

Research Areas

IIIT-Delhi

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INDRAPRASTHA INSTITUTE *of*
INFORMATION TECHNOLOGY
DELHI



Artificial Intelligence



Faculty Name	Research Interests	PhD
Bapi Chatterjee	Distributed Machine Learning, Concurrent Data Structures, Neural Architecture Search, Learned Index Structures	PhD (2018), Chalmers University of Technology, Gothenburg, Sweden
Rajiv Ratn Shah	Multimodal semantic and sentiment analysis of user-generated social media content	Ph.D. (2017), National University of Singapore, Singapore
Tanmoy Chakraborty	Network Science, Data Mining and Data-driven Cybersecurity, Natural Language Processing	PhD (2015), IIT Kharagpur, India
Tavpritesh Sethi	Big-data for clinical decision support, Human physiology.	Ph.D. (2014), CSIR-IGIB, Delhi

Artificial Intelligence



Faculty Name	Research Interests	PhD
V. Raghava Mutharaju	Knowledge Graphs/Semantic Web, Ontology modeling and reasoning, Linked Data, Big Data	Ph.D. (2016), Wright State University, Dayton, OH, USA
Vinayak Abrol	Acoustic modelling and coding, Voice biometrics, Pathological speech and audio categorization	PhD (2018), IIT Mandi, India



Bioinformatics



Faculty Name	Research Interests	PhD
G.P.S. Raghava	Bioinformatics Application on Protein Modelling/ Engineering, Genomics and Informatics Solutions for integrating Biology (GENESIS)	PhD (1996), Institute of Microbial Technology, Chandigarh
Ganesh Bagler	Complex Systems, Computational Biology, Complex Networks, Bioinformatics	Ph.D. (2007), CSIR-Centre for Cellular and Molecular Biology
Tavpritesh Sethi	Big-data for clinical decision support, Human physiology.	Ph.D. (2014), CSIR-IGIB, Delhi

Cognitive Neuroscience



Faculty Name	Research Interests	PhD
Mrinmoy Chakrabarty	Affective Cognitive Neuroscience, Visual-Spatial Cognition, Autism Spectrum Disorders	PhD (2017), Osaka University, Japan
Sonia Baloni Ray	Role of attention in visual processing, studying mechanisms of emotion and motion perception	Ph.D. (2012), Georg August University, Goettingen, Germany
Sriram K	Systems biology, Cell division cycle, Circadian rhythms, Computational cognitive neuroscience.	Ph.D. (2004), Chemistry, IIT Madras

Computer Vision



Faculty Name	Research Interests	PhD
A V Subramanyam	Information Forensics and Security, Multimedia Signal Processing, Visual Surveillance and Deep Learning	PhD (2012), NTU, Singapore
Koteswar Rao Jerripothula	Computer Vision, Image Processing, Multimedia Systems	Ph.D. (2017), NTU, Singapore
Rajiv Ratn Shah	Multimodal semantic and sentiment analysis of user-generated social media content	Ph.D. (2017), NUS, Singapore
Saket Anand	Geometric Computer Vision, Semi-supervised learning, Robust methods	Ph.D. (2013), Rutgers University, NJ, USA
Tamman Tillo	Convolutional Neural Networks, Image Processing, Signal Processing	PhD (2005), Politecnico di Torino, Italy

Computer Graphics



Faculty Name	Research Interests	PhD
Ojaswa Sharma	Computer graphics and geometry with focus on Virtual and Mixed reality (VR/MR), Volume rendering, 3D reconstruction	Ph.D. (2010), Technical University of Denmark, Denmark



Computer Security and Cryptography

Faculty Name	Research Interests	PhD
A V Subramanyam	Information Forensics and Security, Multimedia Signal Processing, Visual Surveillance and Deep Learning	PhD (2012), NTU, Singapore
Arun Balaji Buduru	Cyber security, Reinforcement learning and stochastic planning	PhD (2016), Arizona State University
Donghoon Chang	Cryptography, Cryptanalysis, Cyber Security	PhD (2008), Korea University, Korea
Piyus Kedia	System security, safe languages, virtualization	Ph.D. (2018), IIT-Delhi
Sambuddho Chakravarty	Network Anonymity and Privacy, Network Censorship and Anti-Censorship	Ph.D. (2014), Columbia University, USA

