered 1 Session on International Faculty Development Program on “Trends in Artificial Intelligence and Machine Learning” at Department of Computer Application, North Orissa University, Odhisa, India. (July 17, 2020)  
Topic: Deep Learning in Medical Image Processing
33. Delivered 2 Session on International Faculty Development Programme on “Internet of Things” at Department of Information Technology, EASWARI Engineering College, Chennai. (July 18, 2020)  
Topic: Internet of Things and LoRaWAN
34. Delivered 1 Session on National Level Faculty Development Program on “Online Social Network” at MIT Art Design and Technology University, Pune- MIT School of Engineering. (July 25, 2020)  
Topic: Challenges and Opportunities in Online Social Network
35. Delivered 2 Session on International Virtual Workshop on “LoRaWAN and Intellectual Property Rights” at Easwari Engineering College, Chennai. (July 26, 2020)  
Topic: Hands on Demonstration on Dragino LoRaWAN Kit, Internet of Everything and Patents- How to File Patent in India.
36. Delivered 1 Session on International Online Faculty Development Program on “Technologies with Social Relevance” at GMR Institute of Technology, Rajam, India. (July 27, 2020)  
Topic: LoRaWAN Technology- Glimpse into Future Communication
37. Delivered 1 Session on National Level Faculty Development Program on “Free Tools for Research and Publication” at National Institute of Technical Teachers Training and Research (NITTTR), Chandigarh. (July 30, 2020)  
Topic: Research Tools for Effective Research
38. Delivered 1 Session at National Level FDP on Virtual Classroom and LaTeX Programming at National Institute of Technical Teachers Training and Research (NITTTR), Chandigarh, India. (24<sup>th</sup> August, 2020)  
Topic: Effective Research, Thesis Writing and Publications Pedagogy

39. Delivered 1 Session at Online One Week STTP on AI and Machine Learning at Manav Rachna International Institute of Research and Studies, Faridabad, India (28<sup>th</sup> August, 2020)  
Topic: Artificial Intelligence in Healthcare with hands on Covid-19
40. Delivered 1 Session at Online One Week FDP on Blockchain and Its Applications, Jaipur (16<sup>th</sup> September, 2020)  
Topic: Mining in Bitcoins
41. Delivered 2 Sessions at Online Six Days workshop on Contemporary Artificial Intelligence- Online Refresher Programme. (22<sup>nd</sup> October, 2020 and 23<sup>rd</sup> October, 2020)  
Topic: AI for Healthcare and AI for Biomedical Applications
42. Delivered 1 Session at Online FDP on “Blockchain Technologies and its Applications sponsored by AICTE Training and Learning (ATAL) Academy by Swami Keshvanand Institute of Technology, Management and Gramothan, Jaipur, India. (24<sup>th</sup> November, 2020)  
Topics: Blockchains, Bitcoins and what next
43. Delivered 1 Session at Six Days Online Refresher Program on “Contemporary AI: Application in Healthcare” organized by Dr. D.Y. Patil Pratishthan’s D.Y. Patil College of Engineering, Pune, India. (11<sup>th</sup> December, 2020)  
Topic: Prospects of AII in Healthcare with case study on COVID-19
44. Delivered 1 Session at Two Weeks AICTE Sponsored FDP program on “Artificial Intelligence and its Applications in Biomedical Engineering” organized by JSPM’s Rajashi Shahu College of Engineering, Pune, India (14<sup>th</sup> December, 2020)  
Topic: Advanced Artificial Intelligence technologies for Improvising Healthcare with Case Study on COVID-19.
45. Delivered 2 Sessions at Online 2 Days International Workshop on Paper and Report Writing organized by Vidyavardhaka College of Engineering, Mysuru, India. (15<sup>th</sup> December, 2020)  
Topics: How to write SCIE Paper, How to Manage Project Grants and Research Tools for Effective Research.
46. Delivered 1 Session at Six Days Refresher Program on “Contemporary AI: Idea to Product” organized by Dr. D.Y. Patil Pratishthan’s D.Y. Patil College of Engineering, Pune, India. (25<sup>th</sup> December, 2020)  
Topic: Autonomous Vehicles: Future Transportation of Smart Cities

**47. Delivered 2 Sessions at Six Days AICTE Funded Short Term Training Programme (STTP) on Digital Twin Technology for Industrial Automation Process at Sathyabama Institute of Science and Technology, Chennai, India. (7<sup>th</sup> December, 12 December, 2020)**

