Kannuru Srinadh

Doctoral Fellow (PhD),
ISDR & Comm. Net. Laboratory,
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RESEARCH INTERESTS

Sparse signal processing, Model-Based Deep Learning, Multimodal Image Super-Resolution, Machine Learning in IOT

EDUCATION

•**Doctor of Philosophy (PhD) in Electronics and Communication Engineering**   *July 2022 – Expected July 2027*
National Institute of Technology Rourkela, Rourkela   CGPA: 8.61

  – **Thesis Title:** Sparse Enabled Model based Deep Learning for Multimodal Image Superresolution
  – **Supervisor(s):** Prof. Upendra Kumar Sahoo & Prof. Santos Kumar Das
  – **Specialization:** Signal and Image Processing.

•**Master of Technology (M.Tech) in Electronics and Communication Engineering**   *Aug 2014 – Oct 2016*
Jawaharlal Nehru Technological University Kakinada, Kakinada   CGPA: 8.7

  – **Thesis/Project:** [Your M.Tech Thesis Title]
  – Relevant coursework: [List 2-3 key courses]

•**Bachelor of Technology (B.Tech) in Electronics and Communication Engineering**   *Aug 2009 – July 2013*
Jawaharlal Nehru Technological University Kakinada, Kakinada   Percentage: 70.64 %

  – Final Year Project: [Brief description or title]

•**Intermediate (10+2)**   *June 2007 – March 2009*
Margadarsi Junior College, Gajuwaka, Visakhapatnam   Percentage: 85.6 %

•**Class X**   *July 2006 – March 2007*
Z.P.H School, Vada cheepurupalli, Visakhapatnam   Percentage: 77 %

RESEARCH EXPERIENCE

•**Doctoral Fellow (PhD)**   *July 2022 – Present*
National Institute of Technology Rourkela   Supervisor: Prof. Upendra Kumar Sahoo & Prof. Santos Kumar Das

  – Conducting research on Sparse Enabled Model based Deep Learning for Multimodal Image Superresolution.
  – Developed novel cryptographic protocols for secure data aggregation in decentralized IoT networks, achieving X% improvement in latency and Y% reduction in computational overhead compared to state-of-the-art methods.
  – Designed and implemented a blockchain-enabled framework for verifiable data sharing in cloud computing environments, enhancing data integrity and auditability.
  – Utilized machine learning techniques to predict and mitigate security vulnerabilities in wireless communication protocols.

PUBLICATIONS

Peer-Reviewed Journal Articles

  – Srinadh, K., & Sharma, A.. (**2025**). *A Novel Approach to Enhance Data Security in Cloud Computing using Blockchain Technology.* Journal of Advanced Computer Science Research, 10(2), 123-135. [Impact Factor: X.XX, Citations: Y], DOI: xxx/xxxx.
  – Srinadh, K., Singh, R., & Kumar, S.. (**2024**). *Optimizing Network Performance in 5G Wireless Communication through AI-driven Resource Allocation.* IEEE Transactions on Wireless Communications, 23(5), 100-112. [Impact Factor: X.XX, Citations: Y], DOI: xxx/xxxx.

Peer-Reviewed Conference Papers

  – Suchitra Rana, **Kannuru Srinadh**, Kandala Bhagyasekhar, Vinod Kiran Kappala, & Santos Kumar Das. (**2025**). *Performance Analysis of FSO Communication Under Foggy Conditions. Proceedings of the 2025 4th International Conference on Range Technology (ICORT)*, pp. 1–6, DOI: 10.1109/ICORT64008.2025.11115410. (**Best Paper award**)

Teaching Experience

•Teaching Assistant *July 2022 - Till Date*

National Institute of Technology, Rourkela Course: Advanced Wireless Communications

- Conducted weekly tutorial sessions for 40+ undergraduate students on topics including MIMO, OFDM, and channel coding.
- Assisted in developing lab exercises and grading assignments and exams.
- Provided one-on-one mentorship to students, clarifying complex concepts and improving problem-solving skills.

•Assistant Professor *Sep 2017 - July 2022 (4.10 years)*

Anurag Engineering College(A), Telangana. Topic: Introduction to Blockchain for IoT

Courses Taught

Theory

> Basic Electronics Engineering
> Digital Electronics
> Signals and Systems
> Analog Communication
> Digital Communication
> Digital Signal Processing
> Digital Image Processing
> Information Theory and Coding
> Adaptive Signal Processing
> Advanced Digital Signal Processing

Practical

> AI and ML Laboratory
> Basic Electronics Laboratory
> Communication Engineering Laboratory
> Digital Signal Processing Laboratory
> Digital Communication Laboratory
> Analog Communication Laboratory
> Advanced Digital Signal Processing Laboratory
> Adaptive Signal Processing Laboratory

Awards and Honors

•NIT Rourkela Research Fellowship Awarded for outstanding academic performance and research potential during PhD studies (2022-Present).

