

## Dr. Vrijendra Singh

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### Teaching & Research Interests:

Data Science & Analytics, Time Series Analysis, IOT Applications, Modeling, Simulations & Optimization, Blind Source Separation, Digital Signal and Image Processing, Information Security & Cryptography, Software Project Management.

### Employment and Experience: [ Research & Development- 18+ Years, Teaching- 15+ Years]

- Professor, Mar. 23, 2021 – Present, IIIT Allahabad, PB 4, GP 10500, Basic 1, 73,900/-
- Associate Professor, Nov. 09, 2015 – Mar. 22, 2021, IIIT Allahabad, PB 4, GP 9500, Basic 1, 61,800/-
- Associate Professor, April 06, 2013 – Nov. 08, 2015, IIIT Allahabad, PB 4, GP 9000, Basic 49,240/-
- Assistant Professor, Aug. 06, 2012 – Apr. 05, 2013, IIIT Allahabad, PB 4, GP 9000, Basic 46,400/-
- Visiting Research Faculty, Dec 8, 2011 – Jan. 5, 2012, EPFL, Switzerland, Salary CHF 2866.65
- Assistant Professor, Aug. 06, 2009 – Aug. 05, 2012, IIIT Allahabad, PB 3, GP 8000, Basic 45,350/-
- Faculty Associate/ Lecturer, June 09, 2005 – Aug. 05, 2009, IIIT Allahabad, PB 3, GP 7000, Basic 30,560/-
- Senior Project Associate, Oct. 01, 2003 – June 06, 2005, Dept. of EE, IIT Kanpur, Consolidated 11,000/-
- Project Associate, April 23, 2002 – Sept. 30, 2003, Dept. of EE, IIT Kanpur, Consolidated 7,800/-

### Administrative Experience:

- Associate Dean - Planning, Monitoring & Evaluation, Jan. 05, 2021 onwards, IIIT Allahabad, Prayagraj
- Head, Dept. of Information Technology, July 5, 2017- Jan. 04, 2021, IIIT Allahabad
- Faculty In- Charge Ph. D. Cell, July 06, 2012 – Jan 09, 2014, IIIT Allahabad
- Chief Proctor, July 06, 2012 – Jan 09, 2014, IIIT Allahabad
- Warden, Boys Hostel, Aug. 01, 2005 – July 05, 2012, IIIT Allahabad

### Membership of Professional Societies/ Advisory Board/Institutions/Consulting Experience::

- President- IEEE Computational Intelligence Society (UP Section)- 2021
- Vice President – IEEE Computational Intelligence Society (UP Section)- 2019 & 2020
- Technical Expert, Scientific Advisory Committee & PMRC, BIRAC, Dept. of Biotechnology, Gol, India 2020, 2021
- Advisor to Network Power Solution Enterprise, New Delhi, since June 06, 2015
- Consultant to Pragmalytics Technologies, Kochi, India, 2020.
- Advisor- Research Centre, Panimalar Engineering College Chennai, Anna University, India
- Member- Senate, IIIT Una, Himachal Pradesh
- Member- Senate, IIIT Allahabad
- Member- Academic Council, CAS, AKTU Lucknow
- Member- BOS, Dept. of CSA, ITM University, Gwalior, M. P.
- Member – Asia Pacific Neural Network Assembly
- Member – International Association of Engineers
- Life Member -- Society for Neurochemistry India
- Editorial Board Member -- International Journal of Instrumentation and Control Systems (IJICS)
- Editorial Board Member - Proceedings of Engineering & Technology

## Educational Qualifications:

- a. Ph. D., Computer Science, Dayalbagh Educational Institute, Dayalbagh, Agra, 2009
- b. M. Sc., Computer Science, Dayalbagh Educational Institute, Dayalbagh, Agra, 2002
- c. B. Sc., Physics & Mathematics, Dr. R. M. L. Avadh University, Faizabad, 2000
- d. Intermediate, PCM Group, UP Board, Allahabad, 1997
- e. High School, PCMB Group, UP Board, Allahabad, 1995

