

**IEEE WINTECHCON - 2018****Women's Technical Conference**

A One-day conference ... 28 September 2018 ... 9AM to 5PM

**HOTEL ROYAL ORCHID**, Old Airport Road, Bangalore**Advance Technical Program****Objective:** To provide opportunities to women technology leaders from India to present their work in emerging knowledge areas**Theme:** Designing the Future Electronic Systems & ApplicationsIEEE CIRCUITS AND  
SYSTEMS SOCIETY  
BANGALORE CHAPTERIEEE  
Bangalore Section**Organized by:** IEEE CAS Bangalore Chapter, In cooperation with IEEE Bangalore Section and IEEE WiE Council (IEEE Women in Engineering), Bangalore**IEEE WINTECHCON - 2018  
WOMEN'S TECHNICAL CONFERENCE**Theme: Designing the Future Electronic  
Systems & Applications

A Conference by Women Technologists for All Engineers

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**Technical Program ... Posters and Demo ... Registration Fees**

07.45am – 08.45am	<b>Registration</b>	
08.45am – 09.00am	<b>Inauguration and Welcome Address</b>	
09.00am – 09.30am	<b>Keynote I</b> <b>How AI is Changing the World of IoT</b> <i>Shalini Kapoor - Distinguished Engineer at IBM, Director &amp; CTO - Watson IoT and Watson Education at IBM</i>	
09.30am – 10.00am	<b>Coffee Break</b>	
10.00am – 11.15am	<b>Session 1.1: Vehicular Electronics and Safety</b> Session Chair: <b>Dr. Seema Chopra</b> , Boeing Paper 12	<b>Session 2.1: System Design - 1</b> Session Chair: <b>Chaitra Bhat</b> , IBM Paper 18
	<b>Design Approach for CCSDS Complied Command Operation and Frame Operation Procedure for Integrated Spacecraft Checkout</b> <i>Parul, Sangeetha K. and Vithal Metri (ISRO)</i>	<b>Unified Verification Methodology for Digital and Analog Mixed-Signal Co-Simulation for Low Power Embedded SoC</b> <i>Ashwini Padoor and Lakshmanan Balasubramanian (Texas Instruments)</i>
	<b>Information Extraction for Lightning Strike Related Aircraft Maintenance</b> <i>Ankita Mathur, Halasya Siva Subramania and Micah Goldade (Boeing)</i>	<b>Design for Test Techniques to Enable Automotive Functional Safety</b> <i>Swathi Gangasani, Prasanth V and Maheedhar Jalsutram (Texas Instruments)</i>
11.15am – 12.30pm	<b>Functional safety in Multicore Heterogeneous Systems for Automotive Surround view Applications</b> <i>Vibha Pant, Piyali Goswami and Sujith Shivalingappa (Texas Instruments, Bangalore)</i>	<b>Dimensionality Reduction for Handwritten Digit Recognition</b> <i>Ankita Das, Tuhin Kundu and Chandran Saravanan (Jalpaiguri Government Engineering College)</i>
	<b>Invited Talk</b> <b>5G Evolution Concepts</b> <i>Jiji Jayadevan (MediaTek)</i>	<b>22FDX Ultra Low Power Design with Dynamic Body Biasing and Liberty Variation Format</b> <i>Suman Dwivedi, Ulrich Hensel, Chenbo Liu, Ramya Srinivasan, Siddhart Sawant and Haritez Narisetty (GlobalFoundries)</i>
11.15am – 12.30pm	<b>Session 1.2: Wearbles</b> Session Chair: <b>Juby Jose</b> , Intel Paper 93	<b>Session 2.2: System Design - 2</b> Session Chair: <b>Anjana Ghosh</b> , Canon Paper 79
	<b>Short-term HRV using acceleration PPG under Severe Ambient Settings using in-house Developed Wearable</b> <i>Payal Mohapatra, Preejith Sp and Mohanasankar Sivaprakasam (Indian Institute of Technology, Madras)</i>	<b>Dual-Purpose Hardware Accelerator to implement a High-throughput FFT and Sorting Engine</b> <i>Indu Prathapan and Pankaj Gupta (Texas Instruments)</i>

