CURRICULUM VITAE

1. **Name** : **Harish Kumar**

2. **Father & Mother Name** : Sh. Niranjan Dass & Smt. Padma Devi

3. **Designation & Address** : **Professor in Computer Science and Engineering**,
   Room # 203, Academic Block # 1, First Floor
   UIET, **Panjab University, Chandigarh (UT)**
   India – 160014 (https://uiet.puchd.ac.in)
   E-mail: harishk@pu.ac.in
   Phone: 91-9815964121, 91-172-2534995

   Nationality: Indian;   **Date of Birth**: December 17, 1978

4. **Employment Experience** : 24+ Year (Teaching, Research and Industry)

Organization	Post	Period
Panjab University	**Professor** in Computer Science and Engineering	**July 2016-Till Date**
	Director, Centre for Skill Development and Entrepreneurship	November 2015-March 2023
	Coordinator/ HoD, Computer Science and Engineering Department, UIET	Jan. 2018-Jan. 2021 Aug. 2002–April 2009
	Associate Professor/ Reader in CSE	2010-2016
	Assistant Professor/ Lecturer in CSE	2002-2010
KCW, Ludhiana	Lecturer in Computer Science	2001-2002
TCYOnline Solutions	Consultant	2000-2001

5. **Educational Background:**

Examination	University/Board	Year
Ph.D. (Computer Science)	Panjab University, Chandigarh, India	2009
Master of Technology (Computer Science & Engineering)	Punjab Agricultural University, Ludhiana, India	2001
Bachelor of Engineering (Computer Engineering)	Punjab Technical University, Jalandhar, India	1999

o PhD Thesis: 'Auto-Configuration of IP Addresses in Mobile Ad-Hoc Networks (MANET)'
o MTech Thesis: 'Client Server Approach for Online Registration'

Specialized Training:

Executive Education Training	Institution	Year
Building Excellence in Professional Higher Education Institutions	Indian School of Business (ISB), Hyderabad, India	2014
Management Capacity Enhancement for Administrators	Indian Institute of Management (IIM), Lucknow, India	2014
Telecommunication Technology	FreeSwitch, Chicago, USA	2016

6. **Research Areas**:

Telecommunication Network and Use Cases, Information Retrieval, Cyber Security, Network Science, Tele-Health Convergence, AI/ML in Telecommunication and Health

7. **Awards and Recognition:**

- **Visvesvaraya Young Faculty Research Fellowship (YFRF)** by Ministry of Electronics and IT, Government of India, 2016-2020

- **International Travel Grant Fellowship** for Young Teachers by AICTE, Ministry of Human Resource Development, Government of India, 2008

- **Member, National Working Group 20 'IoT and Smart Cities & Communities'** corresponding to ITU-T SG-20, TEC, Department of Telecommunication (DoT), Government of India, May 2022- May 2024

- Member, **ICMR Expert Group** for NHPR on Digital Technologies for NCD, 2023-2024

- **Member, Working Group 'IoT & 5G Application in Smart Grid'**, TEC, Department of Telecommunication (DoT), Government of India, 2020-2023

- Member**, Consultative Committee for 'Adoption of oneM2M R3 Standard'**, Department of Telecommunication, Govt of India, 2021-2023

- **Member, Governing Council, Science & Technology Entrepreneurship Park (STEP), Thapar Institute of Engg & Tech**, India (2021-2022)

- Member**, Management Committee, DST-Technology Enabling Centre,** Panjab University (January 2021- November 2023)

- **Member, Working Group (WG) 'SBD and NTC'**, TEC, Department of Telecommunication (DoT), Government of India, 2022-2024

- 2nd Teachers Excellence Award by Dr. GC Mishra Memorial Trust at Chandigarh on Teachers Day-2019

- Travel Grant Award by IIIT, Bangalore to attend 'Technology for Education (T4E)' workshop at Bangalore, 2009

- Merit Certificate, National Scholarship Scheme, Government of Punjab, 1993

8. **Sponsored Projects/Consultancy Work:**

SN	Title and Role	Funds / Agency	Duration
24	Tele-health Screening and Management for Non-Communicable disease **(PI)**	Rs. 225.50 Lacs (US$ 270K) / ICMR, GoI	March 2024-March 2027
23	Development of 5G Use-Case Lab (Co-PI)	Rs. 71.25 Lacs (US$ 87K)/ DoT, GoI	2023-2028
22	Study and Documentation form Role of Telecommunication in Electric Vehicle Charging System **(PI)**	Rs. 5.46 Lacs (US$7000)/ Industry (Electrowave Electronics)	April 2022-March 2023
21	Development of efficient Photo Voltaic (PV) Solar Power Plant and Concentrated Solar Power Plant (CSP) for integrated Electrical Vehicle Charging Station (Co-PI)	Rs. 37.70 Lacs (US$50K)/ Industry (Electrowave Electronics)	April 2021-March 2023

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SN	Title and Role	Funds / Agency	Duration
20	Multi-Modal Framework for Monitoring Active Fire Locations (AFL) and Precision in Allied Agricultural Activities using Communication Technologies **(PI)**	Rs. 90.90 Lacs (US$116K)/ MeitY, GoI	April 2020-March 2024
19	Capacity Building and Research Entrepreneurship Centre in Artificial Intelligence, Big Data and IoT (Co-PI)	Rs. 72.94 Lacs (US$100K)/ MeitY, GoI	April 2020-March 2022
18	Design of Monitoring & Surveillance System for Active Fire Locations in Haryana **(PI)**	Rs. 5.5 Lacs (US$7900) / Agriculture Department, Haryana	September 2019 - March, 2020
17	Development of 5G based UAV Augmented Intelligent Monitoring and Surveillance System (Co-PI)	Rs. 186 Lacs (US$265K)/ MeitY, GoI and Coral Telecom	December 2019 - December 2022
16	ICMR Centre for Innovation and Bio-Design (CIBioD) (Co-PI) www.cibiod.in	Rs. 496 Lac (US$709K)/ICMR, GoI	July 2019-July 2024
15	Kisan Mitra **(PI)**	Rs. 14.84 Lacs (US$21K)/ Agriculture Department, Haryana	Jan. 2019 - Feb., 2020
14	Mobile Application Based Solution for Sanitation Monitoring of Hostels in Panjab University **(PI)**	Rs. 6.6 Lacs (US$9.5K)/ Industry (Innobles Smart Technologies, Delhi)	October 2018- March 2019
13	Visvesvaraya Young Faculty Research Fellowship **(PI)**	Rs. 37 Lacs (US$53K) / Media Lab Asia, GoI	May 2016-March 2020
12	Technical Education Quality Improvement Programme-III (Nodal Officer-Academic)	Rs. 700 Lac (US$1000K)/ World Bank and MHRD, GoI	April 2017–March2021
11	Skill and Personality Development Programme Centre for SC/ST Students (SPDP) **(PI)**	Rs. 23.35 Lac (US$33K)/ AICTE, GoI	2017-2020
10	Development of Unified IP based Communication Platform for Voice, Video, Data, Messaging & Chat Services (Co-PI)	Rs. 60 Lacs (US$86K)/ Meity, GoI and Coral Telecom	2016-March 2020
9	A Study of Impact of Free and Open-Source Software (FOSS) **(PI)**	Rs. 5.50 Lacs (US$8500)/ TEQIP	July 2013-June 2016
8	Technical Education Quality Improvement Programme-II (Nodal Officer-Academic)	Rs. 1500 Lac (US$2143K)/ World Bank and MHRD, GoI	September 2012–March 2017
7	Facilities for TCS Application System (iON)	Rs. 2.0 Lac (US$4K) Tata Consultancy Services	August 2012 – August 2015