## Systems/Software/Technology/App Developed:

- p) **Condition Monitoring and Fault Diagnosis of a Two Wheeler Engine for TVS Motors Company, Hosur** capable of classifying the engine into Good and Faulty Class and also predicting the possible type of fault in an engine. (Users: TVS Motor Co. Hosur)
- q) **General Purpose Neural Network Software BIKAS for BARC @ IIT Kanpur:** consists of all the Advanced Neural Networks Algorithms from Supervised to Unsupervised domain. (Users: BARC, ISRO, SAIL, IOCL and EIL)
- r) **ANN Software for ISRO- Inertial System Unit, Thiruvananthapuram @ IIT Kanpur:** capable of stability testing of Gyroscope and Accelerometer Sensors at ground level testing and after Takeoff. (Users: ISRO)
- s) **Blind Source Separation Software:** based on the cocktail party problem and capable of segregating the audio, vibrations, image and other signals from the noise and other unwanted signals. (Users: NBRC, NCRB, CBI)
- t) **Trespasser Detection from signature of buried single mode Fibre optic sensor cable:** Capable of detecting the humans and set of animals. (Users: Panna National Park, M. P.)
- u) **Speaking Geo-GP Assistant Android App:** Voice assisted Gram Panchayat/Village Resource Optimization and Planning Android App based on GIS data (Users: ISRO HQ)

## Research Grants:

1. **Principal Investigator**, “Social Awareness for Covid-19 Through AI Based Mobile App”, NCSTC, Dept. of Science & Technology, Govt. of India, Feb. 17, 2021 – Mar. 31, 2022, Grant: 15.77 Lakhs (Ongoing)
2. **Co-Principal Investigator**, “Emotion Recognition for Creating a Homeostatic balance between Human and Robot in a Cobotics Framework”, Technology Innovation Hub for Cobotics (i.e., Collaborative Robotics) [A Section-8 Company: I-Hub Foundation for Cobotics (IHFC)], IIT Delhi, approved by the National Mission on Interdisciplinary Cyber Physical Systems (NM-ICPS), DST, Govt. of India, Dec. 2020-June 2022, Grant: 93.18 Lakhs [PI- Prof. G. C. Nandi] (Ongoing)
3. **Principal Investigator**, “Classified Signal Project”, Pragmalytics Technologies Pvt. Ltd. Kerala, Aug. 04.2019 – June. 30, 2023. Initial Grant: 10.00 Lakhs + High End Hardware (Ongoing)
4. **Principal Investigator**. “Quality assurance, condition monitoring and fault diagnosis using intelligent control methodologies”, Core – Group on Automotive Research (C.A.R.), Technology Information, Forecasting & Assessment Council (TIFAC), Department of Science & Technology , Govt. of India, Sept. 28, 2007 – August 31, 2009, **Grant: 156.6 Lakhs (Technology Transferred to TVS Motors Co. Hosur)**
5. **Member**, “Establishing a center for generating high quality reengineered E contents for students, mentors and Teachers”, Ministry of Human Resource & Development, Govt. of India, Sept. 01, 2009 – Aug. 31, 2010, **Grant: 150.00 Lakhs**

6. **Member**, “*Micro and Nano-Electronic Devices and Technologies for Environmental Monitoring (Special emphasis on Wildlife protection/Tiger Protection)*,” Indo Swiss Joint Research Programme, 2010 – 2012, **Grant: 144.00 Lakhs**
7. **Co-Investigator**, “*Development of neuron like detection filters/ image identification*”, DST- FRBR, Nov. 24, 2009- Nov. 23, 2011, **Grant: 28.84 Lakhs**
8. **Co-Investigator**, “*Wireless Sensor Networks for Protecting Wildlife and Humans*”, DIT, India & NSF USA, **Oct. 01, 2011 - Sept. 30, 2015**, IITA Budget: **Grant: 162.00 Lakhs (Indian budget) + \$300000 for US partners from NSF**
9. **Principal Investigator**, “*Speaking Geo-GP Assistant*”, RESPOND, Indian Space Research Organization, Department of Space, Govt. of India, March. 01, 2019 – August 31, 2019, **Grant: 03.00 Lakhs**

#### **International Consultancy Project:**

10. **Member**, “Course curriculum development in IT and allied areas for New University Setup”, Putera Sampoerna Foundation, Jakarta, Feb. 01, 2012 – May 15, 2012, **50.00 Lakhs**

#### **MHRD NME- ICT Mission Project:**

11. **Regional Coordinator**, *LCAD (Aakash Tablet) testing and study of penetration of ICT in Rural & Urban Students of UP*, sponsored by IIT Rajasthan, under NME- ICT, MHRD, June - Oct. 2011.