	Paper 47	Paper 94
	<b>Indoor Positioning using Cellular Network and Relay node for Wearables</b> <i>Sreelakshmi Gollapudi, Lalit Kumar Pathak, Tushar Vrind, Diwakar Sharma and Samir Kumar Mishra (Samsung Semiconductor India R&amp;D, Samsung Electronics)</i>	<b>Dynamic Analytical Modeling and Optimization of Critical Healthcare Data using Connectionism Systems</b> <i>Gagana B, H A Ujjwal Athri and Dr. Natarajan S (PES University)</i>
	Paper 97	Paper 83
	<b>Improved Network Analytics with Novel feedback Quantities for Self Optimized Networks</b> <i>Roshni Chatterjee and Tushar Vrind (Samsung Semiconductor India R&amp;D)</i>	<b>Divergence Engine: Early prediction of Clock-tree Divergence at Logic-synthesis Stage</b> <i>Sanjana Sundaresh, Murali Mohan Thota and Atul Garg (Texas Instruments)</i>
12.30pm – 01.15pm	<b>Lunch Break</b> and time to visit the Poster Presentations and Demos	
01.15pm – 01.45pm	<b>Keynote Talk 2</b> <b>Quantum Computing</b> <i>Dr.Susmita Sur-Kolay - Indian Statistical Institute, Kolkata</i>	
01.45pm – 03.00pm	<b>Tutorial 1</b>	<b>Tutorial 2</b>
	Session Chair: <b>Garima Srivastava</b> , Samsung <b>Functional Safety Trends: Challenges and Solutions</b> <i>Trupti Joshi (Intel), Ritu Agarwal (Intel) and Jaya Singh (Texas Instruments)</i>	Session Chair: <b>Ranjini M</b> , Texas Instruments <b>Using Cognitive Technologies for Improved Customer Experience</b> <i>Gargi B Dasgupta (IBM)</i>
03.00pm – 03.45pm	<b>Coffee Break</b> and time to visit <b>dem</b> os and <b>post</b> ers	
03.45pm – 04.45pm	<b>Panel Discussion: Tracing the Trajectory of Women’s Careers in Technology: Challenges &amp; Solutions</b> <b>Moderator:</b> Antaash Sheikh (Texas Instruments) <b>Panelists:</b> Krishna Paul (Intel), Viji Ranganna (Qualcomm), Garima Srivastava (Samsung) and Roopashree HM (Texas Instruments) ... <a href="#">Details</a>	
04.45pm – 05.00pm	<b>Closing Ceremony</b>	

Poster Presentations	Demo
Paper 30: <b>Effect of Performance on Containerized Deep Learning Applications</b> <i>Vinutha Gs and Anto Ajay Raj John (IBM)</i>	Paper 2 <b>Time Sensitive Networking over WiFi</b> <i>Ritu Sethi (Intel)</i>
Paper 33: <b>Implementation of Speech Recognition on Edge Devices</b> <i>Shaik Shabana and Sujith Thomas (Intel)</i>	Paper 82 <b>Occupancy Detection and People Detection on an Edge Device for Smart Building Automation</b> <i>Linet Paul and Raka Singh (Analog Devices)</i>
Paper 39: <b>Context aware Methods for Uplink Centric NBIoT Devices</b> <i>Meha Goel, Tushar Vrind and Diwakar Sharma (Samsung Semiconductor India R&amp;D Center)</i>	Paper 99 <b>PPG and ECG Signal Generator to Automate System and Algorithm Validation</b> <i>Shabana Yerragudi and Nayan Bhatt (Analog Devices Pvt Ltd)</i>
Paper 41: <b>No Reboot Operating System update using OpenStack Technologies</b> <i>Sanchita Sinha (IBM India Pvt Ltd)</i>	Paper 100 <b>Assisted Car Exit using RADAR</b> <i>Saranya Das and Sriram Madavswamy (Analog Devices Inc)</i>
Paper 42: <b>Real Time Memory Regeneration in Constrained Embedded Systems</b> <i>Lakshmi Prasanna Jasti, Kashmira Kapoor, Tushar Vrind, Diwakar Sharma and Raju Udava Siddappa (Samsung R&amp;D Institute - Bangalore India)</i>	
Paper 43: <b>Application specific Transmit Power Optimization using Predictive Modelling</b> <i>Hinduja Ichapuram, Prasad Rao, Maulik Patel, Diwakar Sharma and Tushar Vrind (Samsung R&amp;D Institute - Bangalore India)</i>	
Paper 48: <b>Automated Log Analysis in Communication Systems</b> <i>Divjot Kaur, Roshni Chatterjee, Rajdeep Kaur and Surendra Singh (Samsung Semiconductor India R&amp;D)</i>	
Paper 54: <b>System Optimization for Enabling Debugging</b> <i>Anudhi Jain, Raju Udava Siddappa, Tushar Vrind and Venkata Raju Indukuri (Samsung Semiconductor India R&amp;D Center, Bangalore)</i>	
Paper 87: <b>Comparison of Diagnostic Machine learning Models with Physics based Models for Predicting the Lithium-ion Battery Degradation Behavior</b> <i>Akshata Kishore Moharir, Srishti Gautam, Seema Chopra and Naveen Kumar Megharaj (Boeing India private limited)</i>	