**Topic: Modern Digital Twins and Digital Twin Tools for Industrial Automation  
Industry 4.0: Transforming Traditional Industries to Smart Factories  
Digital Twin Technology and Case Studies in Real World.**

**48. Organized 1 Session at Six Days Faculty Development Program on Blockchain Technologies and Applications at Department of Computer Science and Engineering, Jaypee Institute of Information Technology, Noida, India  
Topic: Blockchain, Bitcoin and Next...?**

**49. Organized 1 Session at Five Day Faculty Development Program on Blockchain being organized by JSS Mahavidyapeetha JSS Academy of Technical Education, New Delhi, India.  
Topic: Blockchain, Bitcoin and What Next ....?(Turning Point in the World)**

**50. Organized 5 Days (One Week) Faculty Development Program in Department of Electronics and Telecommunication Engineering at Shri Sant Gajanan Maharaj College of Engineering, Shegoan, India. (Feb 1-5, 2021)  
Feb 1, 2021: Industry 4.0 and Cyber Physical Systems  
Feb 2, 2021: Research Tools and How to Get Research Grant  
Feb 3, 2021: Medical Informatics and AR Technology  
Feb 4, 2021: Digital Twin Technology  
Feb 5, 2021: Autonomous Vehicles: Transportation for Future Megacities**

**51. Organized 1 Session at Short Term Course on “Technical Writing using LaTeX” at National Institute of Technical Teachers Training and Research (NITTTR, Chandigarh). (Feb 16, 2021)  
Topic: Tips and Tools for Effective Technical and Research Writing**

**52. Organized 1 Session at Short Term Training Program on “Artificial Intelligence and Machine Learning” at Karpagam Academy of Higher Education, Coimbatore, India. (Feb 18, 2021)  
Topic: Artificial Intelligence in Wireless Communication**

**53. Organized 2 Sessions at Two Days workshop on “Robotics: Tools and Technologies” at Charusat Charotar University of Science and Technology, Changa, Gujarat, India. (Feb 27, 2021)  
Topic: Internet of Drone Things, Cyber Physical Systems and Cobotics**

- 54. Organized 1 Session at Five-Day Faculty Development Program on “Advances in Internet of Things” at Vidyavardhaka College of Engineering, Mysuru, Karnataka, India. (March 2, 2021)**  
**Topic: Advances in Industrial Internet of Things (IIoT)**
- 55. Organized 2 Sessions at One-Week Online Induction/Refresher Program on “Internet of Things (IoT)” at A.G. Patil Institute of Technology, Solapur. (April 2, 2021)**  
**Topic: IoT in Drones and IoT in Communication System**
- 56. Organized 1 Session at One-Week ISTE Approved STTP on “Drone Surveying” at Annapoorana Engineering College, Tamil Nadu, India. (May 21, 2021)**  
**Topic: IoT and Applications of Drones in Civil Engineering**
- 57. Organized 1 Session at One Week Faculty Development Program on “Emerging Trends in IoT” at QIS College of Engineering and Technology, Andhra Pradesh, India. (June 23, 2021)**  
**Topic: Internet of Drone Things**
- 58. Organized 2 Session at Five Days Faculty Development Program on “Art of Writing Research Article and IPR” at Sri Krishna Institute of Technology, Bangalore, India. (July 19 and July 23, 2021)**  
**Topic: Introduction on Writing a Research Article**  
**Protect your Research via IPR/Patents**
- 59. Organized 2 Session at 6 Days Online AICTE STTP on IoT and its Application in Industry at Sikkim Manipal University, Sikkim, India. (July 22, 2021)**  
**Topic: Communication Protocols and Standards for Industrial IoT**  
**Industrial IoT in the making of Smart Factories**
- 60. Organized 2 Session at One Week Faculty Development Program on “Artificial Intelligence and Machine Learning: Need of an Hour” at K.R. Mangalam University, Haryana, India. (July 27, 2021)**  
**Topic: Explainable AI in Industry and Digital Twins Revolution in Manufacturing Industry.**
- 61. Organized 1 Session at AICTE Sponsored Online Faculty Development Program on the Internet of Things and Everything- IoT/IoE by Department of Electronics and Communication Engineering, Chandigarh University, Mohali, India. (July 28, 2021)**  
**Topic: Internet of Everything.**