Computer Security and Cryptography

Faculty Name	Research Interests	PhD
Subhabrata Samajder	Symmetric-key Cryptanalysis, Lattice-based cryptography, Blockchains and random graphs	PhD (2017), Indian Statistical Institute, Kolkata
Tanmoy Chakraborty	Network Science, Data Mining and Data-driven Cybersecurity, Natural Language Processing	PhD (2015), IIT Kharagpur, India



Genomics



Faculty Name	Research Interests	PhD
Anubha Gupta	Sparse Reconstruction, FMRI/EEG/MRI/DTI Signal and Image Processing, Genomics Signal Processing	PhD (2006), IIT-Delhi
Arjun Ray	Deciphering the mechanism of CRISPR-Cas9, Elucidating molecular interactions in the reverse cholesterol pathway	Ph.D. (2018) CSIR-IGIB, India
Debarka Sengupta	Applied machine learning and genomics	PhD (2014), Jadavpur University, India
Gaurav Ahuja	Identification, deorphanization and characterization of ectopically expressed GPCRS	Ph.D. (2015), University of Cologne, Germany

Genomics



Faculty Name	Research Interests	PhD
Jaspreet Kaur	Cancer genomics, personalized medicine, drug design and discovery	PhD (2019), IIT-Delhi
Vibhor Kumar	Genomics, Computational Biology and Statistical Signal Processing	Ph.D. (2007) , HUT (now Aalto), Finland



Human-Computer Interaction



Faculty Name	Research Interests	PhD
Aman Parnami	Wearable Computing, Design Research, Education Technology	PhD (2017), Georgia Institute of Technology
Grace Eden	Fieldwork for Design, Human-Centred AI, Participatory Design	DPhil (2012), University of Oxford
Jainendra Shukla	Affective Computing, Embodied Conversational Agents, Social Robotics	PhD (2018), URV, Spain
Rajiv Ratn Shah	Multimodal semantic and sentiment analysis of user-generated social media content	Ph.D. (2017), National University of Singapore, Singapore
Pushpendra Singh	Mobile Systems and Applications, Middleware, ICT for Development	PhD (2004), Inria-Rennes, France

Big Data



Faculty Name	Research Interests	PhD
Mukesh Mohania	Information Integration, Entity Discovery and Analytics, Big Data Analytics and Applications, Blockchain Data Management	PhD (1995), IIT Bombay, India
Vikram Goyal	Data Mining, Databases, Spatial Data Analytics	Ph.D. (2009), IIT Delhi, India



Machine Learning/Deep Learning

Faculty Name	Research Interests	PhD
A V Subramanyam	Information Forensics and Security, Multimedia Signal Processing, Visual Surveillance and Deep Learning	PhD (2012), NTU, Singapore
Anubha Gupta	Sparse Reconstruction, FMRI/EEG/MRI/DTI Signal and Image Processing, Genomics Signal Processing	PhD (2006), IIT-Delhi
Angshul Majumdar	Sparse Recovery, Low-rank matrix completion, Medical Imaging	Ph.D. (2012), University of British Columbia, Canada

Machine Learning/Deep Learning

Faculty Name	Research Interests	PhD
Arun Balaji Buduru	Cyber security, Reinforcement learning and stochastic planning	PhD (2016), Arizona State University
Bapi Chatterjee	Distributed Machine Learning, Concurrent Data Structures, Neural Architecture Search, Learned Index Structures	PhD (2018), Chalmers University of Technology, Gothenburg, Sweden
Koteswar Rao Jerripothula	Computer Vision, Image Processing, Multimedia Systems	Ph.D. (2017), NTU, Singapore

Machine Learning/Deep Learning

Faculty Name	Research Interests	PhD
Md. Shad Akhtar	Sentiment Analysis, Emotion Analysis, Conversational Dialog Systems	Ph.D. (2019), IIT Patna, India
Rajiv Ratn Shah	Multimodal semantic and sentiment analysis of user-generated social media content	Ph.D. (2017), National University of Singapore, Singapore
Ranjitha Prasad	Causal Inference, Survival analysis, and sparsity in Bayesian neural networks.	Ph.D. (2015), IISc, Bangalore