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SN	Title and Role	Funds / Agency	Duration
6	Hostel Facility for SC/ST Students along with Community Skill Development Centre for their Skill Empowerment **(PI)**	Rs. 200 Lac (US$286K)/ AICTE, GoI	March 2013-March 2017
5	Garnering Academia Perspective on Product Engineering Processes **(PI)**	Rs. 2.8 Lac (US$4K)/ Industry (Infosys Limited)	May 2011-July 2011
4	Simulation & Experimental test bed for Routing Algorithms in Mobile Ad-hoc Networks(Co-PI)	Rs. 11.05 Lac (US$16K)/ DST, GoI	2009-2012
3	International Travel Grant Fellowship for Young Teachers	Rs. 74000/- (US$1.1K) AICTE, GoI	2008
2	To explore the network requirement and implement Giga-Bit Ethernet technology along with ATM backbone of the University	Rs. 38.96 Lac (US$56K)/ Panjab University	2005-2008
1	Conceptualize and development of Portal	TCY Learning Solutions	2001

9. **Teaching Subjects** : Information Retrieval, Mobile Computing, Data Structure & Algorithms, Computer Networks, Web Technologies, Software Testing & Quality, Business Intelligence, Telecommunication Technology

10. **Publications (130+):**

Product: 03	Patent: 16 (Granted/ Published)
Journals: 44	Technical Reports: 02
Book Chapters: 28	Conference Proceedings: 45

Selected List:

11. **Industry/Government Support for Research and Academics:**
- Coral Telecom Limited (www.coraltele.com)
- Compliance International (P) Limited (www.typeapproval.com)
- Star Trinity (www.startrinity.com)
- TCY Learning Solutions (P) Limited (www.tcyonline.com)
- Recorders & Medicare Systems (P) Limited (www.rmsindia.com)
- Electrowave Electronics (P) Limited (www.electrowaveselectronics.com)
- KonnectShift Technologies Inc. (www.konnectshift.com)
- Innobles Smart Technologies (P) Limited (www.innobles.com)
- Digital India Corporation (www.dic.gov.in)
- Agriculture Department, Govt. of Haryana (www.agriharyana.gov.in)
- Ministry of Electronics & IT, Govt. of India (www.meity.gov.in)
- Indian Council of Medical Research, Govt. of India (www.main.icmr.nic.in)
- Chandigarh Police, Chandigarh (www.chandigarhpolice.gov.in)
- Gilard Electronics (P) Limited (www.gilard.com)

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12.Research and Academic Interaction:

- **Sessions Chaired (15+)** in various conferences like ICCC2008 (Oradea), ICTRD-2009, IEEE ICAER'10, NHSS-2011, ETNCC-2011 (Udaipur), RIET-2012, Confluence 2012 (Noida), NCRAET-2013, CHASCON, CSI Convention-2013 (Visakhapatnam), GCET-2018 (Tampa) etc.

- **Invited Talks (70+)** on different occasion at various institutes/ events like ETNCC-2011, NITTTR Chandigarh, Infosys Limited, 5th SERC School (DST), MIET Meerut, BBSBEC,HRDC PU, ClueCon-2016 (Chicago), TelecoDays-2017 (Mumbai), GCET-2017, SAU (Delhi), DLIS PU-2019, CMD-OSS PU 2019, WSU-2019 (Sydney), DLIS-2020, AHC-2020, PEC FDP-2020, DCSA Online FDP AI-2020, MCM-RCED EDP-2021, oneM2M-2023 etc.

- **Training Attended 20+** programmes at institutes & industry like IISc Bangalore, ISB Hyderabad, IIM Lucknow, IDC Chandigarh, CoE Pune, IISc Bangalore, Infosys Limited, ESPL, Microsoft, Virtual Labs IIT Delhi etc.

- **Research Evaluator** for Deakin University, Gujarat Technical University, Delhi University, Goa University, Punjab Technical University, Punjabi University, Central University of Pūnjab, Chitkara University, Thapar University, Jammu University, Chandigarh University, CT University, Aligarh Muslim University, BB Ambedkar University, PEC University, JC Bose University

- **Key Note address** during 5th International Conference on Future Network Systems and Security (FNSS),November 25-29, 2019, Melbourne, **Australia**

- **Coordinator**, Online/ Virtual **International Summit** 'Atmanirbhar Bharat: India as Manufacturing Hub for Global Health (Promoting Innovation and Entrepreneurship in Medical Devices & Tele-Health)', November 26-27, 2020, India. Delegates (2500+) & Expert Speakers (65) participated from across the world.

- Key Note Address during National Conference on 'Recent Trends in Computer and Communication Technology', February 21, 2015

- Coordinator/ Team member to organize 15+ events like Cyber Security Symposium, Panel Discussions, Seminars, NanoSciTech-2012, National Conclave-2011, CHASCON-2011, IW-NMWR-2010, CCC-2009, WCES-2007, 91st ISC-2004 etc.

- Convener, Project Competition Team during CHASCON-2011

- Organizing Secretary, Association of Indian University's 3rdANVENSEN-2010

- Coordinator, UGC sponsored Refresher Course in Information Technology 2011

- **Program Co-Chair**, International Conference on Integrated Interdisciplinary Innovations in Engineering (ICIIIE-2020), August 28-30, 2020, Chandigarh, India(Sponsored by TEQIP-III and Indian National Science Academy)

- Organizer Special Session on '**Telecommunications and AI:** Use-Cases in Healthcare and Agriculture', IEEE Conference on Innovative Technologies in Intelligent Systems & Industrial Applications (CITISIA), November 25-27, 2020, Sydney, **Australia**

- **Technical Committee Member** of '12th International Conference on Education Technology and Computers (ICETC 2020)' at University of Hertfordshire de Havilland Campus, London (www.icetc.org)

- Panelist on topic 'Future of Vocational Education' by Media & Entertainment Skill Council, November 20, 2020

- Mentor, BASTET, Smart India Hackathon-2020, MHRD, Government of India

13.University/ Institute Visits (National and International):
India: IISc Bangalore, IIT Ropar, IIT Delhi, IIM Lucknow, Amity University, GB Pant University, MP University of Agriculture & Tech., Thapar University, South Asian University, ISB Hyderabad, AMTZ Vizag, RMS India

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USA: Massachusetts Institute of Technology (MIT), CyLab (Carnegie Mellon University), Pardee RAND Graduate School, Brown University, Florida Poly University, MACOM, UMass Lowell, Molekule

Australia: Deakin University (Melbourne), Western Sydney University (Sydney)

Europe: ITU Geneva (Switzerland), Agora University (Romania)

14. **Life Member Professional Societies:**
   - Computer Society of India (Membership# I0097526)
   - The Institution of Engineers (India) (Membership# M-1700685)
   - Indian Society for Technical Education (Membership# LM-45155)
   - Chandigarh Region Innovation & Knowledge Cluster (CRIKC) (Membership# 147/2019)
   - International Association of Engineers (Membership# 64400)

15. **Administrative and Academic Initiatives:**
   - *Honorary Director, Centre for Skill Development & Entrepreneurship (November 2015–March 2023):*
     - Set-up the center in Panjab University by ensuring budgetary provisions.
     - Initiated MSME Incubator with support from Govt. of India (2022). One startup got selected for funding in 2022. Crowd sourced the 67 start-up ideas in 2023.
     - Prepare and proposed the rules, regulation, academic structure, scheme & syllabus template for B.Voc. (in 2016) and M.Voc. (in 2021) courses.
     - Initiated 41 B.Voc. and M.Voc. courses in Skill Development through affiliated colleges.
     - Organized 35+ skill development programmes in the university campus.
     - Proposed and got established Skill Development Board (SDB) for taking care of skill needs of students.
     - Developed a training pre-incubator facility and initiated 10 trainee start-ups.
     - Initiated MoU with Government of Assam in 2019 with a purpose to establish Srimanta Sankardev Chair with an endowment of Rs. 500 Lacs for R&D on Bhakti Movement and spreading it in Digital Space
     - Prepare project proposal for 'Strengthening Skill, Innovation And Entrepreneurship Components in Science Teaching Courses at Panjab University' for RUSA 2.0 Scheme for which 1500 Lacs have been sanctioned
     - Initiated MoU with Chandigarh Police in 2019 for students skill enhancement in different domains including Cyber Space
     - Initiated and nurtured collaboration with HGI for Innovation & Entrepreneurship, Nottingham University from 2017-2019 for entrepreneurial skill development
     - Engaged different organs of university to include Skill based components in the academic degrees.