## Panel Discussion: Tracing the Trajectory of Women's Careers in Technology: Challenges & Solutions

**Moderator:** Antaash Sheikh, Texas Instruments

**Panelists:** Krishna Paul (Intel), Viji Ranganna (Qualcomm), Garima Srivastava (Samsung) and Roopashree HM (Texas Instruments)

**Background:** While more girls are entering the engineering stream, this is not translating into higher representation of women in the workplace, and this disparity is more pronounced when we look at women in leadership roles in technology. The panel discussion will aim to throw light on what factors hinder women's careers in the technology space.

The topic will cover four different phases of a woman's career and the unique challenges posed in each of these phases and suggested solutions. For solutions, companies can touch upon specific initiatives they've implemented along with other recommendations.

**The four phases are** – student of engineering, early career, break due to maternity, relocation or marriage, and post-break / second chance. While these problems are faced by women across industries, given the stats and representation of women in tech, it seems more acute within the tech industry. In keeping with the conference theme, we should try and link it to specific experiences of women in the tech field wherever possible.

### Registration Tariff and Mode of payment:

**Online registration is open!**

1. Make the applicable payment (Member/Non-member/Student and Before Aug 15 or Sep 15 categories) through NEFT - or - prepare a DD/Chq using the below details. The DD/Chq should reach us by September 18, 2018 at the mentioned address.

2. Register at <https://goo.gl/forms/GpCG9Xzlg2PNXaom2> with the payment details.

**OR** Scan the below QR Code to open Registration form



3. Send a scanned copy of DD/Chq or a screenshot NEFT Transaction/Extract of passbook for the payment made by email to: [accounts@ieee-cas-bangalore.org](mailto:accounts@ieee-cas-bangalore.org) with a copy to [wintechcon@ieee-cas-bangalore.org](mailto:wintechcon@ieee-cas-bangalore.org)

Registration fee structure for WINTECHCON-2018		
Category	Tariff	Applicable to
IEEE Members	Rs 1500/-	All <b>working professionals and faculty</b> who have valid IEEE membership for the year 2018 and who register for the conference and make the payment <b>before Aug 15</b> , including authors
IEEE Members	Rs 2000/-	All <b>working professionals and faculty</b> who have valid IEEE membership for the year 2018 and who register for the conference and make the payment <b>between Aug 16 – Sep 15</b> , including authors
IEEE Non-Members	Rs 2000/-	All <b>working professionals and faculty</b> who do not have IEEE membership and who register for the conference and make the payment <b>before Aug 15</b> , including authors
IEEE Non-Members	Rs 3000/-	All <b>working professionals and faculty</b> who do not have IEEE membership and who register for the conference and make the payment <b>between Aug 16 – Sep 15</b> , including authors
IEEE Student Members	Rs 750/-	All students who have a valid membership of IEEE for the year 2018 and who register <b>before Sep 15</b>
Student Non-Members	Rs 1000/-	All students (including authors) who are not members of IEEE for the year 2018 and who register <b>before Sep 15</b>

#### For NEFT:

**Name of the account / Payable to:** IEEE CAS Bangalore Chapter

**A/C number – 1057 2947 24**

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**NOTE:** Please send a screenshot of the NEFT Transaction to [accounts@ieee-cas-bangalore.org](mailto:accounts@ieee-cas-bangalore.org) with a copy to [wintechcon@ieee-cas-bangalore.org](mailto:wintechcon@ieee-cas-bangalore.org) mentioning your **Name and A/c number** for our reference with **WinTechCon2018 Registration** as the mail subject..

