



# Online International Conference WOMEN RESEARCHERS IN ELECTRONICS AND COMPUTING

## WREC'21

22-24 April 2021

Department of Electronics and Communication Engineering

Dr B R Ambedkar National Institute of Technology,  
Jalandhar

### Publishing partner

The conference proceedings will get published online in AIJR Proceedings Series (ISSN:2582-3922) with ISBN & DOI (Each article will get assigned a separate DOI)



Visibility:

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Designed by: Srishty Banga, ICE 3rd yr



# About the Conference

Though women are underrepresented in engineering, but the number has been growing consistently as more women are opting to pursue studies in this field and still there is a lot required to be done to encourage this trend. We would like to dedicate this conference so as to promote and encourage women engineers and motivate young girls to follow their academic interests to a career in engineering. With a view to inspire women engineers, pioneer and successful women achievers in the domains of VLSI design, wireless sensor networks, communication, image/ signal processing, machine learning, and emerging technologies have been identified from across the globe and invited to present their work and address the participants in this women oriented conference. All the keynote speakers, tutorial presenters, session chairs and the members of conference organizing team are women.

## Our Speakers

KEYNOTE



**Prof. Nilmini Wickramasinghe**  
*Swinburne University of Technology, Australia*

**Day 2, 10:30 AM IST**

Prof. Nilmini will discuss about innovative solutions that support management of chronic diseases by focussing on patient empowerment and prudent preventive measures. She will also focus on technology enabled superior wellness management.



**Prof Maryam Shojaei Baghini**  
*IIT-Bombay, India*

**Day 3, 9:30 AM IST**

Prof. Maryam's talk will be focussed on Integrated circuits and system design with emerging devices. She will discuss various circuit design challenges and the design methodologies that enforce perfect designs.

TUTORIAL



**Dr Gayatri Mehta**  
*University of North Texas, USA*

**Day 2, 8:30 AM IST**

Tutorial session by Dr Gayatri Mehta will be covering the system-level interconnection strategies for coarse-grained reconfigurable fabric with focus on the performance and power consumption challenges.



**Dr Prabhjot Kaur**  
*Co-Founder and CEO at Esmito Solutions Pvt Ltd Chennai, TN, India*

**Day 1, 2:30 PM IST**

Dr Prabhjot will conduct a tutorial session on Cognitive Radios. This tutorial session will be covering the Need, Capabilities, Standards, Applications and Research Challenges with regard to Cognitive Radio.



# Conference Tracks

## Track 1 : Signal and Image Processing

**Chair : Prof Savita Gupta, UIET, Chandigarh**  
**Prof Anamika Dubey, Washington State University, USA**

- Signal Processing Algorithms and Architecture
- Pattern Recognition and Object Tracking
- Biomedical Signal and Image Processing
- Design and Implementation of Signal Processing
- Signal Processing for Communication and Networking
- Soft Computing and its Applications to Signal Processing
- Signal processing for Smart Systems
- Human-Computer Interface
- Signal Processing for Cyber Security
- Signal Processing for Big Data
- Internet of things and RFID
- Digital and Multirate Signal Processing
- Audio/Speech and Language Processing
- Machine Learning and Deep Learning for Signal Processing

## Track 2 : Communication, Wireless Sensor Networks

**Chair : Prof Neena Gupta, PEC Chandigarh**  
**Prof Gurmeet Kaur, Punjabi University**

- Wired, Wireless, Visual, and Acoustic Technologies
- Machine learning for 5G and beyond
- Machine learning and deep learning for all types of networks
- Wave Technology
- Massive MIMO
- MIMO-based networking
- Ultra-reliable low latency communications
- Massive Machine Type of Communication
- Cellular/cell-free massive MIMO
- Multiple Radio Access Technologies (M-RATs) interworking
- Next generation radio access networks (RAN)
- Mobile sensing and applications
- Mobility management and models
- Channel modelling and performance analysis

## Track 3 : VLSI Design

**Chair : Prof Rajeevan Chandel, NIT Hamirpur**  
**Prof Alpana Aggarwal, Thapar University**

- Analog, mixed-signal, and RF designs
- Low-power and thermal-aware design
- Logic and Physical synthesis
- FPGA prototyping
- Reconfigurable computing
- Electronic Design Automation (EDA)
- Hardware/software co-design
- Processor and memory design
- Multicore systems
- Design for Testability
- Embedded system design and IoT
- System-on-Chip (SoC)
- Circuits and systems for signal processing and communication
- Micro-architectural Design
- Challenges for advanced technology nodes
- Nanoelectronics
- Post-CMOS technologies and architectures

## Track 4 : Emerging Technologies

**Chair : Prof Arvinder Kaur, IPU Delhi**  
**Dr Harpreet Kaur, Educator, Hacienda La Puente Unified School District, USA**

- Soft Computing and Applications
- Natural Language Processing
- Feature Engineering
- Blockchain Technology and Applications
- Gamification
- Serious Games
- Learning Technologies and Applications
- Cloud, Fog and Edge Computing
- Deep Learning and Machine Learning Applications
- Geographic Info Systems and Applications
- Virtual/ Augmented Reality
- Information Security



## Registration Fees

Registration Type	Indian	Foreign
Academicians/Researchers	INR 2000	USD 75
Students	INR 1000	USD 75
Industry	INR 3000	USD 75

\* No separate fee for Conference Tutorials

## Important Dates

<b>Paper Submission deadline :</b>	28 February, 2021
<b>Intimation of acceptance :</b>	25 March, 2021
<b>Submission of camera-ready papers and start of registration :</b>	1 April, 2021
<b>Last date of Registration :</b>	15 April, 2021

## Paper Submission

Full papers can be submitted through **Easychair** link available on [nitj.ac.in/WREC21/rules.html](http://nitj.ac.in/WREC21/rules.html)

## Author Guidelines

- Authors from India and abroad are invited to submit manuscripts reporting original unpublished research and recent developments in the topics related to the conference.
- All the papers submitted to the conference should be written in English with length four to six pages (4-6).
- Simultaneous submissions (papers already submitted to other conferences/journals) are not allowed.
- Submission should strictly follow recommended IEEE conference template.
- Plagiarism Check using Turnitin.
- Papers having more than 20% plagiarism score will be examined and those that are deemed unacceptable will be rejected/withdrawn without a formal review.

# Organizing Committee

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## CHIEF PATRON

**Prof. Lalit Kumar Awasthi, Director, NIT Jalandhar**

## PATRON

**Dr Mamta Khosla, Associate Professor and Head, ECE Dept, NIT Jalandhar**

## EXECUTIVE GENERAL CHAIR

**Dr Mamta Khosla, Associate Professor, NIT Jalandhar**

**Dr Indu Saini, Assistant Professor, NIT Jalandhar**

## PROGRAM GENERAL CHAIR

**Dr Neetu Sood, Assistant Professor, NIT Jalandhar**

**Dr Deepti Kakkar, Assistant Professor, NIT Jalandhar**

## ORGANIZING SECRETARY

**Dr Tarun Chaudhry, Assistant Professor, NIT Jalandhar**

## Contact Details

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**Dr Mamta Khosla**

**+91 98886 04632**

**Dr Indu Saini**

**+91 98769 50214**

**Email : *wrec@nitj.ac.in***

**Women Researchers in Electronics and Computing**

**Department of Electronics and Communication Engineering**

**For more details : <https://www.nitj.ac.in/WREC21/>**

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