   - *Coordinator/ HoD, CSE Department, UIET, Panjab University (January 2018-January 2021, August 2002–April 2009):*
     - Instrumental in setting up of UIET an in-campus engineering institute of Panjab University since its inception in 2002. Successfully developed and implemented all the activities like curriculum development, laboratories, examination process etc. for B.E.-CSE and ME-CSE programme by leading team of faculty and staff members.

- o Developed 07 laboratories on platforms like Linux, MS-Windows, Sun Solaris etc.
- o Co-founded 'Telecommunication Research Laboratory'
- o Designed and implemented managed Wifi and Wired network within campus on OFC as backbone.
- o Designed, proposed & started M.E.-CSE programme from 2008 onwards.
- o Designed, proposed & started M.E.-CSE (Cyber Security) from 2019 onwards
- o Switching from brick mortar architecture to complete Online Semester during COVID-19
- o Faculty In-charge of e-Akademic portal for managing attendance, results etc.for around 2500+ students and 150 faculty members.

- **Coordinator, Online Admissions,** *Panjab University (2017)*
  - o First time online admission for 120+ courses in paperless mode.
  - o Online facility included all the processes like form filling by applicant along with uploading the documents, fee deposit, verification of the documents by staff, merit list generation etc., for around 25000 applicants
  - o Objective was that students should come to the university campus only after confirmation of admission and to attend the academic course.

- **Warden, GC Chatterji Hall** *(Boys Hostel# 2), Panjab University, Chandigarh (2011–2016)*
  - o Successfully took care of around 350+ residents belonging to various departments of the university. Around 80+ are the research scholars.
  - o Took initiative to involve all residents for cooperative cultural & sports activities, cleanliness& tree plantation drives, academic and entertainment activities.
  - o Development of structured Wifi facility with in all the hostels premise's for the usage by 6000+ residents
  - o Introduced Air-Conditioned common cum reading room facility for the residents
  - o Initiated the concept of 'Room with Kitchenette' for the Research Scholars by redesigning the Hostel Room
  - o Introduced the software based double entry system of accounting & record keeping enhancing transparency which was replicated in all 21 PU Hostels.
  - o Planned and Pursued the construction of Servant Quarters using Hostel/ Mess Funds for the benefit of Mess/ Canteen Workers
  - o *Member of **PU Core Team** to sensitize and mobilize around **4000 participants** for one-month long Yoga Camp and then for **International Yoga Day-2016** in Capitol Complex, Chandigarh (UT)*
    - o Planning, training, interface with UT Administration for Panjab University's participation in the event which is presided by Prime Minister of India on June 21, 2016
  - o *Assistant Coordinator, IGNOU Study Centre, Panjab University (2012)*
  - o **Programme Officer,** *National Service Scheme (NSS), Panjab University*
    - o Organized a total 6 number of camps of one-week duration.
    - o Motivated and involved the students into various activities like environmental awareness, social service, blood donation, organ donation, team work, community kitchen, Swatch Bharat.

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- *Member of:*
  - o Board of Studies, Faculty of Vocational Studies, KVM, Jalandhar (2023-2024)
  - o Board of Control in Computer Science, Guru Nanak Dev University (2023-2024)
  - o Faculty of Engg & Tech., **MRS Punjab Technical University** (2023-2025)
  - o Research Degree Committee in CSE, PU (2023-2024)
  - o Board of Studies in MSc-Environment Sci. & Solid Waste Mgt, PU (2023-2025)
  - o CSR Resource Mobilization Committee, Panjab University (2023-till date)
  - o Faculty of Engineering & Technology, **Guru Nanak Dev University** (2022-2024)
  - o Assessment Committee, JC Bose UoST, Faridabad, Haryana (2022-2023)
  - o **CII Startup Mentor Club** (www.ciicies.in) (April 2022-till date)
  - o Assessment Committee (Technical Staff), CSIR-IMTECH, Chandigarh (2021)
  - o **Research Board in Engineering**, Panjab University (2018-2021, 2023-2024)
  - o Research Degree Committee in Information Technology, PU (2018-2019)
  - o **Board of Studies** in CSE/IT of Panjab University (2003-2021, 2023-2025 CSE) and Punjab Technical University (2013–2017)
  - o Advisory Committee, 'Internal Quality Assurance Cell' (IQAC), PU (2019-2021)
  - o College Development Council, Panjab University (2019-2021)
  - o Standing Committee of PU Alumni Association (PUAA) (2019-2020)
  - o Core Group of 'IT Sector of PMKVY' for Chandigarh (UT) (2018-2020)
  - o **Board of Management, Government College for Girls Community College,** Ludhiana (2016-2023)
  - o Library Committee, AC Joshi Library, Panjab University (2012-2014)
  - o **Core Group of Computer Engineering Division Board of Institution of Engineers (India)** (2016-2017)
  - o National Academic Depository (NAD) Cell, PU (2017-2020)
  - o **Academic Council**, Panjab University (2016-2018)
  - o Board of Control of DCSA, PU (2012-2015)
  - o RDC in Nano-Science and Nanotechnology, PU (2014-2015)
  - o Board of Studies in Library Science of Panjab University (2013 – 2017)
  - o RMC in Physical Education (2012-2013)
  - o Academic Committee for CABA-MDTP course of National Council for Promotion of Urdu Language, MHRD, GoI (2011-till date)
  - o Number of Selection, Expert and Inspection Committees of Panjab University
  - o National Board of Accreditation (NBA) committees for institutes across India
  - o AICTE's Expert Visit Committees for couple of institutes
  - o NAAC Assessor for couple of Institutes/ Universities across India
  - o Committee to introduce e-Tender system in PU (2010)
  - o University Computer Purchase Committee (2010-2013)

16. **Research Students:**

PhD Scholars: Awarded: 07   Registered: 06;

ME Students: Thesis Completed: 28,   In-Progress: 01

Details:

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Products: 03	Patents: 16	Journals: 44
Technical Reports: 02	Book Chapters: 28	Conference Proceedings: 45

Product

1. '**Nah-Sanchar**', an open-source VoIP-based, RFC compliant, secure Unified Communication system which is scalable from less than 10 lines to 300K lines from a system on chip to server class computing machines. (**Technology approved by Department of Telecommunication, Government of India** wide no: 25-13/2018-NGS/TEC/78 dated June 07, 2021 for TEC GR Standard No. TEC60030: 2016)
   - This Technology is already Transferred to Industry for deployment.

2. '**e-Notice Board**': Cluster installation and remotely controllable from any computing device over the Internet

3. '**TeleHealth Kiosk**': with integrated bio-chemistry laboratory, cloud hardware interface and video conferencing for consultation to check 80+ body parameters **mapped with 12-Health packages as defined by MoFHW, GoI and Health Technology Assessment by GoI resource centre.** It provides promotive, preventive and curative healthcare service at single point of contact while reducing out-of-pocket expenses & carbon footprints, enhances the utilization rate of healthcare services and promotes the outcome with increased penetration, utilization, adherence and compliance of patient without disturbing the livelihood earning of rural masses.