62. Organized 2 Days Virtual Workshop on “Art of Research” at SAI Ram Institute of Technology, Chennai. (August 23-24, 2021)  
Topic: Research Methodology
63. Organized 2 Sessions at Essentials of IoT for Mechanical Engineers at Sardar Vallabhbhai Patel Institute of Technology, Gujarat, India. (24<sup>th</sup> August, 2021)  
Topic: Internet of Robotic Things; Smart Transportation System
64. Organized 1 Day at One Week AICTE Sponsored ATAL FDP on “Internet of Things (IoT) with Machine Learning and Artificial Intelligence” at ITS Engineering College, Greater Noida, India. (September 14, 2021)  
Topics: Future Intelligent Smart Transportation System and Future Intelligent Smart Wireless Communications- LoRaWAN and How to Design IoT Lab.
65. Organized 1 Day at 5 Days International Virtual FDP on “Quality Technical Paper Publication and Intellectual Property Rights (IPR)” at ATRIA Institute of Technology, India. (September 30, 2021)  
Topic: IPR, Formalities to follow with US Patents
66. Organized 1 Day at ATAL Academy Sponsored Five Days FDP on “Blockchain Technologies and its Applications” at Department of Computer Science and Engineering, Manipal Institute of Technology, Manipal, India.  
Topic: Blockchain in Cyber Security.
67. Organized 1 Day at ATAL Academy AICTE Sponsored FDP on “Advanced Sensor Technology for Efficient Biomedical and Energy Management in Smart Cities” at Jaipur Engineering College and Research Center (JECRC), Jaipur, Rajasthan, India.  
Topic: Internet of Medical Things and Sensor Technology in Healthcare Informatics
68. Organized 1 Day at AICTE/ISTE Sponsored FDP on “AI in Electrical Signal Analysis” at R.C. Patel Institute of Technology, Shirpur, India.  
Topic: Application and Prospect of AI in Smart Grid.
69. Organized 1 Day at AICTE Training and Learning (ATAL) sponsored FDP on “Machine Vision and Digital Twin” at Sathyabama Institute of Science and Technology, India.  
Topic: Digital Twin and Industry 4.0; Internet of Medical Things.



70. Organized 1 Day (1 Session) at AICTE Training and Learning (ATAL) Academy sponsored FDP program on “Industry 4.0: Digitalization, Sensorization and Optimization” at Manav Rachna University, India.  
Topic: IoT Applications for Industry 4.0
71. Organized 1 Day (1 Session) at AICTE Sponsored FDP program on “Artificial Intelligence (AI) based Conditional Monitoring of Electrical Systems” at Amrutvahini College of Engineering, Sangamner, Pune.  
Topic: Smart Grids Technology
72. Organized 1 Day (2 Session) at UGC Sponsored Refresher Course on “Biotechnology” at Kumaun University, Nainital.  
Topic: Artificial Intelligence with Special Reference to Medical Technology.
73. Organized 1 Day (1 Session) at AISTE and ISTE Sponsored FDP Program on “Design Thinking” at Vidyavardhaka College of Engineering, Mysuru.  
Topic: Introduction to Agile Methods and Challenges of Problem Definition
74. Organized 1 Day (1 Session) at One Week Residential Training on “Internet of Things (IoT) for Scientists, Engineers and Technologists” Sponsored Under Scheme: National Training Program for Scientists and Technologists working in Government Sector Under General Component by Ministry of Science and Technology, Govt of India)  
Topic: Research Opportunities in IoT
75. Organized 1 Day (1 Session) at Two Weeks Department of Science and Technology (DST) Sponsored Faculty Development Program on “Emerging Technologies” at Department of Computer Science and Engineering, Jamia Hamdard University, New Delhi.  
Topic: Metaverse Next Generation Augmented Reality
76. Organized 1 Day (1 Session) at 5-Day Online International FDP on “Current Trends in Information Technology” at MEASI Institute of Information Technology, India.  
Topic: Software Defined Networking- Foundation Concepts and Research Direction
77. Organized 1 Day (1 Session) at 5-Day Online FDP on “Recent Advancements in Intelligent Computing Technologies” at Sri Krishna College of Engineering and Technology, India.  
Topic: Medical Image Processing



