

# 2022 IEEE Women in Technology Conference (WINTeCHCON) #55229



## IEEE WINTeCHCON 2022

Technical Conference by Women in Engineering

June 2 & 3, 2022 | Venue: Virtual

Theme: Smarter technologies for a sustainable and hyper-connected world

Platinum Patron  
& Host  
**Qualcomm**

Gold Patrons

**cadence** **intel** **SYNOPSYS** **TEXAS INSTRUMENTS**

Silver Patrons

**ANALOG DEVICES** **IBM** **Infineon** **SAMSUNG**

## AGENDA

	Venue	Time	Particulars
DAY 1	Audi 1	09:00 - 09:30 AM	Welcome Note
	Audi 1	09:30 - 10:30 AM	Grand Summit Keynote by Karen Bartleson with Q & A
	Booths/ Networking Zone	10:30 - 11:00 AM	Visit Sponsor Booths / Break / Poster, Project Demo, PhD Forum Booths
	Track 1	11:00 - 11:40 AM	<b>Tutorial:</b> <b>AI/ML &amp; Big Data</b> Emerging Techniques of Information-Retrieval from Text and Tabular data in Advanced Q&A Systems - Sakina Pitalwala (Intel); Ruma Mukherjee (Intel)
	Track 1	11:40 - 12:00 PM	<b>Algorithms and Applications of AI, ML &amp; Big Data</b> Refinement Of Reinforcement Learning Algorithms Guided By Counterexamples - Bittu Gangopadhyay (Indian Institute of Technology Kharagpur); Soni Vishnoi (IIT Kharagpur); Pallab Dasgupta (IIT Kharagpur)
	Track 1	12:00 - 12:20 PM	Enabling Smart Building Applications on the Edge using Artificial Intelligence - Raka Singh (Analog Devices)
	Track 1	12:20 - 12:40 PM	SiBo-The Sign Bot, Connected world for disabled - Nikhita Rajasekhar (Infineon Technologies India Pvt. Ltd.); Swarnam Panday (Infineon Technologies)
	Track 1	12:40 - 01:00 PM	A Faster Approach For Direct Speech to Speech Translation - Rashmi T S (Samsung R&D Institute India-Bangalore); Sourabh Tiwari (Samsung R&D Institute India-Bangalore)
	Track 2	11:00 - 11:40 AM	<b>Tutorial: VLSI &amp; EDA</b> Ride High: Achieve success in complex low power SoC design using smart UPF Strategies - Kritika Rampal (Intel)*; dhanapathy krishnamoorthy (Intel India); sreehari karnam (Intel India)
	Track 2	11:40 - 12:00 PM	<b>Pre-silicon Verification</b> Formal Verification of Deep Neural Networks in Hardware - Shreyansh Agrawal (Intel Tech India Pvt Ltd); Surinder Sood (Intel Technology India Pvt Ltd); Sincy Ann Saji (Intel Technology India Pvt Ltd)
	Track 2	12:00 - 12:20 PM	A Holistic Approach to CPU Verification using Formal Techniques - Bhavya Sri Dasari (Texas Instruments); Karthik Rajakumar (Texas Instruments); Pojoa M (Texas Instruments); Venkata Nitin Edarapalli (Texas Instruments)
	Track 2	12:20 - 12:40 PM	Deploying SEC for Design Cycle Time Reduction and Quality Improvement - Varshashree Kottadamane (Texas Instruments); Naveen Kuthuri (Texas Instruments); Saravanan Gajendran (Texas Instruments); Devi A (Texas Instruments); Narendra Ravilla (Texas Instruments); Lobeeb K (Texas Instruments); Sai Langodi (Texas Instruments)
	Track 2	12:40 - 01:00 PM	A hardware-software approach for model downloading in multi-fpga platforms - Vani V (Intel); Mark Hick (Intel); Gary McGee (Intel); Balaji G (Intel); Vikas Akalwadi (Intel)
DAY 2	Audi 1	09:00 - 09:30 AM	Welcome Note
	Audi 1	09:30 - 10:30 AM	Grand Summit Keynote by Vanitha Kumar with Q & A
	Booths/ Networking Zone	10:30 - 11:00 AM	Visit Sponsor Booths / Break / Poster, Project Demo, PhD Forum Booths
	Track 1	11:00 - 11:40 AM	<b>Tutorial:</b> <b>Emerging Technologies/Open-Source Technology</b> Demystifying Device Tree Concepts - Priya Dixit (Samsung Semiconductor Research India)
	Track 1	11:40 - 12:00 PM	<b>Cloud, Compute, Security, Mobile Communications, Connectivity</b> Simplified near Data Placement Processing Layout for Distributed Storage Object Systems - Subhashini Mohan (HCL); Ian Adams (Intel); Santhoshkumar Nallamalla (HCL); Aaditya Sharma (HCL)
	Track 1	12:00 - 12:20 PM	Adaptive DRX mechanism to improve Energy Efficiency and to reduce Page Delay for VoWiFi Devices - Deepthi Balu Dash (Samsung Semiconductor India R&D, Bangalore); Goutham Pannamreddy (Samsung); Umashankar Ceendhrulu Baskar (Samsung Semiconductor India R&D, Bangalore); Prasad Basavaraj Dandla (Samsung Semiconductors Bangalore)
	Track 1	12:20 - 12:40 PM	AI layer reference generator engine for early enablement of workloads over multiple frameworks - Mansi Agarwal (Intel); Swadesh Verma (Intel); Pramod Kumar (Intel); Chandan Kumar (Intel)
	Track 2	11:00 - 11:40 AM	<b>Tutorial: Internet of Things - Wearables</b> Wearable Devices and Body Area Networks - Salma Fouzia (Muffakham Jah College of Engineering and Technology)
	Track 2	11:40 - 12:00 PM	<b>Data and ML Solutions for EDA</b> Relevancy of Replacing NFS with Storage Buckets in EDA Industry - Harisree LNU (Synopsys); Lokesh Babu Rao (Synopsys); Sai Nikhil Guntur (Synopsys); Radha Srinivasan (Synopsys)
	Track 2	12:00 - 12:20 PM	Challenges in Building Deployable Machine Learning Solutions for SoC Design - Shristy Kapoor (Qualcomm); Payal Agarwal (Qualcomm); Lindsey Kostas (Qualcomm Technologies, Inc.)
	Track 2	12:20 - 12:40 PM	High Performance Field Configurable Data Re-alignment Engine - Yashwanti Priyanka Vempati (Samsung Semiconductor India Research); Shriharsha Kolla (Samsung Semiconductor India Research); Kiran Lumar Muralidharan (Samsung Semiconductor India Research); Vulligodla Amresh (Samsung Semiconductor India Research)
	Track 2	12:40 - 01:00 PM	High Speed IO Access for Test - Kranthi Kandula (Synopsys); Amit Kapotkar (Synopsys); Hemasagar Babur Reddy (Synopsys)
	Audi	01:00 - 01:30 PM	Awards Ceremony