Patent

4. Gurjot Singh, Diljeet Singh, <u>Harish Kumar</u>, Nitish Mahajan, Sakshi and Akashdeep, "Multi-modal framework for monitoring active fire locations (AFL) and precision in allied agricultural activities", filed on February 01, 2024

5. Nitish Mahajan, <u>Harish Kumar</u>, Sakshi Kaushal and Amita Chauhan, "A System for Detection and Mitigation of Security Attacks in High Availability SIP-Based Communication" published on December 06, 2019 in Indian Patent Registry (**Granted** on January 30, 2024; Patent No. 505306)

6. Naman Tulli, Prakhar Singh, Harpreet Singh, Nishtha Hooda, Prashant Singh Rana, Yamuna Prasad, Aishwarya R. Hiray, Varinder Garg, <u>Harish Kumar</u>, Surinder Rana, "Epiderma", filed on June 14, 2022 under Indian Patent Registry (Application No. 202211034085)

7. Ramandeep Kaur, Sidhhant Mukherjee, Karthik Vinay Mahesh, Varinder Garg, <u>Harish Kumar</u>, Manoj Goyal, "Digital Walker/Medical Rambler", filed on March 09, 2022 under Indian Patent Registry (Application No. 202211012715)

8. Varinder Garg, <u>Harish Kumar</u>, Mandeep Singh, Raghav Katoch, Swapnil Roy, Dhruv Puri and Babita Ghai, "Device And Method For Quantitative Sensory Testing" published on October 13, 2021 in Indian Patent Registry (Application No. 202111046717)

9. Harpreet Singh, Prashant Singh Rana, Neeru Jindal, Mexson Fernandes, Mandeep Singh, Varinder Garg, <u>Harish Kumar</u> and Kanupriya Vashishth, "Systems and Methods For Alerting A User of A Possibility of Infection" published on August 26, 2021 in Indian Patent Registry (Application No. 202111038746)

10. Shailesh Gahukar, Harbinder Singh, Naresh Kumar, Deval Pareek, Shubham Rattra, Chaitanya, Shreerama Shiva, Sai Bharadwaja, Varinder Garg, <u>Harish Kumar</u>, Sidhhant Mukherjee, "Intelligent Patient Care System" filed on August 03, 2021 under Indian Patent Registry (Application No. 202111034970)

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11. Ramesh K Sharma, GR Chaudhary, Varinder Garg, <u>Harish Kumar</u>, Amit Bahl, Rajesh Gupta, "Chemical-free Car-boot Disinfectant" filed on July 19, 2021 under Indian Patent Registry (Application No. 202111032486)

12. Varinder Garg, <u>Harish Kumar</u>, Ranjit S. Randhawa, Babita Ghai, Ramandeep S. Virk, Siddhant Mukherjee, "Reusable Air Purifying Respirator/ Snorkel Mask" published on February 26, 2021 under Indian Patent Registry (Application No. 202111007125, Publication No. 09/2021)

13. Gaurav Shoeran, Rakesh Sehgal, Upninder Kaur, Varinder Garg, <u>Harish Kumar</u>, "Live Attenuated Vaccine for Lieshmaniasis and method thereof" published on November 27, 2020 under Indian Patent Registry (Application No. 202011046500, Publication No. 48/2020)

14. Varinder Garg, <u>Harish Kumar</u> and Surinder S. Rana, "A Portable Currency Sanitizing Wallet Device", published on August 28, 2020 in Indian Patent Registry (Application No. 202011031887, Publication No. 35/2020)

15. Bharat Bajaj, Varinder Garg and <u>Harish Kumar</u>, "Antiviral Coating Materials and Method of Preparation Thereof" published on August 07, 2020 in Indian Patent Registry (Application No. 202011027405, Publication No. 32/2020)

16. Varinder Garg, <u>Harish Kumar</u>, Surinder S. Rana, Poonam Aggarwal Thakur, Monika Singh and Gunjan, "MASK (GAMCHAA MASK)", filed on July 29, 2020 in India Design Registry (Application No. 331445-001)

17. Varinder Garg, <u>Harish Kumar</u>, Surinder S. Rana, Sushil Rana, Sudhir Kumar, Bikramjeet Singh Kalsi and Gunjan Sharma, "Thermal Screening Cum Disinfectant Chamber", **Granted** on July 26, 2020 in Indian Design Registry (Application No.331372-001)

18. Ravinder K. Duvedi, Mandeep Singh, Bikramjit Sharma, Babita Ghai, Varinder Garg, Harish Kumar, "Ambu Bag System", **Granted** on in Indian Patent Registry (Application No. 376249-001)

19. Varinder Garg, Ashutosh Tiwari, Yash Paul Sharma, Uttam Kumar Thakur and Harish Kumar, "Currency Note Sanitizing Device", **Granted** on November 19, 2021 in Indian Design Patent Registry (Application No. 337357-001)

Journal

20. Kushal Kanwar, Sakshi Kaushal, <u>Harish Kumar</u>, Gaurav Gupta & Manju Khari, "An efficient method for node ranking in complex networks by hybrid neighbourhood coreness", Journal of Computing, Springer, Volume 106, pp 139–161, 2024 (SCI IF: 3.7)

21. Parneet Kaur, <u>Harish Kumar</u> and Sakshi Kaushal, "Technology-Assisted Language Learning Adaptive Systems: A Comprehensive Review", International Journal of Cognitive Computing in Engineering, Elsevier, Volume 4, pp 301-313, 2023

22. Sushil Rana, Urvashi Tandon and <u>Harish Kumar</u>, "Understanding Medical Service Quality, System Quality, and Information Quality of Tele-Health for sustainable development in Indian context", The international journal of cybernetics, systems and management sciences (Kybernetes), Emerald Insight, May 2023, (SCI IF: 2.5)

23. Kushal Kanwar, Sakshi Kaushal, <u>Harish Kumar</u>, Gaurav Gupta and Manju Khari, "B_{CDCN}: A new edge centrality measure to identify and rank critical edges pertaining to SIR diffusion in complex networks", Journal of Social Network Analysis and Mining, Volume 12, Article # 49, 2022, (SCI IF: 2.8)

24. Kirti Thakur, <u>Harish Kumar</u> and Snehmani, "Framework for variability analysis of seasonal meteorological data Journal of Earth System Science", Journal of Earth System Science, Volume 131, Article # 223, 2022, (SCI IF: 2.045)

25. Nitish Mahajan, Amita Chauhan, <u>Harish Kumar</u>, Sakshi Kaushal and Arun Kumar Sangaiah, "A Deep Learning Approach to Detection and Mitigation of Distributed Denial

of Service Attacks in High Availability Intelligent Transport Systems", Journal of Mobile Networks and Applications, April 2022, (SCI IF: 3.8)

26. Akashdeep Sharma, <u>Harish Kumar</u>, Kapish Mittal, Sakshi Kauhsal, Manisha Kaushal, Divyam Gupta, Abheer Narula, "IoT and deep learning-inspired multi-model framework for monitoring Active Fire Locations in Agricultural Activities", Journal of Computers and Electrical Engineering, Volume 93, July 2021 (SCI IF: 4.3)

27. Ravneet Kaur, Sarbjeet Singh and <u>Harish Kumar</u>, "An Intrinsic Authorship Verification Technique for Compromised Account Detection in Social Networks Soft Computing", Journal of Soft Computing, January 2021 (SCI IF: 4.1)