Machine Learning/Deep Learning

Faculty Name	Research Interests	PhD
Saket Anand	Geometric Computer Vision, Semi-supervised learning, Robust methods	Ph.D. (2013), Rutgers University, NJ, USA
Sanjit K. Kaul	Networking for Cyber Physical Systems, Networks of Autonomous Vehicles, and Autonomous Driving	PhD (2011), Rutgers University, USA
Sayan Basu Roy	Adaptive control for uncertain switched systems, Online approximate optimal control using reinforcement learning	PhD (2019), IIT-Delhi

Machine Learning/Deep Learning

Faculty Name	Research Interests	PhD
Tanmoy Chakraborty	Network Science, Data Mining and Data-driven Cybersecurity, Natural Language Processing	PhD (2015), IIT Kharagpur, India
Tavpritesh Sethi	Big-data for clinical decision support, Human physiology.	Ph.D. (2014), CSIR-IGIB, Delhi
Vinayak Abrol	Acoustic modelling and coding, Voice biometrics	PhD (2018), IIT Mandi, India

Natural Language Processing



Faculty Name	Research Interests	PhD
Md. Shad Akhtar	Sentiment Analysis, Emotion Analysis, Conversational Dialog Systems	Ph.D. (2019), IIT Patna, India
Rajiv Ratn Shah	Multimodal semantic and sentiment analysis of user-generated social media content	Ph.D. (2017), National University of Singapore, Singapore
Tanmoy Chakraborty	Network Science, Data Mining and Data-driven Cybersecurity, Natural Language Processing	PhD (2015), IIT Kharagpur, India
Vinayak Abrol	Acoustic modelling and coding, Voice biometrics	PhD (2018), IIT Mandi, India

Very Large Scale Integration [VLSI]

Faculty Name	Research Interests	PhD
Anuj Grover	Ultra Low Power In-Memory Compute, Safety and security in hardware; and Error resilient energy efficient systems	PhD (2015), IIT-Delhi
Mohammad S. Hashmi	Multi-band RF Circuits & Systems, PA Design and Linearization, Advanced RF Instrumentation SI/PI and EMC Analysis	PhD (2009), Cardiff University, UK
Ram Krishna Ghosh	Computational nanoelectronics, spintronics, quantum transport simulation, device modeling	Ph.D. (2013), IISc, Bangalore

Very Large Scale Integration [VLSI]

Faculty Name	Research Interests	PhD
Sneh Saurabh	Nanoelectronics, Exploratory Electronic Devices, Energy-Efficient Systems VLSI Design and Verification and CAD for VLSI.	PhD (2012), IIT, Delhi
Sujay Deb	Heterogeneous System Architectures (HSA), SoC Design & Test, Design of novel interconnect architectures for multi-core chips	Ph.D. (2012), Washington State University
Sumit J Darak	Intelligent, Reconfigurable and Self-sustainable wireless radio, Machine learning for wireless networks, Algorithms to architectures	PhD (2013), Nanyang Technological University (NTU), Singapore

Wireless Communication



Faculty Name	Research Interests	PhD
Anand Srivastava	Digital Communications, Wireless and Optical communications, Optical Networks	PhD (2003), IIT-Delhi
Gourab Ghatak	Stochastic geometry, millimeter-wave communications, 5G network planning and positioning in 5G	Ph.D. (2019), CEA-LETI and Telecom ParisTech, France
Ranjan Bose	Secure Communications, Coding Theory, 5G Security	PhD (1995), University of Pennsylvania, Philadelphia, USA
Sanjit K. Kaul	Networking for Cyber Physical Systems, Networks of Autonomous Vehicles, and Autonomous Driving	PhD (2011), Rutgers University, USA

Wireless Communication



Faculty Name	Research Interests	PhD
Shobha Sundar Ram	Conceptualize Model Design and Test Electromagnetic Sensors, EMI based sensing of energy consumption	PhD (2009), University of Texas at Austin
Vivek Bohara	Device-to-device communication, Visible Light Communication, Hybrid VLC-RF architecture	PhD(2011), Nanyang Technological University, Singapore