#### **International Visits (Grants):**

- a. Represented IITA at Gulf Education and Training Exhibition (GETEX- the largest education fair in the Middle East and Asia, Organized by International Conferences & Exhibitions (IC&E)) 2007, Dubai, April 11 – 14, 2007.
- b. DST Sponsored Young Scientist Interaction and Participation in International Youth Innovation Forum in Siberia (INTERRA), Novosibirsk, Russia, Sep. 22- 25, 2010.
- c. Follow-up Research Interaction & Collaboration Visit, University of Abertay, Dundee, (UAD), Scotland, March 7 - 12, 2011 under Academic & Educational MOU between IITA & UOD.
- d. Visiting Research Faculty at EPFL, Switzerland, for Micro and Nano-Electronic Devices and Technologies for Environmental Monitoring Project under Indo Swiss Joint Research Programme (ISJRP), Dec 8, 2011 – Jan. 5, 2012.
- e. (DST Sponsored) Participated in the first Indo-Russian summer school on "High Performance Computing for Geophysical Problems" Jointly organized by Indian Institute of Information Technology-Allahabad (IIIT-A) and Moscow Institute of Physics and Technology (MIPT), Nalchik, Russia, June 10 - June 18, 2013.
- f. (CPDA) IEEE- SPS Winter School on Security and Privacy Issues in Biometrics, Center for Cyber Security at New York University, Abu Dhabi, Jan. 7 – 12, 2017.
- g. (CPDA) Winter School on Optimization and Operations Research, Transport and Mobility Laboratory, EPFL, Switzerland, Jan. 15 – 20, 2017. Successfully completed 1 credit course during the School.

#### **New Lab Setup/Established at IITA:**

- a. Deep Learning Lab (DLL)
- b. Advanced Image & Data Science Lab (AIDSL)
- c. Software Engineering Research Lab (SERL)

### **Awards/Achievements/Extra-Curricular:**

- a. 50 Fabulous EduTech Leaders Global Award, 8<sup>th</sup> World Education Congress, July 04, 2019, Mumbai
- b. Two Gold Medals in Bachelor's Degree for securing highest marks in College and as a Best Student of College
- c. Best Project Implementation Certificate in NBRC Sponsored Short Term Course on Computational Neuroscience at University of Hyderabad, Oct. 11 – 21, 2004.
- d. Successful Pre-Project Completion Certificate by ISRO Inertial System Unit, Indian Space Research Organization, Trivandrum.
- e. NCC – “C” Certificate
- f. President, Research Associate's Hostel, IIT Kanpur, 2004 – 2005
- g. Faculty InCharge – Technical Club, IIITA, 2012

### **Recognitions/ Positions:**

- a. Expert, Public Service Commission of various states Govt.
- b. Member - Expert Committee- Curriculum Equivalence- IIT (ISM) Dhanbad, 2019
- c. Member, Institute Health Centre Advisory Committee, IIITA, Feb. 02, 2017 – June 2017
- d. Confidential Work – JEE, CBSE Board Delhi
- e. Member, Academic Council, IIITA, Feb. 05, 2013 - March 02, 2015
- f. Chairman, Security Implementation & HR Committee, IIITA, July 06, 2012 – Jan 09, 2014
- g. Member, Anti Ragging Committee 2010, 2011, 2012, 2013, 2014
- h. Member, Senate, IIITA, Feb.05, 2011- Feb. 04, 2013, July 05, 2017-Present
- i. Member, Selection Committee of Staff, IIITA, June 2012
- j. Member, Scrutiny Committee for Non - Academic Technical Positions, IIT Jodhpur, August 2012
- k. Organizing Committee Member, Inspire Program, IIITA, 2010, 2011, 2013
- l. Member, Science Conclave, IIITA, 2008, 2009, 2010, 2011, 2012, 2013, 2014
- m. Member- Hostel up gradation committee, IIITA, 2005-2012
- n. Member, Purchase Committee, IIITA, 2011
- o. Regional Coordinator, LCAD testing and penetration of ICT in Rural & Urban Students of UP under NME- ICT, MHRD, June to Oct. 2011