The posters, project demonstrations and PhD forum presentations were all available when the poster booth was entered, and the conference attendees can listen to the video recordings in any order they want.

**Posters list:**

id	Poster Title	Authors
1	Improved Unified UPF methodology of first server class dedicated AI Edge interface SoC's for first pass silicon success	Kritika Rampal (Intel)*; Dhanapathy Krishnamoorthy (Intel India); Sreehari Karnam (Intel India); Vijay Anand Mathiyalagan (Intel India)
2	Smart Framework for Finding Corner Case Bugs Leading to Increased Coverage Horizon	Amita Trisal (Qualcomm India Pvt. Ltd.)*; Swati Garg (qualcomm)
3	Automated Workflow for Large-scale Data-centric Mixed Defect Identification on Semiconductor Wafers	Priyadarshini Pai (Samsung Semiconductor India R&D Center)*; Rohan Dassani (Samsung R&D Institute - Bangalore); Prashant Shinde (Samsung Semiconductor India R&D Center); Shashishekar Adiga (Samsung Semiconductor India R&D Center)
4	Assessing the Quality of SOC Testcases Using PSS	Kiran Mayekar (Qualcomm)*
5	An optimal selection of Rx beam post SSB detection in NR	Ruchi Bharat Kansara (Samsung Semiconductor India R&D)*; Vamshidhar Kamuganti (Samsung Semiconductor India R&D); Samir Mishra (Samsung Semiconductor India R&D)
6	HYBRID TECHNIQUE FOR RESET VERIFICATION USING FORMAL CAPABILITIES	Krishna Priyanka Immidiseti (Qualcomm)*; Praveen Kumar (Qualcomm); Raghunadha Rao Pati (Qualcomm); Aravind R K (Qualcomm)
7	A Machine Learning Approach for Power Estimation of AURIX Microcontroller	Shalini Negi (Infineon)*; Rupali Honkegar (Infineon); Surya Musunuri (Infineon); Eswar Goda (Infineon)
8	Method for Wi-Fi SoftAP power save and improved spectral efficiency in congested environments	chandrakalavathi Yellampalli (SAMSUNG)*; Anoop Nair (SAMSUNG); Rajat Chandrashekar (SAMSUNG); Kavitha velayutham (SAMSUNG); Rajan vijayaraghavan (SAMSUNG)
9	Enhanced Battery life for Video Conferencing use case in Educational PC Segment	Shweta Aladakatti (Intel Technologies)*; Jasdeep Jain (Si Design ( Power and Perf) ); Sailesh Rathi (Intel India Pvt Limited); Kaustubh Ghormade (Intel Technologies); Vinay Kumar (Intel Technologies); Yojak Raote (Intel Technologies); Ankit P Navik (Intel)
10	ROS based obstacle detection robot using ultrasonic sensor and FMCW radar	Anusha T R (Amrita School of Engineering, Coimbatore, Amrita Vishwa Vidyapeetham)*; Dr.S.Selva Kumar (Amrita School of Engineering, Coimbatore, Amrita Vishwa