78. Organized 10 Day (10 Sessions) course at “Symbiosis Institute of Technology”, India.  
Topic of Talk: Research Methodology Course- 10 Day Course for Ph.D Students and Faculty Members
79. Organized 1 Day (1 Session) at 1<sup>st</sup> National Level Research Conclave at “Nirma University”, India.  
Topic of Talk: Idea Conversion to Patent
80. Organized 2 Day (2 Sessions) at ATAP FDP on ReCENT Trends In Realizing Smart Sustainable Cities: Harnessing the Internet of Things Based (IoT), Software Defined Networks (SDN) and Services” at National Institute of Technology, Meghalaya, India.  
Topic of Talk: Industry 4.0; Digital Twins
81. Organized 1 Day (1 Session) at International Workshop on Augmented Reality conducted by Department of Computer Science (PG), PSGR Krishnammal College for Women, Coimbatore, India.  
Topic of Talk: AR in Healthcare
82. Organized 1 Day (1 Session) at International Faculty Development Program titled “Smart Future Technologies in AI/ML and Data Analytics” organized by Department of Information Technology and Engineering, Amity University, Tashkent, Uzbekistan.  
Topic of Talk: 6G Wireless Networks
83. Organized 1 Day (2 Sessions) at One Week Workshop on “Blockchain and Cryptocurrencies” organized by Sri Mata Vaishno Devi University, J..K., India.  
Title of Talks:  
a. The Role of Distributed Ledger Technology for Beyond 5G Networks  
b. Blockchain and Cyber Security

## (ACADEMIC/ RESEARCH/ EDUCATION AWARDS)

### Total Awards: 41

1. College Color from DBIMCS as Best Speaker, Quizzer and Best Student of MCA Course 2005-08.
2. Shiksha Ratan Puraskar Award 2012-Computer Science by India International Friendship Society (IIFS), New Delhi.
3. Best Citizen of India Award 2012- Computer Science by Best Citizen Publishing House, New Delhi.
4. ISTE Best Teacher Award 2013-Computer Science by Indian Society of Technical Education (ISTE), India.
5. Young Scientist Award 2013-Computer Science Research Excellence by IRAJ Research Association, India.
6. Bharat Excellence Award 2014-Education& Research by Friendship Forum of India.
7. Rashtriya Gaurav Puraskar Award 2014-Computer Science, Education & Research- Achievements and Contributions by India International Friendship Society (IIFS), New Delhi.
8. Rashtriya Jewel Award 2015-Education& Computer Science Research by Friendship Forum of India.
9. Global Excellence Award 2015-Education& Scientific Research by Friendship Forum of India.
10. Exemplary Educationist Award 2015-Education Achievements and Contributions Research by Indo Global Chamber of Commerce, Industries and Agriculture in Association with Confederation of Indian Universities at The International Education and Leadership Summit-2015.
  - a. (First Computer Science Professor in Punjab to Receive this Award)

**11. Distinguished Faculty Award 2015-Education Achievements and Contributions Research by Indo Global Chamber of Commerce, Industries and Agriculture in Association with Confederation of Indian Universities at The International Education and Leadership Summit-2015.**

