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# International Conference On Signal Processing and Computer Vision (SIPCOV-2023)

Technically Co-sponsored by IEEE Kolkata section and  
Financially sponsored by SERB-DST, Government of India

**MARCH 30 & 31, 2023**



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Organized by  
Department of Electronics and Communication Engineering  
National Institute of Technology Silchar  
Assam, India

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**MORE INFORMATION** →

**[HTTP://SIPCOV.NITS.AC.IN/](http://sipcov.nits.ac.in/)**

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## ABOUT SIPCOV 2023

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The main aim of this international conference is to bring researchers from all the esteemed institutes of the World. Along with researchers, the professionals and executives from Signal Processing and Computer Vision are invited to share ideas and information about innovations focused on techniques for handling today's challenges. The conference aims to bring together leading researchers from academia and industries to exchange and share their experiences and results on all aspects of recent societal developments and applications. It will also provide an interdisciplinary platform for researchers, practitioners, and educators to present and discuss the most recent innovations, trends, and concerns, as well as practical challenges encountered and solutions adopted in the fields of Signal Processing and Computer Vision applications such as Image, and Video Processing, Medical Imaging and Technology, Communication System Engineering and IOT based System Design.

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## ABOUT THE INSTITUTE

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National Institute of Technology (NIT) Silchar, an institute of national importance under the NIT Act, was established in 1967 as Regional Engineering College (REC) Silchar in Assam. In 2002, it was upgraded to the status of NIT from REC. NIT Silchar has situated on the banks of the river Barak and has a sprawling campus spread over 600 acres of land on Silchar's outskirts. The landscape of NIT Silchar is beautiful, with natural lakes and hillocks surrounded by tea gardens. The climate of Silchar during July is delightful, with an average temperature of around 20-25°C. NIT Silchar is a fully residential institution with nine hostels for boys and three hostels for girls. NIT Silchar is a teaching and research institute which steps in the various national and international ranking frameworks.

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## ABOUT THE DEPARTMENT

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The Department offers B.Tech. in Electronics and Communication Engineering and M.Tech. in two specializations (i) Micro-Electronics and VLSI Design & (ii) Communication and Signal Processing Engineering. This department also offers a Ph.D. in Electronics and Communication Engineering. The state-of-the-art laboratory facilities exist in the department to facilitate the UG, PG, and Ph.D. scholars to research the frontier research areas of Electronics and Communication Engineering. The faculty members are specialized in diverse fields, and there is a commendable research ambiance in the department. Department of Electronics and Communication Engineering takes up R & D projects sponsored by various funding agencies such as DST, SERB, BARC, MeitY CSIR, and many more.

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# CALL FOR PAPERS

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The Conference solicits papers in the areas of Signal, Image, and Video Processing, Medical Imaging and Technology, Communication System Engineering, and IOT based System Design Original and unpublished research papers from all viewpoints, including theory, practice, experimentation, and Survey highlighting specific research domains are invited from researchers, academicians and professionals throughout the globe for presentation in the technical sessions of the conference. The maximum allowable length of the paper is six (6) pages (including figures and references) for regular research articles. Three experts will blindly review articles to decide their suitability for publication at the conference. Accepted and registered papers will be published in IEEE Xplore (Approval pending from IEEE MCE).

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## TOPICS AND TRACKS OF SIPCOV- 2023

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### **TRACK 1: SIGNAL, IMAGE, AND VIDEO PROCESSING**

Signal, Image, and Video Processing  
Audio, Speech and Music Processing  
Deep learning for Images and Video  
Supervised and unsupervised Learning Methods  
Statistical Signal Processing  
Natural language Processing  
Image and Video Analysis for the Web  
Big data management  
Data Analytics and Machine Learning  
Computer graphics and visualization  
Signal/image metrics  
Human Biometrics and Security Systems  
Social Network Analysis  
Sentiment Analysis  
Information retrieval  
Emerging Technologies in Digital Signal Processing  
Virtual Reality and 3-D Imaging  
Multimedia Security and Forensics