28. Parneet Kaur, <u>Harish Kumar</u> and Sakshi Kaushal, "Affective state and learning environment based analysis of students' performance in online assessment", International Journal of Cognitive Computing in Engineering, Volume 2, pp 12-20, 2021

29. Ravneet Kaur, Sarbjeet Singh and <u>Harish Kumar</u>, "TB-CoAuth: Text Based Continuous Authentication for Detecting Compromised Accounts in Social Networks", Journal of Applied Soft Computing, Volume 97, Part A, 2020 (SCI IF: 8.7)

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Invited Lectures/ Panelist

1. 'Digital Foot-Prints: Viksit Bharat @2047', RUSA National Seminar on Digital India: Empowerment and Transformation Towards Inclusive Growth, Dev Samaj College for Women at Chandigarh on March 15, 2024

2. 'Application of IoT: Use Case in Healthcare and Agriculture', National Seminar on Technology Trends in IoT & its Applications, Telecom Regulatory Authority of India (**TRAI**), Govt. of India by Regional Office Jaipur at Chandigarh on October 17, 2023

3. 'NEP-2020, Skill Framework and Regional Content', National Seminar on Implementation of National Education Policy (NEP-2020) in Technical Education & Technical Terminology in Punjabi, **Commission for Scientific & Technical Terminology**, Govt of India at GNDU, Amritsar on March 11, 2023

4. 'oneM2M's University Engagement with Academia and Startups', oneM2M Stakeholder's Day by **India-EU ICT Standardization Collaboration**, oneM2M and TSDSI on February 24, 2023

5. 'भारी पड़ेगी 'साइबर सुरक्षा' के प्रति हमारी उदासीनता?', Jus TV Hindi Straight Talk Show on December 1, 2022 (https://youtu.be/Otdgxc-33sg)

6. 'Theme based MSME Idea Hackathon 2.0', **YourPedia** You-tube Channel on October 02, 2022 (https://youtu.be/fEdJkiA4YEo)

7. 'Learning Skill and Entrepreneurship for Next Generation', Chief Guest at Orientation Programme 'Prarambh', Swami Vivekanand Group of Intuitions on September 30, 2022

8. 'India vs Pakistan Missed Catch, Misinformation and Trolling', **Jus TV Hindi** Straight Talk Show on September 7, 2022 (https://youtu.be/T5dAVbVv1zU)

9. 'IoMT in Healthcare', Webinar on Indian Context: Standards Based Deployment Showcase, **DoT and TSDSI**, New Delhi on August 25, 2022

10. 'Skill Framework in Curriculum: Implementation Strategies', Online Consultative Meet on NEP-2020 at HRDC and Education Department, Panjab University, Chandigarh on June 30, 2022

11. 'Skill Framework in Curriculum: Implementation Strategies', at SAIF/ CIL, Panjab University, Chandigarh on June 29, 2022

12. 'Telecommunication and UAV Product Development Capacities', at **12th MachAuto Expo-2022**, Ludhiana on March 12, 2022

13. 'Research and Innovation Competency', UGC-HRDC Inter-disciplinary Refresher Course (IDC), Jai Narain Vyas University, Jodhpur, Rajasthan on February 04, 2022

14. 'Future Technologies in Automotive Domain for Sustainable Mobility', **Industries Department**, Chandigarh at Municipal Corporation Office on January 28, 2022

15. 'Research and Innovation for Faculty of Computing', University Centre for Research and Innovation, Chandigarh University, Punjab on January 15, 2022

16. 'MOOCs and Evaluation', UGC-HRDC Refresher course on Advances in Pedagogy, Panjab University on January 15, 2022

17. 'MedTech: Realize the Dream of Atmanirbhar Bharat (Inclusive Development)', Online UBA-VIBHA-CIBioD International Summit Tech4Seva on October 21, 2021

18. 'E-Content: An Essential for Learner 2.0', UGC-HRDC Faculty Development Programme, Jai Narain Vyas University, Jodhpur, Rajasthan on October 08, 2021

19. 'Network Science: Centrality Measures', ATAL Faculty Development Programme, Amity University, Jaipur, Rajasthan on August 25, 2021

20. 'Social Media and Cyber Security', 4th Faculty Induction Programme, **UGC-HRDC**, University of Rajasthan, Jaipur, Rajasthan on August 16, 2021

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21. 'Role of and Rolling a Startup', MCM-RCED Entrepreneurship Development Programme, MCM-DAV College, Chandigarh on March 23, 2021

22. 'Embedded Media and Entertainment Programs in Higher Education', Media and Entertainment Skill Council, New Delhi on November 20, 2020

23. 'Network Science& Cyber Security', RUSA-2.0 UGC-HRDC Short Term Course, DCSA, Panjab University, Chandigarhon October 08, 2020

24. 'ATM Card Security and Fraud', **Daily Post Punjabi** TV Show on September 12, 2020 (https://www.facebook.com/dailypostpunjabi/videos/329080724973977/?extid=y72Q KCEs4VMB3c4R)

25. 'Network Science & Cyber Security', ATAL Faculty Development Programme at **Punjab Engineering College**, Chandigarh on May 25-29, 2020

26. 'Network Security and Infrastructure', Department of Library and Information Science, Panjab University, Chandigarh on March 06, 2020

27. 'Green ICT', Ambedkar Centre and Punjab Pollution Control Board, Chandigarh at National Seminar on February 15, 2020

28. 'Network Science', **Western Sydney University**, Australia on December 2, 2019

29. 'Network Science: Cyber and Infrastructure Security', **Deakin University, Australia** on November 27, 2019

30. 'Information Retrieval', DLIS, Panjab University, Chandigarh on February 13, 2019

31. 'Digital Library', Department of Library and Information Science, Panjab University, Chandigarh on February 13, 2019

32. 'Next Generation Telecommunication and Sustainability', GCET-2018, **Florida Polytech University**, Florida, USA on July 18, 2018

33. 'Cloud Computing and Network Security', Faculty Development Programme, SVIET, Rajpura on February 20, 2018

34. 'Open Source in Telecommunication', **South Asian University**, New Delhi on March 06, 2017

35. 'Green Telecommunication', GCET under **Indo-US Knowledge Partnership**, Panjab University, Chandigarh on April 21, 2017

36. 'Telecommunication and Make in India', **Global Telecom Meeting** (TelecoDays), Mumbai, Maharashtra on February 07, 2017

37. 'E-Teacher Skills: An essential for Student 2.0', Refresher Course in IT at UGC-HRDC, Panjab University, Chandigarh on November 29, 2016

38. 'Network Science Essentials', RUSA Faculty Development Programme at MCM DAV College for Women, Chandigarh on November 28, 2016

39. 'Telecommunication Indian Perspective', **ClueCon-2016**, Chicago, USA on August 10, 2016

40. 'Role, Growth and Issues of Social Network', Refresher Course in IT on December 11, 2015 at UGC-HRDC, Panjab University, Chandigarh

41. 'Social Network: Instant Connectivity', PTU's Faculty Development Programme on July 02, 2015 at CGC College of Engineering, Landra, Punjab

42. 'e-Content for Student 2.0', SCD Government College, Ludhiana, Punjab on February 24, 2015

43. 'Trends in Computer and Communication', JC DAV College, Dasuya, Punjab on February 21, 2015

44. 'Cyber Security and Information Retrieval', TEQIP-III Short Term Course at Guru Nanak Dev Engineering, Ludhiana, Punjab on August 08, 2014

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45. 'Mobile Computing Challenges', The Institution of Engineers (India), Alwar, Rajasthan on February 22, 2014

46. 'ICT Trends', Computer Society of India, Visakhapatnam, Andhara Pradesh on December 14, 2013

47. 'Information Science', **UGC-HRDC** Refresher Course in Library and Information Science, Panjab University Chandigarh on December 03, 2013

