

2nd International Conference on Advanced Communication Technologies and Signal Processing (ACTS-2021)

(Technically Co-sponsored by IEEE)
15th - 17th December 2021

Department of Electronics and Communication Engineering
National Institute of Technology Rourkela



ACTS
IEEE ACTS 2021



IEEE ACTS-2021 is the 2nd edition of the international conference series ACTS to be organized by the Department of Electronics and Communication Engineering, **National Institute of Technology Rourkela** jointly with **National Institute of Technology Silchar** in **virtual mode**. ACTS-2021 is technically co-sponsored by the IEEE Kolkata Section and is technically supported by the local IEEE Rourkela Subsection. The ACTS-2021 aims to promote the state-of-the-art research in the field of Communications, Signal Processing, and Microwave Engineering. The 2nd edition of ACTS, i.e., ACTS-2021 is envisioned to provide a larger platform for researchers from academia and industry not only to share their research but also networking opportunities among the peers for collaborations. The conference aims to foster the theme through keynotes, invited talks, and industry exhibits and oral presentation of research articles in the most relevant areas allied to the theme. The conference will also exhibit Graduate Research Forum to encourage budding young researchers to showcase their innovative research in aforementioned domains.

The theme of IEEE ACTS 2021 is "**Smart Technology for Next Generation Connectivity**". Technological advances in communications, wireless sensor networks, signal processing, the Internet of Things or cyber-physical systems are creating limitless possibilities for connecting multiple devices, networks, and systems, to promote ideas for future generations of smart societies.

Important Dates

Paper Submission Deadline: 15th September 2021

Notification of Acceptance : 30th October 2021

Final Camera Ready Submission: 15th November 2021

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Call for Paper

After peer review, all accepted and presented papers of IEEE ACTS-2021 will appear in IEEE Xplore and indexed in SCOPUS, Google Scholar and other major indexing. There will be a few workshops co-located with the conference. Proposals to organize workshops in-line with the theme and main conference are also encouraged. In addition, those interested in the conference are also encouraged to submit proposals for tutorials.

Prospective authors are invited to submit original, and unpublished full papers in the following tracks but not limited to:

COMMUNICATION AND NETWORKING

Wireless Communications & Networks
Optical Communications & Networks
Modulation and Coding Techniques
Ad-hoc & Sensor Networks
Vehicular Networks
Mobility Models & Mobile Networks
Internet-of-Things (IoT) Networks
Cognitive IoT
Device-to-Device (D2D) Communications
Social Network Aware Wireless Network
5G & Beyond Technologies
mmWave Communications
Cross-layer Designs
Cognitive Radio Systems and Networking
Spectrum Management
Distributed Resource Allocation and Scheduling
Modulation, Coding and Diversity
Multicarrier Communication Systems
Routing Protocols and QoS Scheduling
Cooperative Communications
Underwater Communications
Green Telecommunications
Smart Grid Communications
Soft Computing and its Applications to Communications

SIGNAL PROCESSING

Image/Video/Multimedia Signal Processing
Audio/Speech/Spoken Language Processing
Digital and Multi-rate Signal Processing
Statistical Signal Processing
Signal Processing Algorithms and Architectures
Pattern Recognition and Object Tracking
Compressive Sensing and High-Dimensional Statistics
Signal Processing in Bio-Medical Engineering
Signal Processing for Communications
Soft Computing and its Applications to Signal Processing
Geoscience and Remote sensing
Array Signal Processing
Human-Computer Interfaces

RF CIRCUITS AND MICROWAVE

Antennas, Propagation and Computation EM
RF/Millimeter-wave Circuits and Systems
THz, mmWave and RF Systems for Communications
Materials and Structures
Microwave Metrology
RF and Microwaves in Medicine and Biology
Reconfigurable Intelligent Surfaces

Topics on AI, ML/DL, Big Data relevant to theme of IEEE ACTS 2021 are also encouraged.



ABOUT THE THEME

Smart technology for next-generation connectivity aims to reach out to the people and enable them to use and experience the benefits for a more intelligent & better society. Smart technologies would involve innovations in every aspect of engineering and communication, such as developing devices, sensing, networking and data processing algorithms, energy utilization, safety and security considerations, efficient bio-medical signal processing, accurate diagnosis of diseases, etc. Next-generation technology will be primarily driven by the ubiquitous communication & networking technology encompassing multiple platforms, systems, and services; pervasive signal processing algorithms comprising medical imaging and speech processing for automated systems. In addition to the topics mentioned in various tracks, technical papers are invited to focus on enabling technologies for the next generation-connected world. This 3-day technical event includes several keynote speeches by distinguished speakers from academia, industry, government sectors, panels and forums, followed by technical sessions featuring technical papers extensively reviewed by peers. It also focuses on workshops with the latest trends in various technology, tutorials delivered by experts in respective disciplines, exhibits, an awards luncheon, and a relaxing and entertaining banquet.

ABOUT NIT ROURKELA

National Institute of Technology Rourkela was founded as Regional Engineering College, Rourkela in 1961. It is a prestigious Institute with a reputation for excellence at both undergraduate and postgraduate levels, fostering the spirit of national integration among the students, a close interaction with industry and a strong emphasis on research, both basic and applied.

For information visit: <https://www.nitrkl.ac.in>

ABOUT THE DEPARTMENT

The Department of Electronics and Communication Engineering at NIT Rourkela covers a host of subjects inclusive of electronic circuits, microprocessors, digital signal processing, image processing and computer vision, soft computing, analog communication, digital communication, mobile communication, VLSI, embedded Systems, electronic instrumentation, analytical instrumentation and many more. The department has laboratories catering to all the subjects of studies. Faculty members of the department are working in different specializations under the groups: Communication Engineering, VLSI and Embedded Systems, Signal Processing and Instrumentation. Many research projects are being pursued by faculty members with funding from organizations like ISRO, DST, DRDO and BRFST.

For more information visit: <https://www.nitrkl.ac.in/EC>

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THEIR POTENTIAL