### **International Program/Technical Committee/Session Chair:**

- a) **Session Chair**, International Conference on Contemporary Computing and Applications (IC3A 2020), [IEEE, TEQIP-3], Dr. A P J Abdul Kalam Technical University, Uttar Pradesh, Lucknow, India, Feb. 05-07, 2020.
- b) **Technical Committee Chair & Session Chair**, 3<sup>rd</sup> IEEE Conference on Information & Communication Technology (CICT-2019), IIIT Allahabad, India, Dec. 06- 08, 2019.
- c) **Session Chair**, 4th International Conference on “Information Systems and Computer Networks (ISCON)”, [IEEE], GLA University Mathura, U. P. India, Nov. 21-22, 2019.
- d) **Technical Committee Chair**, 2nd International Conference on Communication Networks and Computing (CNC-2019), ITM University Gwalior, M. P. India, Nov. 14-16, 2019.
- e) **Technical Committee Chair**, 1st International Conference on Communication Networks and Computing (CNC-2019), ITM University Gwalior, M. P. Mar. 22-24, 2018.
- f) International MultiConference of Engineers and Computer Scientists, Hong Kong, 2014, 2015.
- g) The Sixth International Conference on Wireless, Mobile Network & Applications (WiMoA 2014), Chennai, July 26 – 27, 2014
- h) **Session Chair**, 9th IEEE International Conference on Industrial and Information Systems (ICIIS2014), IIIT Gwalior, 15-17 December 2014.
- i) IEEE Sponsored International Conference on Signal Processing and Integrated Networks, SPIN, New Delhi, 2014.
- j) **Session Co – Chair**, IEEE Workshop on Computational Intelligence: Theories, Applications and Future Directions, IIT Kanpur, July 14 – 19, 2013.
- k) Springer, IInd International Conference on Intelligent Interactive Technologies and Multimedia, IIIT Allahabad, March 09 – 11, 2013.
- l) 5th International Conference on Intelligent Human Computer Interaction Sydney, 2013.

- m) 3rd International Conference on Computer Technology and Development, ICCT, Chengdu, China. November 25-27, 2011.
- n) ACM, International conference on Advances in Computing and Artificial Intelligence (ACAI), Punjab, July 21-22, 2011.
- o) IEEE Region-10 sponsored "Colloquium and International Conference" 2011.
- p) ACM, First international conference on Intelligent Interactive Technologies and Multimedia, IIT Allahabad, Dec. 28 – 30, 2010.

**Reviewer:**

- a) Wiley Journal of Software: Evolution and Process
- b) IEEE Transactions on Signal Processing
- c) IEEE Transactions on Neural Networks
- d) IEEE Transactions on Automation Science and Engineering
- e) IEEE Transactions on Audio, Speech and Language Processing
- f) IEEE Signal Processing Letters
- g) International Journal of Computational Vision and Robotics (IJCVR), Inderscience
- a) Global Journal of Business, Management and Accounting
- b) International Research Journal of Library, Information and Archival Studies (IRJLIAS)
- c) African Journal of Marketing Management
- d) International Journal of Bank Marketing
- e) Decision Sciences
- f) Many International Conferences

**Research / Thesis/ Project's Supervision:**

Doctoral Thesis (Completed under Supervision): 06  
 Doctoral Thesis (Ongoing under Supervision): 03  
 CV Raman International Fellowship for African Researchers (DST & FICCI): 01 (senior fellowship 1 month)  
 M. Tech. Thesis Supervised: 27  
 M. Tech. Thesis (Ongoing under Supervision): 08  
 MBA/MSCLIS Projects Supervised: > 50  
 B. Tech. Projects Supervised: >150