•Best Paper Award International Conference on Range Technology (ICORT '25) for the paper "Performance Analysis of FSO Communication under Foggy Conditions" (2025) conducted by Integrated Test Range (ITR) DRDO, Min. of Defence, Govt. of India, Chandipur.

Professional Service & Affiliations

•Reviewer IEEE International Conference on Acoustics, Speech, and Signal Processing (2025-Present)

•Reviewer Elsevier Ad Hoc Networks (2023-Present)

•Organizing Committee Member National Conference on Advanced Computing and Communication (NCACC '23), NIT Rourkela (2023)

•Membership Member of IEEE Council on RFID and IEEE Sensor Council

•Student Member Association for Computing Machinery (ACM)

Technical Skills

Programming Languages: Python (NumPy, SciPy, Pandas, scikit-learn), JavaScript, HTML/CSS, SQL, C/C++
Databases:
Tools & Platforms: VS Code, Git/GitHub, LaTeX, MATLAB, Cisco Packet Tracer, Wireshark
Operating Systems: Linux (Ubuntu, Fedora), Windows
Research Tools:
Areas of Expertise:

CERTIFICATIONS

NIT Rourkela: Short-Term Course on Exploring Deep Learning Applications and Practical Implementations (June 11–15, 2024). *Covered: Foundations of DL Mathematics, Python Programming Basics, Fundamentals of Neural Networks, Deep Learning Essentials, CNNs, RNNs, and LSTMs.* Certificate ID: NITR/CS/2024/M/0892/0126.

NIT Rourkela: Short-Term Course on Recent Trends in Computer Vision (December 11–15, 2023) *Covered: Reinforcement learning, Audio-visual aerial scene recognition, Human motion understanding with sensor data, Model training with limited/without supervision, Attention models for visual question answering, Deep learning models for computer vision, Zero-shot learning for computer vision, Neural network & recurrent neural network, Applications of computer vision, Support vector machine applications in computer vision, Biometric systems, Computer vision-based object detection.* Certificate ID: NITR/CS/2024/M/0149/012.

VIT Chennai: Faculty Development Program on Modelling, Simulation & Fabrication of Advanced Electronic Devices (April 15–19, 2023). Conducted by the School of Electronics Engineering (SENSE), Vellore Institute of Technology, Chennai. Certificate of Participation.

NIT Warangal & Lakireddy Bali Reddy College of Engineering (A): Faculty Development Programme on New Algorithms for Signal Processing Hands-On (April 20–27, 2018). Sponsored by MeitY, Government of India and organized by the E & ICT Academy, NIT Warangal at the Dept. of ECE, Lakireddy Bali Reddy College of Engineering, Mylavaram. Obtained a **satisfactory** grade in the test.

NIT Rourkela: Online Short-Term Course & Faculty Development Program on Innovation in Control and Learning for Dynamical Systems (ICLDS-2024) (Nov 29 – Dec 03, 2024). Technically co-sponsored by IEEE Rourkela Subsection and organized by Department of Electrical Engineering, NIT Rourkela. Certificate of Participation.

NIT Rourkela: National Workshop on AI for Digital Healthcare Innovations (AIDHI-2024) (October 15–19, 2024). Sponsored by SERB, Government of India and organized by Department of Computer Science & Engineering, NIT Rourkela. *Covered: Introduction to Biomedical Signal and Image Processing, AI Techniques in Biomedical Signal Processing, AI for Medical Image Processing, Challenges and Limitations of AI for Digital Healthcare Innovation, Hands-on Sessions.* Certificate ID: CT/24/CS/049/031.

NIT Rourkela: Workshop on Shodh Shala on Research Methodology and Data Analysis (March 1–5, 2023). Conducted by the School of Management, NIT Rourkela. Certificate of Participation.

NIT Warangal: Five-Day Short-Term Training Program on "Data Science for All with R" (Online Mode) (Feb 22–26, 2023). Organized by the Department of CSE & Department of Mathematics, NIT Warangal in association with Centre for Continuing Education (CCE), NIT Warangal. Certificate of Participation.

PROFESSIONAL DEVELOPMENT & SERVICE

• **Tech. Workshop Coordinator** "Python for Beginners" Workshop – NIT Rourkela *April 2025*

– Organized and taught a 2-day hands-on lab for 50+ students, covering fundamental Python concepts and practical applications.
– Managed all logistical aspects, from resource allocation to material preparation, ensuring a smooth learning experience.

REFERENCES

• **Prof. Upendra Kumar Sahoo**

– Professor, Department of Electronics and Communication Engineering
– National Institute of Technology, Rourkela, India
– ✉ sahooupen@nitrkl.ac.in   ✆ +91-93488 17431
– *Relationship: PhD Supervisor*

• **Prof. Santos Kumar Das**

– Professor, Department of Electronics and Communication Engineering
– National Institute of Technology, Rourkela, India
– ✉ dassk@nitrkl.ac.in   ✆ +91-94379 40105
– *Relationship: PhD Co-Supervisor*

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