***a. (First Computer Science Professor in Punjab to Receive this Award)***

**12. Indira Gandhi Award for Excellence 2015-Education& Scientific Research by Friendship Forum of India.**

***a. (First Computer Science Professor in Punjab to Receive this Award)***

**13. ISTE SECTION BEST COMPUTER SCIENCE TEACHER by Indian Society for Technical Education (ISTE), New Delhi.**

***a. (First Computer Science Professor in Punjab to Receive this Award- 2<sup>nd</sup> Time)***

**14. Global Teacher Role Model Award 2015 by MVLA Trust, Mumbai.**

***a. (First Computer Science Professor in Punjab to Receive this Award)***

**15. Young Researcher Award 2017 by ITSR (Institute of Technical and Scientific Research), Jaipur.**

***a. (First Computer Science Professor in Punjab to Receive this Award)***

**16. Best Scientist Award 2017 by ITSR (Institute of Technical and Scientific Research), Jaipur.**

***a. (First Computer Science Professor in Punjab to Receive this Award)***

**17. Asian Status Award for Intellectual People 2018-Education& Scientific Research by Friendship Forum of India.**

**18. Global Indian Personality Award 2018 -Education & Scientific Research by Friendship Forum of India.**

**19. Indo-International Emerging Star Award 2018-Education & Scientific Research by Friendship Forum of India.**

20. **Outstanding Researcher Award (Computer Science and Engineering) 2019-Advanced Research** by GOREA, India.
21. **Top 1% Reviewer- Computer Science, Engineering and Cross-Field for Reviews** by Publons- Year 2019.
22. **Best Researcher- Computer Science** by Duy Tan University- Year 2019, 2020-2021, 2021-2022 (Consistent 3 Years Award Holder)
23. **Distinguished Scientist Award- Computer Science** by VDGGOOD Professional Association under International Scientist Awards on Engineering, Science and Medicine- Year 2020.
24. **International Researcher of the Year 2020- Computer Science** by ICCIC 2020 Conference.
25. **Excellence in Education Award-2020- Computer Science** by Institute of Technical and Scientific Research, Jaipur, India.
26. **Outstanding Teacher of Indian Origin working in Foreign University 2020** by MTC Global, under MTC Global Award for Excellence, 2020.
27. **Top 2% Scientist by PLOS ONE and STANFORD University, 2019, 2020 (Career Single Year)- Artificial Intelligence, Networking and Telecommunications and Information and Communication Technologies. (Rank: 18310 (2022); Rank: 40845 (2020); Rank: 132860 (2019);)**
28. **Dr. Sarvepalli Radhakrishnan Best Teacher Award 2021** by Society for Learning Technologies, Recognized by Government of Andhra Pradesh, India.
29. **Distinguished Scientist Award 2021** by Social Science Research Network (SSRN), ELSEVIER.
30. **Outstanding Scientist Award 2021** by VDGGOOD, India.
31. **Vivekananda Prize 2021** by Institute of Researchers, India.

32. **Distinguished Professor Award-** by Cognizance Alliance, India. Year 2022 for Outstanding Contribution in the Field of Teaching, Administration, Publication, Research and Development and Continued dedicated service to the academic and student community.
33. **Excellence Service Award-** by VDGGOOD Professional Association. Year 2022.
34. **Perficio Award 2022- BEST INNOVATIVE FACULTY OF YEAR 2022** by DHS Foundation India and Faculty of Entrepreneurship and Business, Universiti Malaysia, Kelantan, Malaysia in collaboration with Janardhan Rai Nagar Rajasthan Vidyapeeth University, India.
35. **InRes Young Fellow Award 2022** by Institute of Researchers, India.
36. **Best Senior Scientist Award 2022** by Global Education and Corporate Leadership (GECL 2022) Awards, 5<sup>th</sup> International Annual Awards Summit, India.
37. **Asia's Top 50 Academician and Scientist 2022** by EET CRS Research Wing for Excellence in Professional Education and Industry by Educationexpo.tv.
38. **The Distinguished Scientist Award 2023 and Medal Lecture** by National University of Singapore (NUS), Singapore under “International Conference on Low Energy Digital Devices and Computing (ICLED 2023)
39. **2022 Outstanding Editorial Member Award** by Intelligent Automation and Soft Computing (IASC Journal)—Tech Science Press.

## **(Administrative Experience)**

- Appointed as Special Observer in PTU Distance Examinations March 2010 in GGNIMT, Civil Lines Ludhiana. Center Code: 1219105
- Appointed as Technical Panel Expert in 1-Day Workshop to Design Curriculum of Diploma Programme in Information Technology for Polytechnic Colleges in NITTTR Chandigarh.

Syllabus Designed: Cloud Computing, Data Communications, Technical Specifications Writing.

- Appointed as Resource Person (Region-1) by Computer Society of India for delivering Lectures on Computing Areas- Cloud Computing, IoT, Wireless Sensor Networks, Cyber Security.

[http://csi-india.org/resource\\_person.aspx](http://csi-india.org/resource_person.aspx)

## **(Invited Judge/Guest- College Functions)**

- Invited as Judge at Guru Nanak Khalsa College for Women for “Paper Presentation Competition” at Prof. Gurbir Singh Sarna Memorial on February 20, 2015.
- Invited as Judge at Mata Sahib Kaur Girls College for “Power Point Presentation Contest” on April 7, 2016.