48. 'Information Retrieval', UGC-HRDC Refresher Course in Library and Information Science, Panjab University Chandigarh on November 29, 2013

49. 'E-Content', AC Joshi Library, Panjab University, Chandigarh on October 30, 2013

50. 'Uses of e-Content', SGG Janta Girls College, Raikot, Punjab on October 11, 2013

51. 'E-content: An essential for Student 2.0', UGC-HRDC Refresher Course in Information Technology, Panjab University Chandigarh on September 11, 2013

52. 'Information Retrieval: Recent Issues', UGC-HRDC Refresher Course in Information Technology, Panjab University Chandigarh on September 10, 2013

53. 'ICT Trends', Institute of Engineering and Technology, Bhaddal, Punjab on August 13, 2013

54. 'Career Guidance Counselling', Workshop at DAVCSS, Roopnagar on July 13, 2013

55. 'Wireless Network Technologies', Continental Engineering Institute, Fatehgarh Sahib, Punjab on April 06, 2013

56. 'Information Retrieval on Web', SGG Janta Girls College, Raikot, Punjab on November 22, 2012

57. 'Information Security and Management', Amity University, Noida, Uttar Pradesh on September 27, 2012

58. 'Research Methodology for Computer Science', PTU Faculty Development Programme at LLR Group of Institutions, Moga, Punjab on May 30, 2012

59. 'Trends in Computer Technology', Galaxy Global Engineering Institute, Ambala, Haryana on March 24, 2012

60. 'E-Content Development', UGC-HRDC Refresher Course in Information Technology, Panjab University, Chandigarh on December 13, 2011

61. 'Network Traffic Profiling', CSI-COMNET-2011 at Computer Society of India, Rajasthan on December 05, 2011

62. 'Google Cloud Infrastructure', Short Term Training Programme at National Institute of Technical Teachers Training & Research, Chandigarh on August 09, 2011

63. 'Various Forms of e-Content', Distance Education Council Workshop, USOL, Panjab University, Chandigarh on May 25, 2011

64. 'Hands on Internet', UGC-ASC, Refresher Course in Information Technology, DCSA, Panjab University, Chandigarh on May 17, 2011

65. 'Mobile, Adhoc and Sensor Networks', National Conference at The Institution of Engineers (India), Udaipur, Rajasthan on April 23, 2011

66. 'Research Issues in Adhoc Networks', **25th National Convention** of Computer Engineers at IE(I), Udaipur, Rajasthan on February 05, 2011

67. 'e-Content Various Forms', UGC-ASC, Refresher Course in Information Technology, DCSA, Panjab University, Chandigarh on September 20, 2010

68. 'Hands on Internet', UGC-ASC, Refresher Course in Information Technology, DCSA, Panjab University, Chandigarh on September 16, 2010

69. 'Network Fundamentals', **UGC-ASC**, Refresher Course in Information Technology, DCSA, Panjab University, Chandigarh on September 13, 2010

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70. 'Auto-configuration of IP in MANET', PTU-Faculty Development Programme, BBSB Engineering College, Fathegarh Sahib, Punjab on July 29, 2010

71. 'Mobile Computing, Wireless Networks& Tools', Staff Development Program at Meerut Institute of Engg and Tech., Meerut, Uttar Pradesh on January 18-20, 2010

72. 'Wireless Technologies', National Seminar at The **Institution of Engineers (India)**, Udaipur, Rajasthan on September 12, 2009

73. 'Issues in Mobile Adhoc Networks', **Agora University**, Romania on May 17, 2008

74. 'Mobile IP and Wireless TCP', Faculty Development Programme at CIET by National Institute of Technical Teachers Training & Research, Chandigarh on January 12, 2008

75. 'Analysis of Algorithms', **Infosys Limited**, Chandigarh on November, October 24-26, 2006

76. 'Mobile IP', Faculty Development Programme, National Institute of Technical Teachers Training and Research, Chandigarh on February 23, 2006

77. 'Wireless TCP', Faculty Development Programme, National Institute of Technical Teachers Training and Research, Chandigarh on October 13, 2005

78. 'Design and Analysis of Algorithms', Faculty Development Programme, Government Engineering College, Jodhpur, Rajasthan by NITTTR, Chandigarh on May 09-10, 2005

79. 'Object Oriented Programming', **5th DST SERC School** on Experimental High Energy Physics, Chandigarh on March 11-12, 2005

80. 'Mobile IP', Faculty Development Programme, Technical Teachers Training Institute, Chandigarh on October 13, 2004

Programme Organized

Role: Organizing Secretary/ Coordinator/ Program Co-Chair

1. 'Tech4Seva: 2nd Virtual International Summit on Technology Outreach as Enabler for Inclusive, Sustainable and Affordable Healthcare', in Hybrid Mode, October 20-23, 2021. **Delegates (5000+) & Expert Speakers (125)** participated along-with **Online 3D Expo with 40 Display Booths** from Industry/ Institutes.

2. 'Future Telecom Technologies', 3rd Sat Paul Mittal Memorial Lecture in Telecommunication at UIET, Panjab University on March 25, 2021 (https://youtu.be/EjN610pwNcE)

3. 'Atmanirbhar Bharat: India as Manufacturing Hub for Global Health (Promoting Innovation and Entrepreneurship in Medical Devices & Tele-Health)', Virtual International Summit, November 26-27, 2020, India. **Delegates (2500+) & Expert Speakers (65)** participated from across the world. Supported by India-EU ICT Standards Collaboration Project.

4. 'Integrated Interdisciplinary Innovations in Engineering (**ICIIIE-2020**)', International Conference, Chandigarh, India(Sponsored by TEQIP-III and Indian National Science Academy) on August 28-30, 2020

5. 'Role of Innovation in Affordable Health Care', Webinar at ICMR-CIBioD on July 07, 2020

6. 'LDRA Software for Software Testing, Verification and Validation', Workshop at UIET, Panjab University on March 19, 2019

7. 'Indian Contribution to 5G Standard', 2nd Sat Paul Mittal Memorial Lecture in Telecommunication at UIET, Panjab University on March 11, 2019

8. 'Current Developments in R&D in IT/CSE in India', Seminar at Panjab University on November 29, 2018

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9. 'Trends of AI and its Adaption in Industry – Academia Ecosystem', Seminar at Panjab University on October 29, 2018

10. 'Urban Mobility Planning', Seminar at Panjab University on October 05, 2018

11. 'Artificial Intelligence and Industry 4.0', Seminar at Panjab University on October 01, 2018

12. 'Start-Up and M2M Technologies', Workshop at Panjab University on September 09, 2018

13. 'Balanced Life Is A Successful Life', Seminar, Panjab University on April 20, 2018

14. 'How do Machine Learn', Seminar, Panjab University on March 20, 2018

15. 'Startup and Entrepreneurship', Seminar, CSDE, Panjab University on March 13, 2018

16. 'Telecommunication for New India', 1st Sat Paul Mittal Memorial Lecture in Telecommunication at UIET, Panjab University on March 09, 2018

17. 'Developing Machine Learning Skills in Python', Workshop, Panjab University on March05-08, 2018

18. '3D Modeling and Printing Skill Development', Workshop, CSDE, Panjab University on September 21-23, 2017

19. 'Fibre Optic Industry Challenges and Skills', Sponsored by **BICSI** at Panjab University on March 03, 2017

20. 'Telecommunication Industry: Expected Skills', Seminar, CSDE, Panjab University on January 23, 2017

21. 'Challenges of Global Project/ Research Management', Seminar, CSDE, Panjab University on January 16, 2017

22. 'Skill Development Opportunities', Seminar, CSDE, Panjab University on January 03, 2017