**Courses Undertaken:**

**Under Graduate Level:**

Optimization Techniques,  
 Cryptography & Information Security  
 Object Oriented Methodologies  
 Modeling and Simulations,  
 Image Processing,  
 Data Warehousing & Mining,  
 Digital Signal Processing,  
 Neuro- Fuzzy Computing,  
 Soft Computing,  
 Digital Electronics,  
 Electronics Workshop,  
 Introduction to Programming,  
 Introduction of Computers and Programming

**Post Graduate Level:**

Cryptography,  
 Data Information & Cryptography  
 Cryptography & Information Security  
 Quantitative Decision Modeling,

Data Warehousing & Mining  
Pattern Recognition,  
Project Management,  
Software Engineering,  
Software Solutions & Processing,  
System Design and Integration,  
Quality Assurance & Control,  
Materials Management & Inventory Control (Course developed by me)  
Research Methodology,  
Digital Infrastructure & Enterprise Resource Planning (*one module on Intelligent ERP has been added by me*)

#### **Teaching Pedagogy:**

All the course materials in weekly formats are on the MOODLE server. I use to take quizzes, assignments, polls, chat, doubt discussion through the Moodle server only in order to save time and give more transparency to the students in the overall evaluation and learning process.

#### **Professional Training Received/QIP Course Attended:**

- a. One week FDP on Blockchain, NSC Lab, IIIT Allahabad Prayagraj, sponsored by AICTE ATAL Academy Program, Oct. 21- 25, 2019.
- b. Three days' workshop on Low Cost Access-cum-Computing Devices (LCAD) under National Mission on Education, IIT Jodhpur, June 28 – 30, 2011.
- c. Two Weeks short term course on "Information Security", Dept. of Computer Sc. & Engineering, PEC, Puducherry, sponsored by DIT under ISEA Project, June 01 – 12, 2009.
- d. One Week "Animated Stories Appreciation of Animation Art", at National Institute of Design (NID), Ahmadabad, Feb. 18-22, 2008.
- e. 15 Days, QIP short term course on "Application of Matlab in Engineering", sponsored by AICTE at IIT Kanpur, May 16-31, 2006.
- f. IPv6 Workshop, Dept. of Computer Science & Engineering, IIT Kanpur, April 01 – 02, 2005.
- g. Ten Days, NBRC Sponsored Short Course on Computational Neuroscience, Dept. of Computer & Information Sciences, Univ. of Hyderabad, Oct. 11 – 21, 2004.
- h. 12 Days, NBRC Sponsored Short Course on Computational Neuroscience, Dept. of Electrical Engineering, IIT Kanpur, July 7-18, 2003.

#### **Webinar's Organized/Delivered Talk:**

- a. **Coordinator**, One Day Virtual Workshop on Internet of Things: System Configuration Perspectives, IIIT Allahabad, INDIA, June 20, 2020. Title of the Talk: "*Foundations of Machine Learning and Time Series Analysis for IoT Applications*".
- b. **Keynote**, Three Days International Webinar on "Peaceful Life in Post COVID-19: Resilience from Bio Physics, Electronics and Computer Application", Jointly Organised by Centre for Biophysics, Electronics and Computer Application, ECC Prayagraj and Indian Association of Physics Teachers (IAPT- RC04 UP), June, 19-21, 2020. Title of the Talk: "*Intelligent Approaches for Management of COVID-19 Pandemic*".

#### **International Conference/ Workshop/ Courses/ Training Programme Organized:**

- a. **Coordinator**, Industrial Training Programme for ONGC Personnel on "Big Data Analytics, Artificial Intelligence, Blockchain Technology and IoT", Dept. of IT, IIIT Allahabad, INDIA, Feb. 24-28, 2020.
- b. **Coordinator**, Two Days Workshop on "Robotics and Machine Intelligence", [IIIT-A, IEEE RAS UP Section], Centre of Intelligent Robotics, IIIT Allahabad, INDIA, Jan. 02-03, 2020.
- c. **Keynote Speaker and Member** - Workshop Committee, Two Day Workshop on Internet of Things and Aerial Mesh Networks, Organised by the WSN Lab, IIIT Allahabad, Prayagraj, Title of the talk "*Principal components and Stochastic Learning for Internet of Things Applications*", Dec. 19-20, 2019.
- d. **Member of Organizing Committee**, XXXIV Annual IAPT Convention-2019 & National Seminar on Recent Advances & Innovations in Physics Teaching & Research (RAIPTR-2019), IIIT Allahabad, India, October 13-15, 2019.