## **Research Organizations/Professional Societies-Membership**

- 1. Senior Member- Professional Membership of Association for Computer Machinery (ACM)- (Membership No: 5200633) (Membership Type: Professional Membership-Annual) (Senior Member: 2015 Onwards)  
(ACM DISTINGUISHED SPEAKER- September 2018 to June 2021)**
- 2. Life Membership of Computer Society of India (CSI-INDIA), India. (Membership No: I1502825) (Membership Type: Life Membership)**
- 3. Distinguished Member of European Alliance for Innovation (EAI). (<https://blog.eai-conferences.org/2020/11/11/announcing-eai-distinguished-members-class-of-2020/>)**
- 4. Fellow Member of International Scientific Research Organization for Science, Engineering and Technology (ISROSET, India). (Membership Type: Fellow) (Membership Number: ISROSET-FM-1124)**
- 5. Life Membership of Indian Society for Technical Education (ISTE), India (Membership No: 78808) (Membership Type: Life Membership)**
- 6. Life Membership of Punjab Academy of Sciences (PAS), Punjabi University, Patiala. (Membership No: L-1304) (Membership Type: Life Membership)**
- 7. Life Membership of Indian Science Congress Association (ISCA), Kolkata, India. (Membership No: L23993) (Membership Type: Life Membership) (Section: Information and Communication Science & Technology (Including Computer Science))**
- 8. Life Membership of Cryptology Research Society of India (CRSI), India. (Membership No: L/0524) (Membership Type: Life Membership)**
- 9. Life Membership of International Association of Engineers (IAENG), Hong Kong (Membership No: 110841) (Membership Type: Life Membership)**
- 10. Life Membership of International Association of Computer Science & Information Technology (IACSIT), Singapore (Membership No: 80340482) (Membership Type: Life Membership)**
- 11. Life Membership of Indian Academicians and Researchers Association (IARA), India. (Membership No: M/M-148) (Membership Type: Life Membership)**

- 12. Life Membership of All India Association for Educational Research (AIAER), India (Membership No: 3399) (Membership Type: Life Membership)**
- 13. Life Membership of International Society for Development and Sustainability (ISDS), Japan (Membership No: M140445) (Membership Type: Life Membership)**
- 14. Life Membership of Computer Science Teachers Association (CSTA), USA (Membership No: 5200633) (Membership Type: Life Membership)**
- 15. Life Membership of Internet Society (ISOC), USA (Membership No: 62888) (Membership Type: Global Membership)**
- 16. Life Membership of Society of Digital Information and Wireless Communication (SDIWC), Lithuania. (ID No: 2006).**
- 17. Life Membership of Universal Association of Computer and Electronics Engineers (UACEE), India. (Membership No: A7800627) (Membership Type: Life Membership)**
- 18. Life Membership of Universal Association of Arts and Management Professionals (UAAMP), India. (Membership No: AM10100051254) (Membership Type: Life Associate Member)**
- 19. Life Membership of Institute of Research Engineers and Doctors (IRED), India. (Membership No: AM1002693) (Membership Type: Life cum Associate Member)**
- 20. Life Membership of International Association of Engineers and Scientists (IAEST), Singapore. (Membership No: 011084280, Membership Type: Member).**
- 21. Life Membership of Asia-Pacific Chemical, Biological and Environmental Engineering Society (APCBEEs), Hong Kong. (Membership No: 200586, Membership Type: Life Membership)**
- 22. Life Membership of Science and Engineering Institute (SCIEI), Hong Kong. (Membership Type: Senior Member, Membership No: 009120120213001)**
- 23. Life Membership of International Economics Development Research Center (IEDRC), Hong Kong. (Membership No: 90080238, Membership Type: Life Membership)**



- 24. Life Membership of Global Educational Research Association (GERA), Phagwara, Punjab, India. (Membership Type: Prospective Member, ID No: 158).**
- 25. Life Membership of International Association for Engineering and Management Education (IAEME), India. (Membership Type: Life Membership).**
- 26. Life Membership of British Science Association.**
- 27. Life Membership of Institute for Computer Sciences, Social Informatics and Telecommunications Engineering (ICST), Belgium.**
- 28. Life Membership of International Association of Online Engineering (IAOE), Vienna, Austria. (Membership ID: 413, Membership Type: Life Membership).**
- 29. Life Membership of Academy and Industry Research Collaboration Center (AIRCC), India. (Membership ID: 128716, Membership Type: Life Membership).**
- 30. Life Membership of i-Xplore International Research Journal Consortium (IRJCJOURNALS.ORG), India. (Membership ID: 12085, Membership Type: Life Membership).**
- 31. Life Membership of International Association of Academicians and Researchers (INAAR), India. (Membership ID: 1017, Membership Type: Life Membership).**
- 32. Life Membership of Research and Educational Society (RESINDIA), India. (Membership ID: RESIJMCS21MEM, Membership Type: Life Membership)**
- 33. Life Membership of Asian Society for Academic Research (ASAR), India. (Membership ID: ASAR20137, Membership Type: Life Membership)**
- 34. Life Membership of International Association of Academicians, Scholars, Scientists & Engineering, India. (IAASSE, Membership Type: Life Membership)**
- 35. Life Membership of International Association for Computerized Adaptive Testing (IACAT, Membership Type: Life Membership).**
- 36. Life Membership of International Society on Multiple Criteria Decision Making (MCDM, Membership Type: Life Membership).**
- 37. Life Time Membership of International Association for Cyber Science and Engineering (IACSE), Hong Kong. (Membership No: 2015ICTAA00306, Membership Type: Life Membership).**