## **TRACK 2: MEDICAL IMAGING AND TECHNOLOGY**

Medical Imaging and Image Processing

Computer-aided diagnosis

Biomedical applications in molecular, structural, and functional imaging

Ultrasonic imaging and tomography

Medical Signal Acquisition, Analysis, and Processing

Deep learning for Medical Imaging

Biomedical & Health Informatics

Applications in Electronic Health Records

Neural and Rehabilitation Engineering

Biomedical Engineering Education and Society

Digital pathology

Health monitoring devices

Neuroimaging

X-ray, CT, PET, and SPECT

Image perception, observer performance, and technology assessment

## **TRACK 3: COMMUNICATION SYSTEM ENGINEERING**

5G & Beyond Technologies

Device-to-Device (D2D) Communications

Optical and Satellite Communication

[WWW.REALLYGREATSITE.COM](http://WWW.REALLYGREATSITE.COM)

Routing Protocol and Architecture

Cognitive Radio Systems and Networking

Vehicular Networks

Wireless Sensor Networks

Modulation and Coding Techniques

Ad-hoc & Sensor Networks

Network Performance Analysis, Optimization and related topics.

Wireless and Network Security

Data Privacy, Cryptanalysis

Routing Protocols and QoS Scheduling

Green Communications

Underwater Communications

Machine Learning and its Applications to Communications

Antenna, Propagation, and Computational EM

THz, mmWave and RF Systems for Communications

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## TRACK 4: IOT BASED SYSTEM DESIGN

Internet-of-Things (IoT) Networks

Cognitive IoT

Novel Applications of IoT in Industry (e.g., manufacturing, agriculture, business processes, etc.)

Special purpose hardware to support deep learning in embedded architectures

Digital Health and Telemedicine

Vehicle Telemetry System with IoT

Security and Privacy Enhancing Technologies for IoT devices

Data Acquisition, Storage and Management for IoT

AI and Machine Learning for the IoT

IoT System Interfaces

IoT-enhanced AR/VR/MR, Metaverse, and Games

IoT protocols and Transports

Agents and Multi-agent Systems

Edge computing for smart embedded systems: hardware and software aspects

Energy Efficiency and Sustainability in IoT

Electronics and Signal processing for IoT

Human Interaction with IoT

IoT-enabled Innovation and Entrepreneurship

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## IMPORTANT DATES

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**PAPER SUBMISSION STARTS: NOVEMBER 15, 2022**

**PAPER SUBMISSION DEADLINE: JANUARY 31, 2023**

**PAPER DECISION: FEBRUARY 10, 2023**

**FINAL PAPER SUBMISSION: FEBRUARY 15, 2023**

**REGISTRATION DEADLINE: FEBRUARY 28, 2023**

**CONFERENCE DATES: MARCH 30, 31, 2023**

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## PAPER SUBMISSION LINK AND GUIDELINES

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Submissions should be made according to the IEEE Conference format (LaTeX template, or Word template).

Papers should be submitted through the Microsoft CMT

<https://cmt3.research.microsoft.com/SIPCOV2023>

The papers should be in English. The maximum full-length size of the paper should be six (6) pages (Including references). Any published work or other conference/journal work submitted will be rejected in the preliminary stage.

All papers will be checked by Plagiarism checker software. The paper submissions must follow the IEEE Conference formatting guidelines.

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# Keynote Speakers

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**PROF. BJÖRN W. SCHULLER,  
UNIVERSITY OF AUGSBURG,  
GERMANY**



**PROF. SEYEDALI MIRJALILI  
TORRENS UNIVERSITY  
AUSTRALIA.**



**PROF. ALAIN TRÉMEAU  
UNIVERSITY JEAN MONNET,  
SAINT-ETIENNE, FRANCE.**



**PROF. JIANKUN HU  
SCHOOL OF  
ENGINEERING AND  
INFORMATION  
TECHNOLOGY,  
THE UNIVERSITY OF NEW  
SOUTH WALES,  
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**PROF. IR. TS. DATIN  
DR. WAHIDAH  
DIRECTOR AT  
MICROWAVE  
RESEARCH INSTITUTE,  
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## REGISTRATION FEE

Registration fee	Indian (INR)	International (Dollars)
<b>IEEE Member (Full Registration)</b>	<b>6000</b>	<b>250</b>
<b>IEEE Non-Member (Full Registration)</b>	<b>7000</b>	<b>300</b>
<b>IEEE Student Member</b>	<b>4000</b>	<b>150</b>
<b>IEEE Student Non-Member</b>	<b>5000</b>	<b>200</b>
<b>Participants from Industry</b>	<b>7000</b>	<b>350</b>
<b>Participants only</b>	<b>2000</b>	<b>100</b>

## CONTACT

**CONFERENCE RELATED QUERIES [SIPCOV@NITS.AC.IN](mailto:SIPCOV@NITS.AC.IN)**