- e. **Organizing Chair**, International Conference on Machine Intelligence and Signal Processing (MISP), at IIIT Allahabad, INDIA, Sept. 7-10, 2019.
- f. **Faculty Coordinator**, “Two Days Lecture Series on Good Research Practices”, Dept. of IT, IEEE sponsored IIIT Allahabad, Nov. 27-28, 2019.
- g. **Co- Chair**, IEEE CIS Summer School 2019 on "Big Data Analytics and Stream Processing: Tools, Techniques and Application"- IIIT Allahabad, Prayagraj, Aug.10-14, 2019.
- h. **Coordinator and Main Teacher (Self-Financed)**, 5-Days Course cum Workshop on “Effective Image Processing and Machine Learning Tools for Contemporary Applications” at IIITA, (Technical Co-Sponsor: IEEE CIS UP Section), May 27-31, 2019.
- i. **Coordinator and Main Teacher (Self-Financed)**, 2-Days Certificate Programme on “Effective Image Processing Tools for Novice: Learn Image Processing for Contemporary Applications” at IIITA, Dec. 01-02, 2018.
- j. **Coordinator**, Summer School on Robotics, Sponsored by Science and Engineering Research Board (SERB), DST, June 07 – 13, 2014.
- k. **(Member of Organizing Committee)** 6<sup>th</sup> Science Conclave: A Congregation of Nobel Prize Winners and INSPIRE Internship Programme 2013, Dec. 08 – 14, 2013.
- l. **Coordinator & Resource Person**, 3 Weeks -Indo Africa Training Programme on Technological Innovation for Capacity Building in Data Analysis, Oct. 15 – Nov. 3, 2012.
- m. **Coordinator**, Workshop on Content Development in Advertising & Brand Management through IT enabled tools, IIITA, March 18 - 22, 2009.
- n. **(Member of Organizing Committee)** First IEEE International Conference on Intelligent Human Computer Interaction, IIITA, Jan. 19 - 22, 2009.
- o. **(Member of Organizing Committee)** Science Conclave: A Congregation of Nobel Prize Winners, Dec. 15 – 21, 2008.
- p. **(Member of Organizing Committee)** Sensitization cum Awareness Program for Technology Information Facilitation, Sponsored by-Department of Scientific & Industrial Research (DSIR), Govt. of India, IIITA, Oct. 27, 2008.
- q. **(Member of Organizing Committee)** Finishing Schools 2008, IIITA, June- July 2008.
- r. **Coordinator**, Short Term course on E-content Development & Delivery supported by AICTE/ MHRD (GoI), New Delhi, IIITA, June 24 – July 3, 2008.
- s. **(Member of Organizing Committee)** Two days summer school on information security, IIITA, March 29 – 30, 2008.
- t. **Coordinator**, Workshop on Research Methodology & Marketing Research, IIITA, Jan 3- 4, 2008.
- u. **(Member of Organizing Committee)** IEEE IIIrd International Conference on Wireless Communications and Sensor Networks, Dec. 11 -15, 2007.
- v. **(Member of Organizing Committee)** IEEE IIrd International Conference on Wireless Communications and Sensor Networks, Dec. 17 -19, 2006.
- w. **(Member of Organizing Committee)** 80th All Indian Universities/ Institute Vice Chancellors/ Directors Conference, IIITA, Nov. 24 – 27, 2005.

**International Conference/ FDP/Workshop/ Seminar Attended:**

- a. AICTE Training and Learning (ATAL) sponsored FDP on “Blockchain”, NSC Lab, IIIT Allahabad, Oct. 21- 25, 2019.
- b. National Seminar on Quality of Teaching in Self Finance Management Institutions, FMS, BHU, Oct. 31, 2009.
- c. National Seminar on Rural Services Delivery and Contents through ICT, RGIIT, August 20-21, 2008.
- d. Sensitization cum Awareness Program for Technology Information Facilitation, IIITA & DSIR, Gol, Oct. 27, 2007.
- e. Short term course on Bioinformatics and Data Mining, IIT Kanpur, April 17- 22, 2005.