- 38. Life Time Professional Membership of Industrial Engineering and Operations Management (IEOM) Society, India. (Membership No: PN-142-9311). Membership Type: Professional Member**
- 39. Life Membership of Association of European Operational Research Societies (EURO, Membership Type: Life Membership)**
- 40. Life Membership of Institute of Advanced Scientific Research (IASR), U.S.A.**
- 41. Life Membership of Informing Science Institute (ISI).**
- 42. Life Membership of International Association of CPAs, Attorneys and Management (IACAM), Delaware.**
- 43. Life Membership of International Fleet Management Benchmarking Association (IFMBA), USA.**
- 44. Life Time Associate Membership of Institute of Nanotechnology (IoN), U.K.**
- 45. Life Time Membership of International Scientific Academy of Engineering and Technology (ISAET), India.**  
a. (<http://www.isaet.org/members.php?page=22> )
- 46. Life Membership of Indian Mathematical Society (IMA), University of Pune, India. (Membership Type: Life Membership)**
- 47. Life Membership of International Indian Statistical Association (IISA), India. (Membership Type: Life Membership)**
- 48. Life Membership of Indian Society of Information Theory and its Applications (ISITA), India (Membership Type: Life Membership)**
- 49. Life Membership of International Institution of Science Technology Engineering and Management (IISTEM), India. (Membership No: IISTEM20137)**
- 50. Life Membership of Center for Education Growth and Research (CEGR), India. (Membership No: CEGR/OT)**
- 51. Life Membership of South Asia Institute of Science and Engineering (SAISE), US. (Membership No: 20170129001)**
- 52. Academic Membership of MT Research & Educational Services (MTRES). (Membership No: AM-A0077)**

- 53. Affiliate Membership of International Federation of Automatic Control (IFAC), Austria.**
- 54. Life Membership- Associate Member of International Association of Innovation Professionals (IAOIP)**
- 55. Life Membership- Associate Member of International Association of Outstanding Professionals (IAOP), Florida. (Membership No: IAOP-64781)**
- 56. Annual Membership- Academic Professional Member of Society for Data Science, India. (Membership No: S4DS-APM-2018-00016)**
- 57. Life Membership- Associate Member of Global Leaders Foundation, India.**
- 58. Life Membership Society for Learning Technologies, India. (Membership Number: LM336)**
- 59. Life Membership Institute of Researchers, India. (Membership No: LM042102)**

## **Teaching Experience**

**Total Experience: (18+ Years)/ 4+ Years Post- Ph.D Experience**

**Duy Tan University, Da Nang, Viet Nam**

**Professor, Scientist, Vice-Chairman (Research)**

**Director- IoT and Intelligent Systems Lab**

**School of Computer Science, International School, American Development Program (ADP), Faculty of Information Technology**

**Jan 26, 2018- Till Present**

- **Teaching BS, MS, Ph.D. Classes.**
- **Subjects (Graduate-B.S. Classes): Introduction to Networking and Telecommunications, Introduction to Database Systems, Software Process and Quality Management, Software Project Management, Software Measurements and Analysis, Information Warfare, Artificial Intelligence, Operating System, Linux Administration, E-Commerce, Network Security, Big Data Analytics, Computer Security and Reliability, Elements of Network Security, Machine Learning, English for IT.**
- **Subjects (Masters- M.S. Classes): Network Security, Software Testing, Distributed Systems and Cloud Computing.**
- **Subjects (Ph.D Classes): Research Methodology**
- **Mentor- Capstone Projects- B.S., M.S. and Ph.D Students**
- **Speaker- ASEAN 2018, FICTA 2018, DSC-Hello World.**
- **Conferences- Local Chair- INISCOM 2018, Publicity Chair/Local Secretary- FICTA 2018.**