		Vidyapeetham, India); Swarnam Panday (Infineon Technologies India Pvt. Ltd.)
11	Hardware Acceleration of Similarity Search for Machine Learning Applications	Shikha Singh (Intel)*
12	Non-invasive PCIe RAS DES Framework for Automotive SoCs	Shradha Todi (Samsung Semiconductor India RnD, Bengaluru)*; Padmanabhan Rajanbabu (Samsung Semiconductor India R&D Center); Pankaj K Dubey (Samsung Semiconductor India Research)
13	Hierarchical B Picture Coding For Linear Transrating In H.265/HEVC	Smitha T Murthy (Samsung Semiconductor India R&D)*
14	Smart Vehicle Grid Solutions for Electric Vehicle	Saraswathi Sreenivasulu(Infineon)*, Puneetha Mukherjee(Infineon), Poorva Bhargava (Infineon)

**Project demonstrations list:**

Demo ID	Project Title	Authors
1	Secure and Reliable Configurable and Reconfigurable Computing for Artificial Intelligence Applications	Hena Naaz (Nvidia)*
2	Project Demonstration-Virtuoso Power Manager(VPM)- Futuristic Solution for Evolving Mixed Signal Designs	Shweta Sharma (Cadence Design Systems)*; Vikrant Tyagi (Cadence Design Systems)
3	Smart IPQA Manager	Tina Furtado (SSIR)*; Manish Deshmukh (Samsung Semiconductor India Research)
4	Automotive Infotainment Solution, Exynos Auto	Veena V (Samsung Semiconductor India Research)*; Veena V (Samsung Semiconductor India Research); Ashwini Ramesh Patil (Samsung Semiconductor India Research); K Roshini Munawwara ( Samsung Semiconductor India Research)
5	Prototyping Emerging Technology using SigmaStudio+ and A2B	Agnes Melcy Monica (Analog Devices)*; Ashwin PS (Analog Devices)
6	Towards the Next Generation Verification Frameworks with Python	Lavanya Jagadeeswaran (Vyoma Systems)*
7	STUDENT ATTENTIVENESS DETECTION	Berlinda A J (Sri Sairam Engineering College)*; Gayathiri Varsha A S (Sri Sairam Engineering College)

8	A2B Bus Analyzer – a Debug and Development tool for A2B	swathi aithal (Analog Devices)*; Nikhil Jacob (Analog Devices ); Naveen Kumar (Analog Devices)
9	Enabling Telephony Services over Cross Stack Mobile Data	Aparna Sateesh Kini (Samsung)*; Nila Rajan (SSIR)
10	Cyber security solutions for emerging challenges in hyper connected vehicles	Poorva Bhargava (Infineon)*; Puneetha Rao (Infineon technologies India Pvt Ltd)
11	Product Documentation Landing Page Design	Mehala Balasundaram (Synopsis)*; Banani Dey (Synopsis); Thanuja Sateesh (Synopsis); Rupen Sharma (Synopsis); Abhishek Kumar (Synopsis)