#### **Webinar’s Organized/Lectures Delivered/ CSR:**

- a. CIS’11 - Lecture Series on Computational Intelligence Dec. 17- 26, 2020, IEEE UP CIS section, Title of the Talk: *“Time Series Analysis”*, Dec. 17, 2020.
- b. 3rd One week self sponsored Short Term Course on Advances in Deep Architectures for Signal, Image & Vision Applications (ADASIVA), IIITA, Title of the Talk: *“Deep Learning for Time Series Analytics”*, Dec 03, 2020
- c. ATAL AICTE - FDP on Machine Learning and Applications (MLA-2020), IIITM Gwalior, Title of the Talk: *“Time Series Forecasting”*, Nov 23-27, 2020
- d. AICTE Sponsored STTP on Applied Computing, MITS Gwalior Title of the Talk: *“Time Series Analytics on IOT”*, Nov 09-13, 2020
- e. FDP on “How to improve Quality in Teaching Learning Process”, AIET Moodbidri, Karnataka, Title of the Talk: *“Paradigms for Augmenting Quality in Teaching, Learning and Assessment”*, Oct. 02, 2020
- f. FDP on Exemplary Practices in Teaching-Learning and Evaluation of courses in Computer Science & Information Technology, VTU, Title of the Talk: *“Exemplary practices for teaching/learning and assessments of Data Mining and Machine Learning courses”*, Aug 03-07, 2020.
- g. One Day Virtual Workshop on Internet of Things: System Configuration Perspectives, IIIT Allahabad, INDIA, June 20, 2020. Title of the Talk: *“Foundations of Machine Learning and Time Series Analysis for IoT Applications”*.
- h. Three Days International Webinar on “Peaceful Life in Post COVID-19: Resilience from Bio Physics, Electronics and Computer Application”, Jointly Organised by Centre for Biophysics, Electronics and Computer Application, ECC Prayagraj and Indian Association of Physics Teachers (IAPT- RC04 UP), June, 19-21, 2020. Title of the Talk: *“Intelligent Approaches for Management of COVID-19 Pandemic”*.
- i. Industrial Training Programme for ONGC Personnel on “Big Data Analytics, Artificial Intelligence, Blockchain Technology and IoT”, Title of the talk *“Cryptography Basics for Blockchain”*, Dept. of IT, IIIT Allahabad, INDIA, Feb. 26, 2020.
- j. Two Day Workshop on “Internet of Things and Aerial Mesh Networks”, Organised by the WSN Lab, IIIT Allahabad, Prayagraj, Title of the talk *“Principal components and Stochastic Learning for Internet of Things Applications”*, Dec. 20, 2019.
- k. IEEE CIS Summer School 2019 on "Big Data Analytics and Stream Processing: Tools, Techniques and Application"- IIIT Allahabad, Prayagraj, Title of the Talk “Time Series Data Analysis”, Aug. 14, 2019.
- l. Teacher’s Training Programme (FDP) on “Application of Embedded Systems to Internet of Things (IoT) using Machine Learning” at ITM University Gwalior (M.P.), India, June 24-29, 2019.
- m. 7-Days Workshop (Self-Financed) on “Satellite Image Analysis for Contemporary Applications: Hands on with ENVI and Matlab”, IIIT Allahabad, Prayagraj, Apr. 27, 2019.
- n. IEEE CIS Summer/ Winter School on Deep Learning and Computational Intelligence at Indian Institute of Technology Kanpur, India during December 5-7, 2018.
- o. One Week Faculty Development Programme on Data Mining, Shambhunath Institute of Engineering & Technology, Allahabad sponsored by TEQIP-III, Dr. A.P.J. Abdul Kalam Technical University, Lucknow, Uttar Pradesh (AKTU) June 1-6, 2018.
- p. Indian Institute of Information Technology, Prayagraj, India, May, 2019. Brain Storming Session on Human Robot Interaction, 10<sup>th</sup> Uttarakhand State Science & Technology Congress 2015 – 16 at Uttarakhand State Council for Science & Technology (UCOST), Dehradun, Feb. 10 – 12, 2016.
- q. Key Resource Person in FDP on “Innovative Methods in Teaching”, Technocrats Institute of Technology- MBA, May 27 – 31, 2015.
- r. QIP Short Term Quality Improvement Program on Intelligent Informatics, IIT Kanpur, July 14 – 19, 2013.
- s. Workshop on Systems Biology (WSB13), IIITA, March. 16 – 17, 2013.
- t. Workshop on Image Processing and Neural Networks, MANIT Bhopal, May 12-16, 2008.