Your registration will be confirmed and further details will be mailed.

#### For DD/Chq payments:

Prepare the DD (Demand Draft) or cheque for the amount to "IEEE CAS Bangalore Chapter" payable at Bangalore. The DD is to be sent to: "**C.P. Ravikumar**, Secretary, IEEE CAS Bangalore Chapter, Texas Instruments, Bagmane Tech Park, CV Raman Nagar, Bangalore 560093" to reach us by September 18, 2018.

Please write your **Name, Phone number and WinTechCon2018** on the reverse side of DD/Chq for our reference.

### Keynote 1

#### How AI is Changing the World of IoT

*Shalini Kapoor - Distinguished Engineer at IBM, Director & CTO - Watson IoT and Watson Education at IBM*



**Shalini Kapoor** is leading Mobile Enterprise applications Research at India Research Labs. She is building strategy and implementation around novel mobile solutions for Smarter Planet. Her research is leveraging mobile, speech, social networking, and context assets to improve urban and rural life. She is researching on needs and demands of mobile users and solutions spanning retail, healthcare, travel, banking and telco which will benefit citizens of the emerging countries.

Shalini is a Senior Certified IBM Executive IT Architect.

In her previous roles at Software group she has led team of architects and technical specialists across all 5 Software brands. She has provided technical directions to key systems integration (SI) partners (Infosys, Accenture, TCS, Wipro, Cognizant, Cap Gemini) on how to align IBM products to various industry segments, develop joint solutions, ramp up of the practices on skills, develop Center of Excellences within partners, increase awareness on IBM products and increase certified resources on IBM. She was responsible for providing architectural and design guidance to Global and Major System Integrators for multi million deals happening globally. She nurtured creation of several Centre of Excellences and spearheaded SOA initiatives with the SIs. She also created an architectural support model for GMSIs that is repeatable, reusable, successfully proven and has a multiplier effect across several projects.

Prior to joining IBM she was working with the Strategy division of large services organization in India as an architect.

She is Co Chair of Technical Experts Council and an ex-officio member of Academy of Technology.

Shalini has done her B.Tech in Computer Science from University of Lucknow and MBA in Information Systems from S. P. Jain Institute of Management and Research, Mumbai.

<https://researcher.watson.ibm.com/researcher/view.php?person=in-kshalini>

### Keynote 2

#### Quantum Computing

*Dr. Susmita Sur-Kolay - Indian Statistical Institute, Kolkata*



**Susmita Sur-Kolay** received the B.Tech.(Hons.) degree in Electronics and Electrical Communications Engineering from Indian Institute of Technology Kharagpur and the Ph.D. degree in Computer Science and Engineering from Jadavpur University India. She has been a faculty member in the Advanced Computing and Microelectronics Unit of the Indian Statistical Institute, Kolkata, India since 1999 and is presently a Professor. During the period 1993-99, she was a Reader in the Department of Computer Science and Engineering of Jadavpur University. Prior to that, she was a post-doctoral fellow at University of Nebraska-Lincoln, and a Research Assistant at the Laboratory for Computer Science in Massachusetts Institute of Technology.

She was also on sabbatical at Princeton University and Intel Corp., USA. Her research contributions are in the areas of electronic design automation for VLSI physical design, fault modeling and testing, synthesis of quantum computers, and graph algorithms. She has co-authored several technical papers in leading international journals and refereed conference proceedings, and a chapter in the Handbook on Algorithms for VLSI Physical Design Automation. She was the Technical Program Co-Chair of the 18th International Conference on VLSI Design (2005), the 11th Symposium on VLSI Design and Test (2007), ISVLSI 2011 and has served on the program committees of several international conferences.

She has served on the editorial board of the IET Computers and Digital Techniques, and IEEE Transactions on VLSI Systems. She is a Distinguished Visitor of IEEE Computer Society (India), Senior Member of IEEE, Member of ACM, IET and VLSI Society of India. Among other awards, she was the recipient of the President of India Gold Medal (summa cum laude) at IIT Kharagpur (1980), IBM Faculty Award (2009).

<https://www.isical.ac.in/~ssk/>