# **KCL Institute of Management and Technology, Jalandhar**

**Assistant Professor & Head- Research and Development Cell**

**August 2011—October 2017**

- Teaching BCA, BBA, BCom, MBA, MCA classes.
- Subjects: Computer/IT Fundamentals, IT Fundamentals (Lab), Management Information Systems, Software Engineering, Artificial Intelligence, System Simulation, Human Values and Professional Ethics (HVPE), System Analysis and Design (SAD), Operating System, Operating System LAB, Java Lab, Information Management Lab, Data Mining and Data Warehousing, Advanced Operating System (AOS), Advanced Operating System Lab, Computer Graphics Lab, Embedded Systems, Embedded Systems-LAB, Network Security and Administration, Information Security, Programming in C, Systems Administration.
- Research and Development Cell - Head and Coordinator
- Organized IT Quiz 6 Times for students of IT Department as Event Coordinator and “*Quiz Master*”
- Part of Organizing cum Advisory Committee of HR Summit 2012 Future of Strategic HR: Challenges and Opportunities Ahead.
- Part of Event Coordination-Tech-Radiance 2015, 2016,2017 – Cyber Quiz, Typing Test and Lan Gaming.
- Part of Event Coordination -Symphonic 2014, 2015, 2016, 2017 – Cyber Quiz, Typing Speed Test.
- Co-Coordinator: 7 Days FDP on Emerging Trends & Challenges in Management and IT Education.
- Delivered 100% Results from last 8 Years of Service in MCA, BCA, MBA, BBA, B.Com. PTU University Examinations.

## **K.L.S.D College & Arya College, Ludhiana**

**Assistant Professor**

**June 2009-June 2011**

- Teaching BCA, PGDCA, BBA, MSC (IT).
- Subjects: Data Structures, Networking, DBMS, Management Information System (MIS), FIT, Algorithm Analysis & Design (ADA), Linux Administration.
- Involved as Project Guide for B.C.A., PGDCA and M.Sc. (IT) Students.
- Worked as Deputy Superintendent/Assistant Superintendent in House Examinations & Punjab University Final Examinations 2009-10, 2010-11 Batches.

## **Pace Computers Ltd., Ludhiana**

**Centre Manager**

**July 2008-June 2009**

- Teaching Hardware, MCSE, RHCE, CCNA, Web Development.
- Completely involved as Systems Administrator in Maintaining and Troubleshooting Labs Environments.
- Implemented Windows 2003 server for Students Rights and Policy management.
- Involved in 6Weeks/6Months Industrial Training of Networking, Database, .net and Live Projects Management and Deployment.

## **IDS Infotech Ltd, Mohali**

**Systems Administrator cum Network Trainee**

**Jan 2008- July 2008**

- Desktop Technical Support on Windows 2003/2008/XP.
- Troubleshooting & Configuring CISCO Router 2600 and CISCO PIX 515e.
- Red Hat Enterprise Linux 4/5.2 Troubleshooting cum Server Administration.
- Windows 2003 Systems Administration cum Web Administrator on IIS & APACHE Web Server Administration.
- Full Implementation of VPN (SITE TO SITE AND REMOTE ACCESS) Server.

## *References*

### **Reference: 1**

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### **Reference : 2**

**Name :** Dr. (Prof.) Chuan Ming Liu  
**Designation :** Professor, Department of Computer Science and Information Engineering  
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### **Reference : 3**

**Name :** Dr. Noor Zaman  
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## **PERSONAL INFORMATION**

**Name** : Dr. Anand Nayyar  
**Father's Name** : Sh. Sunil Kumar Nayyar  
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**Sex** : Male  
**Marital Status** : Single  
**Nationality** : Indian  
**Language** : English, Hindi, Punjabi, Vietnamese  
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**Passport No** : H7156660 (Old); T3893697 (New)  
**Pan Card No** : AHKPN6607P

***Declaration:*** I hereby declare that all the information that I have given here is true according to the attested testimonials. If given a chance to me, I will put in my best efforts to prove myself worthy in the eyes of my employers.

**Date:**

**Place:** Da Nang, Vietnam

**Signature**