- u. Taken weekly classes on “Computer & Internet” using E- Classroom Facility of IIIT Allahabad, under the joint Village Resource Centre Project of Indian Space Research Organization, Bangalore and Rajiv Gandhi Institute of Information Technology, Tikermafi, Amethi, July-Dec. 2007.
- v. Conference on Advanced Manufacturing Technologies, organized by Core-group on Automotive R & D (C. A. R), DST at Central Leather Research Institute, Chennai, June 17, 2006.
- w. Short term course on Bioinformatics and Data Mining, IIT Kanpur, April 17 – 22, 2005.
- x. Short Course on Computational Neuroscience, Dept. of Computer & Information Sciences, Univ. of Hyderabad, Oct. 11 – 21, 2004.
- y. Delivered Guest Lecture on Application of ANN to Real Life Problems at Bhabha Atomic Research Centre, Mumbai, India, in the workshop of Artificial Neural Networks, in 2003.

## **Publications:**

### **International Journals:**

1. Anjali Gautam, Vrijendra Singh, “Parametric Versus Nonparametric Time Series Forecasting Methods: A Review”, *Journal of Engineering Science & Technology Review*, 13 (3), pp. 165-171, 2020. (Scopus)
2. Anjali Gautam, Vrijendra Singh, “CLR-based deep convolutional spiking neural network with validation based stopping for time series classification”, *Applied Intelligence*, 50, 3, pp. 830-848, Springer US, Mar. 2020. (SCI)
3. Anjali Gautam, Vrijendra Singh, “CNN-VSR: A Deep Learning Architecture with Validation-Based Stopping Rule for Time Series Classification”, *Applied Artificial Intelligence*, 34, 2, pp. 101-124, Taylor & Francis, Jan. 2020. (SCI)
4. Arti Gupta and Vrijendra Singh, “Incorporating organisational justice, job satisfaction and organisational commitment in a model of turnover intentions for software professionals”, *International Journal of Indian Culture and Business Management*, IEL, 21(4), pp. 544-562, 2020.(ESCI)
5. Swarnima Singh Gautam, Vrijendra Singh, “The State-of-the-art in Software Development Effort Estimation”, *Journal of Software: Evolution and Process*, Vol 30, Issue 12, Wiley 2018 (SCI).
6. Preetish Ranjan, Vrijendra Singh, Prabhat Kumar, Satya Prakash, “Models for the Detection of Malicious Intent People in Society”, *International Journal of Digital Crime and Forensics (IJDCF)*, Vo 10, issue 3, pp. 15-26, 2018.(Scopus)
7. Arti Gupta and Vrijendra Singh, "Enhancing intention to stay among software professionals", *Academia Revista Latinoamericana de Administración*, Vol. 31 Issue: 3, pp.569- 584, 2018. (SSCI).
8. Arti Gupta and Vrijendra Singh, "Devising retention strategy for software professionals: an application of analytic hierarchy process", *International Journal of Manpower*, Emerald, 2018. (Under revision) (SSCI)
9. Arti Gupta and Vrijendra Singh, 'Influence of organizational justice on intention to stay of IT professionals', *Int. J. Indian Culture and Business Management*, Vol. 17, No. 4, pp.428–441, 2018. (ABDC).
10. Arti Gupta and Vrijendra Singh, "Organizational justice and intention to stay among software professionals: An analysis of job satisfaction as a mediator", *International Journal of Indian culture and business management*, Inderscience, 2018. (Accepted) (ABDC)
11. Arti Gupta and Vrijendra Singh, " Role of organizational justice in turnover intentions: An investigation on Indian IT professionals", *Journal of Asia Business Studies*, Emerald, 2018. (Under final revision) (ABDC)
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