23. 'Green Technologies and Skills', Seminar, CSDE, Panjab University on December 23, 2016

24. 'Start-Up Mentorship and Industry Institute Interaction', **Panel Discussion** at CSDE, Panjab University on November 03, 2016

25. 'Recent Advances in AI, Robotics and Entrepreneurial Opportunities', Seminar sponsored by **SPSTI** at Panjab University on October24, 2016

26. 'University based Incubators in Supporting Student Startups for Clean Tech Entrepreneurship', Seminar, CSDE, Panjab University on October 19, 2016

27. 'Startup Challenges and Leadership', Seminar, CSDE, Panjab University on September 28, 2016

28. 'Entrepreneurship Development', Awareness Programme, Panjab University on July 15, 2016

29. 'Tally Accounting Software Skill Training', CSDE, Panjab University on March 21, 2016

30. 'Cyber Security', Symposium during 79th Annual Meeting of **IASc** at Panjab University on November 08, 2013

31. 'Refresher Course in Information Technology', UGC-HRDC, Panjab University on June 15 – July 05, 2012

32. 'Science and Technology in India: Opportunities and Challenges', **National Conclave** at UIET, Panjab University, Chandigarh on September 15-16, 2011

33. 'Researcher's Project Competition', during 5th **Chandigarh Science Congress**, Annual National Conference, Panjab University, February 26-28, 2011

34. '3rd National Student Research Convention-2010 (**ANVENSEN**)', Association of Indian University at Panjab University, Chandigarh on August 11-13, 2010

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35. 'Computing, Communication and Control (CCC-09)', National Conference, UIET, Panjab University, Chandigarh on October 23-24, 2009

36. 'Microsoft Academic Day', National Event by Microsoft (India) and UIET Panjab University on February 18, 2006

37. 'Recent Trends in Computers & Communication', National Symposium sponsored by **Infosys Limited** at Panjab University on January 19, 2006

Role: Organizing Team Member

1. '26th Conference of the Oriental COCOSDA', Technical Committee Member, IG Delhi Technical University for Women (IGDTUW), Delhi, India on December 04-06, 2023

2. '13th IDEA Convention & International Conference on Recent Advances in Engineering Applications for Sustainable Dairying', Technical Committee Member, Guru Angad Dev Veterinary & Animal Science University, Ludhiana, India on October 13-14, 2023

3. '13th International Conference on Education Technology and Computers (ICETC 2021)', Technical Committee Member at Wuhan, China (www.icetc.org) on October 22-25, 2021

4. 'Creativity and Design Thinking', Webinar in collaboration with UIFT on June 04, 2021

5. '12th International Conference on Education Technology and Computers (ICETC 2020)', Technical Committee Member at University of Hertfordshire de Havilland Campus, London (www.icetc.org) on October 23-26, 2020

6. 'Telecommunication and AI: Use Cases in Healthcare and Agriculture', Special Session during IEEE International Conference on Innovative Technologies in Intelligent Systems & Industrial Applications (CITISIA), November 25-27, 2020, Sydney, Australia

7. 'Degree Award Ceremony-2017', UIET, Panjab University on May 08, 2017

8. 'Image Processing and Machine Learning', Workshop at UIET, Panjab University on July 11-16, 2016

9. 'The Making of Modern Punjab', Seminar at Panjab University, Chandigarh on October 24-26, 2013

10. 'SETU: Bridging Gap Between Industry and Academia', Conclave at UIET, Panjab University, Chandigarh on November 08-09, 2012

11. 'Genes, Genetics and Genomics: Today and Tomorrow', International Conference, Indian Society of Human Genetics, Panjab University on March 03-05, 2012

12. 'Frontiers in Nanoscience, Nanotechnology and Applications (NanoSciTech-2012)', International Conference at Panjab University, Chandigarh on February 15-18, 2012

13. 'Vimarsh-2012', Regional Event of Student Council of Panjab University on February 14, 2012

14. 'Panjab University Chandigarh Zone-A Youth and Heritage Festival', Regional Event of Panjab University Campus on October 20-23, 2011

15. 'AAVISHKAR-2011', Technical Fest, UIET, Panjab University on October 18-19, 2011

16. 'International Conference on Emerging Trends in Networks and Computer Communications (ETNCC-2011)', IE(I) and IEEE-Delhi Section on April 22-24, 2011

17. 'Multimedia: 5th Dimension of Computer Science', UGC Sponsored National Seminar by Hans Raj Mahila Maha Vidyalaya, Jalandhar on March 11-12, 2011

18. '5th Chandigarh Science Congress (CHASCON-2011)', Annual National Conference, Panjab University, February 26-28, 2011

19. 'Twenty Fifth National Convention of Computer Engineers and National Seminar on Networked Home Systems and Services (NHSS)', IE(India) at Udaipur on February 4-6, 2011

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20. 'In-Country Workshop on Networked Mobile Wireless Robotics (IW-NMWR-2010)', SIG-WN, CSI and IE(India) at Udaipur on October 26-28, 2010

21. 'Image Processing, Analysis and Clinical Applications', International Symposium, UIET, Panjab University on July 16-17, 2010

22. 'E-content Development and Question Generation', MHRD at Panjab University on May 19, 2010

23. '4th Chandigarh Science Congress (CHASCON-2010)', Annual National Conference, Panjab University on March19-20, 2010

24. 'Emerging Trends in Wireless Communication & E-Security (WCES-2007)' National Conference, UIET, Panjab University on January 11-12, 2007

25. '91st Session of Indian Science Congress', at Panjab University, Chandigarh on January 03-07, 2004

Programme Attended

1. 'ITU-T Study Group-15 Meeting', **International Telecommunication Union**, Geneva (Switzerland) on November 20 – December 01, 2023

2. 'Indian Mobile Congress', MeitY, GoI on October 27-29, 2023 (Online) at New Delhi

3. 'COVID-19 Respiratory Equipment', World Health Organization (OpenWHO) on October 23, 2023 (Online)

4. 'Start-Up Investment Summit 2.0', Punjab Angels Network on April 14, 2023 at Chandigarh

5. 'Promoting Research & Innovations through Collaboration', **G20-Summit: 2nd Education Working Group Meeting** on March 15-17, 2023 at Amritsar hosted by IIT Ropar

6. 'Standards for Sustainable Development', **5th Tech Deep Dive Conference by TSDSI** on November 07-10, 2022 (Online)

7. 'MSCA-PF Call 2022', Webinar by EURAXESS, **European Commission** on July 01, 2022

8. '**Digital India Week 2022**', Exhibition cum Discussions by MeitY, Government of India at Mahatma Mandir Convention Centre, Gandhi Nagar (Gujarat) on July 3-5, 2022

9. 'Student Engaging Classrooms- Online/ Offline', Webinar by UIET, Panjab University, Chandigarh on May 15, 2020

10. 'Online Session on Virtual Laboratories', Workshop by **IIT Delhi** and Panjab University, Chandigarh on April 29, 2020

11. 'Virtual Laboratories', Workshop by IIT Delhi and Panjab University, Chandigarh on February 18, 2020

12. '5G Technology and Standards', Workshop by IEEE and TSDSI during **Indian Mobile Congress**, New Delhi on October 26, 2018

13. 'Global Education Meet', **International Summit by FICCI** and State Higher Education Council, Thiruvananthapuram, Kerala on January 29-30, 2016

14. 'Orientation Course for NSS Programme Officers', One Week programme by Ministry of Youth Affairs & Sports at IDC, Chandigarh on May 25-31, 2015

15. 'NPTEL Introduction', Workshop at UIET Panjab University, Chandigarh on August 5, 2013