#### PhD Forum Presentations:

PhD ID	PhD Thesis Title	Authors
1	Covert Speech Classification using EEG based Brain-Computer Interface	Dipti Pawar (SPIT)*
2	AUTOMATION OF BREAST CANCER DETECTION FROM HISTOPATHOLOGICAL IMAGES	Rashmi R (Manipal Academy of Higher Education)*; Keerthana Prasad (SOIS)
3	Graph Based Analysis of Functional Brain Networks	Jyoti Maheshwari (IIT Delhi)*; Shiv Dutt Joshi (IIT Delhi); Tapan K. Gandhi (IIT Delhi)
4	Enhancement of IoT security using MUD in programmable Data Plane	Suvrima Datta (IIIT Naya Raipur)*
5	Resource Allocation Techniques for extending the performance of Long-Range Network	Preti Kumari (IIT (BHU))*
6	Retinal disorders detection and analysis from fundus and optical coherence tomography images using deep learning models	Smitha A (National Institute of Technology Karnataka)*; Jidesh Padikkal (National Institute of Technology Karnataka)
7	Modeling and Optimization of Ultra-Wideband Antennas using Computational Intelligence Techniques	Debanjali Sarkar (NIT Silchar)*
8	Indian Normative Brain Anatomy Variation with Ageing	Alphin Thottupattu (International Institute of Information Technology Hyderabad)*
9	Optimal Control of SSSC under Non-Sinusoidal Conditions	Shruti Nema (Lokmanya Tilak College of Engineering)*; Sincy George (SFIT, Borivali, Mumbai)
10	Digital Calibration Techniques of Pipelined and Algorithmic ADCs	Chinmaye Ramamurthy (RV College of Engineering)*
11	Printed Devanagari Script Recognition Using Contextual Linguistic Information	Shaheera Akhter (College of Engineering, Pune)*; Priti P. Rege (COEP)

12	Adaptive Security Design and Vulnerability Analysis of Cyber-physical Systems	Ipsita Koley (Indian Institute of Technology Kharagpur)*
13	Security Verification and Quantification of Information Leakage for Compiler Transformations	Priyanka Panigrahi (Indian Institute of Technology Guwahati)*

## Academic and Industry Regular Papers:

Submission count: 182

Accepted as paper: 15

Accepted as poster: 14

Total number of reviewers: 197

Total Number of TPC members: 45

Total Number of members in steering committee: 16

### Awards:

**Best:** *SiBo-The Sign Bot, Connected world for disabled* Nikhita Rajasekhar (Infineon Technologies India Pvt. Ltd.)\*;  
Swarnam Panday (Infineon Technologies)

### Runners-up:

1. *A Faster Approach For Direct Speech to Speech Translation* Rashmi T S (Samsung R&D Institute India-Bangalore)\*; Sourabh Tiwari (Samsung R&D Institute India-Bangalore)
2. *Formal Verification of Deep Neural Networks in Hardware* shreyansh agrawal (Intel tech india pvt ltd)\*;  
Surinder Sood (Intel Technology India Pvt Ltd); Sincy ann Saji (Intel Technology India Pvt Ltd)

## PhD Forum:

Submission Count: 22

Total Number of reviewers: 10

Accepted in conference: 13

### Awards:

**Best:** *Retinal disorders detection and analysis from fundus and optical coherence tomography images using deep learning models* Smitha A (National Institute of Technology Karnataka)\*

**Runner-up:** *Adaptive Security Design and Vulnerability Analysis of Cyber-physical Systems* Ipsita Koley (Indian Institute of Technology Kharagpur)\*

## Project Demonstrations:

Submission Count: 12

Accepted: 11

### Awards:

**Best:** *Towards the Next Generation Verification Frameworks with Python* Lavanya Jagadeeswaran (Vyoma Systems)\*

**Runner-up:** *A2B Bus Analyzer – a Debug and Development tool for A2B* swathi aithal (Analog Devices)\*; Nikhil Jacob (Analog Devices ); Naveen Kumar (Analog Devices)

## Tutorials:

Submission Count: 15

Accepted in conference: 4

### Awards:

**Best:** *Emerging Techniques of Information-Retrieval from Text and Tabular data in Advanced Q&A Systems* Sakina Pitalwala (Intel)\*; Ruma Mukherjee (Intel)