16. 'Cloud Computing', Two Week **AICTE Winter School** at National Institute of Technical Teachers Training and Research, Chandigarh on November 11-22, 2013

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17. 'E-Governance and National Plan', Seminar at Computer Centre, Panjab University, Chandigarh on December 07, 2012

18. 'Web-based Management Information System', TEQIP-III Institute of Engineering and Technology, Lucknow, Uttar Pradesh on June 5-6, 2012

19. 'PMSS Training', SPFU TEQIP-III at PEC, Chandigarh on March 15, 2012

20. 'Handling Mid-Career Challenges in Academic Profession', One Week Short Term Course at ASC Panjab University, Chandigarh on November 14-19, 2011

21. 'Student Research Convention-2010 (ANVENSEN)', AIU's Regional Level at University of Jammu, Jammu on June 04-05, 2010

22. 'Technology for Education (T4E)', **International Workshop** at International Institute of Information Technology, Bangalore on August 04-06, 2009

23. 'Insight09', Workshop by Infosys Technologies, Chandigarh on April 15-16, 2009

24. '.Net Technologies', Workshop by **Microsoft India** at Panjab University, Chandigarh on January 30 – February 01, 2009

25. 'Advances in Frontier Technologies', Seminar at UIET, Panjab University, Chandigarh on March 27, 2008

26. 'Product Migration', Workshop at Infosys Technologies Limited, Chandigarh on April 03-05, 2007)

27. 'Embedded Systems using Windows CE', Workshop by Microsoft Corporation at UIET, Panjab University, Chandigarh on July 11-14, 2006

28. 'Refresher Course in Information Technology', Three Week Course by UGC-ASC, Panjab University on December 10-30, 2005

29. '65th General Orientation Course', Four Week Course by UGC-ASC, Panjab University on March 01-28, 2005

30. 'Parallel /High Performance Computing' One Week Workshop at DCSA, Panjab University, Chandigarh on February 24, 2003 to March 01, 2003

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PhD Scholars working/ worked with Professor Harish Kumar

SN	Name & Current Status	Funding Status	Year/ Status	Topic
1	Lokesh Jain (Professor, Punjab Agricultural University)	Salary (In-service)	2010/ Awarded (2015)	Agricultural Information Dissemination System Using Mobile Networks
2	Raman Singh (Assistant Professor, University of West of Scotland)	TEQIP-II Fellowship	2010/ Awarded (2015)	Development of Malware Detection Technique With Network Traffic Profiling
3	Veenu Mor (Senior Programmer, PU)	Salary (In-service)	2011/ Awarded (2019)	Energy Efficient Routing Model for Wireless Mesh Networks
4	Sahil Kansal (Mentor, iNurture Education Solutions Pvt. Ltd.)	Rajiv Gandhi National Fellowship	2012/ Awarded (2019)	Optimal Pricing Framework for Cloud Computing Service Model
5	Kushal Kanwar (Associate Professor, Jaypee University)	Visvesvaraya Fellowship	2015/ Awarded (2020)	A Framework for Contagion Spread in Complex Networks
6	Ravneet Kaur (Assistant Professor Thapar University)	Visvesvaraya Fellowship	2015/ Awarded (2020)	Design & Development of User Profiling based Technique for Detecting Compromised Accounts in Online Social Networks
7	Parneet Kaur (Assistant Professor, Guru Kashi University)	UGC BSR Fellowship	2015/ Awarded (2023)	Cognitive Skills Based Online Learning and Assessment Framework to Improve Educational Outcomes
8	Nitish Mahajan (Founder, Menthosa Solutions)	MeiTY Project Associate	2017/ Thesis Submission	Development of Unified Communication System with Data Analytics for Next Generation Networks
9	Kirti (Data Scientist, Swaraj Mahindra & Mahindra Ltd.)	DRDO Research Fellow	2018/ Thesis Submission	A Framework for Avalanche Risk Probability Assessment Based on Snow and Terrain Using Artificial Intelligence
10	Amita Chauhan (Assistant Professor Amity University, Mohali)	UGC-NET MeitY JRF	2021/ Synopsis Approved	Intelligent Computation Offloading for UAV Enabled Mobile Edge Computing in Next Generation Networks
11	Sushil Rana (VP-R&D, Recorders & Medicare Systems)	Industry Sponsor	2022/ Synopsis Approved	Study and Analysis of Tele-Health Interventions in India: Practitioners and Patients Perspective
12	Puneet Kapoor (Assistant Professor, Shoolini University)	Industry Sponsor Project Fellow	2022/ Synopsis Approved	Design of Link Prediction Technique for Complex Networks
13	Jaskiranjit Kaur	Visvesvaraya Fellowship	2023	

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Master of Engineering Thesis Students

SN	Name	Completion Year	Topic
1	Rajni Sobti	2008	Study and Analysis of Cooperation & Authentication in MANET
2	Manisha Kapoor	2010	Service Discovery in Mobile Ad-hoc Network using Web Service Protocol
3	Akanksha Saini	2010	Effect of Black Hole Attack on AODV Routing Protocol in Mobile Ad-hoc Networks (MANET)
4	Harneet Arora	2011	Link State Based Routing in Wireless Sensor Networks
5	Akanksha Bisaria	2011	Rank Based Video Retrieval Using Transcripts
6	Taranvir Kaur	2012	Game Theory Based Transmission Control Protocol for Adhoc Networks
7	Hardeep Singh	2012	Performance Analysis of Unsupervised Machine Learning Techniques for Network Traffic Classification
8	Gurvinder Singh Aulakh	2013	Performance Analysis of AODV, PUMA and ANTNET Routing Protocols in MANET
9	Manpreet Kaur	2013	Keyword Based Search & Ranking in NPTEL Lecture Videos
10	Manish Kumar	2013	Offline and Online Signature Based Bot Detection
11	Jaskirat Pannu	2014	Dataset Labelling for Network Traffic Archive
12	Naveen Kumar	2014	User Perception Based Ranking in NPTEL Lecture Videos
13	Meghna Chaudhary	2015	Ranking of Nodes on Social Media Platform Based on Sentiments
14	Kirti	2015	Classification of Social Media Users Based on Sentiment Analysis
15	Harsimran Kaur	2016	Trust Modeling in Social Networking Sites
16	Prabhjot Kaur	2016	Ranking and Clustering Social Media Users based on Temporal Analysis
17	Ramita Jindal	2017	Nighttime Vehicle Lamp Detectionand Tracking
18	Shubhani Aggarwal	2017	Load Balancing and Clustering Scheme for Real-Time VoIP Applications
19	Rakshita Bansal	2018	A Supervised Machine Learning Technique for Temporary Event Detection
20	Riya Goyal	2018	An Optimized Handover Management Technique in LTE Networks
21	Amita Chauhan	2019	Detection and Mitigation of DDoS Attacks in High Availability SIP-Based VoIP Communication Networks
22	Shubham Gupta	2021	Achieving Self Sovereign Identity in Education System using Hyperleder Indy
23	Shubham Sharma	2021	A Blockchain Based Framework for Electronic Medical Records System in Healthcare
24	Deepali Sharma	2022	Arogi Chatbot: A Platform for Pre-Screening of Gynecology and Obstetrics Patients
25	Monika	2022	Body Vitals using Remote Photoplethysmography through Camera
26	Bhavna Sethi	2023	Framework for Electronic Medical Record (EMR) Management using IPFS on Ethereum Block chain
27	Kiranpreet Kaur	2023	Simulation & Analysis of Routing Protocols using Real-Time Data in Vehicular Ad-Hoc Networks
28	Harsimran Singh	2023	UAV Based Package Delivery Using Flying Ad-Hoc Network
29	Abhinav Sharma	2024 (Expected)	

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