Thursday, September 19, 2024 End General Sessions - Grand Victoria

Track 2 - Grand Victoria A

Paper Session 2A:

Formal Verification

2A1:1947 - Navigating Instruction Length Decode: TAP

into IP using Formal Verification

Vedprakash Mishra

2A3:9864 - Early bird catches the bug - the Arch Formal

Aatreyi Bal, Mahendrawada Sai Kameshwara Rao,

Sireesha Tulluri and Robert Beers

2A2:3167 - Towards Rigorous Fairness: Formal

Verification of Multi-Level Arbitration through

Hierarchical Family Chains

Vedprakash Mishra and Keerthi B

Paper Session 2B:

Formal Verification

2B1:2190 - Complexity Conquered: Pioneering Formal

Verification Methods for Systolic Controllers in

Advanced Computing

Sarsii Saurabh, Rahul Dabur, Tushar Agarwal and

Vichal Verma

2B2:7611 - Who watches the watchman? FuSa

Verification of DCLS configuration through Formal and

Static checks

Avinash Pandey, Srobona Mitra Mitra, Sayandeep

Sanyal, Sathish Kumar Manickam, Deepak Baranwal

and Arunava Dutta

2B3:1423 - GenAl Leap in Formal Verification

Testplanning

Anshul Jain, Karan Rawat and Pradip Prajapati

Paper Session 2C:

Formal Verification

2C3:6747 - Enhancing Arbitration Integrity: Formal

Verification of Weighted Round Robin Arbiter in High-

Performance Graphics

Usha Rani Bagadi, Mohit Choradia, Ajay Kumar Kolluri

and Vichal Verma

2C2:7372 - Efficiently Analysing Unreachable Properties

in Configuration-Based Designs with Automated Mode-

Aware Coverage Analysis

Vedprakash Mishra and Shravva Jampana

2C3:9882 - Pioneering Software Formal Verification

Methodology for Firmware

Sparsa Roychowdhury, Disha Puri and Sudipa Mandal

09:15 Welcome & TPC Update

09:15

09:45

10:15

11:00

Start

11:15

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13:45

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16:00

17:30

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Track 1 - Grand Victoria B

Paper Session 1A:

Design & Architecture

1A1:3195 - Design Implementation of Generic

Architecture for Image Processing Applications and its

Verification with UVM Framework

Sougata Bhattachariee

1A2:9722 - Data-Driven Design for Adaptive Multi-Die

Soc

Ankita Roy and Vikrant Kapila

1A3:4275 - A shift-left approach in Qualification of

Digital IPs for SoCs by applying next gen automation

and data analytics

Hirak Jyoti Chakraborty and Ashutosh Bajpai

Paper Session 1B:

Design & Architecture

1B1:8189 - Automation of Delay Tuning in TSV aware

Heterogeneous 3D Inter-Die memory controller

Rahul Laxkar, Ananya Sinha, Naveen Srivastava and

Sekhar Dangudubiyyam

1B2:6634 - Voltage Slack Analysis as part of Design

Robustness analysis to avoid failures due to voltage

variations

Anurag Sharma and Savithri Sundareswaran

1B3:3720 - Generative Al based RTL code generator

Hareesh Perumal S, Ashutosh Bajpai, Kranthi Kiran

Gandem and Vishnu Dutt Pathak

Paper Session 1C:

System/System C

1C1:7510 - Early Architecture Exploration of Multi Die

Designs

Ranjan Mahajan and Souradeep Guha

IC2:9221 - SDV Aware Verification : Verification

Challenges, Opportunities & Evolution around SW

Defined Vehicles (SDV) & Zonal Architectures

Neha Srivastava

IC3:614 - Early Performance Exploration of Memory

based on JEDEC Specifications

Parvinder Asiia and Aman Gupta

Keynote: Accelerated Infrastructure in an Al World 09:45

Puneet Agarwal, Marvell Keynote: The Increasing Verification Horizon in the Era of Pervasive Intelligence

Vikas Gautam, Synopsys & Subrangshu Das, Google Industry Panel: Building RISC-V Systems: An Indian Perspective

Moderator: Subhra Kanti Das, Thales Panelists: Krishna Kumar Rao, CDAC: Sundar Haran, Western Digital: Srikanth Puvvada, Ola-Krutrim: Neel Gala, Incore Semiconductor

Tea Break & Networking

Track 3 - Robusta & Arabica

Paper Session 3A:

Design Verification - SV & UVM

3A1:3687 - Sparking UVM stimulus via state design

pattern

Debarati Banerjee, Nikhil Singla and Rohit Jindal

3A2:7056 - SVRAND - Random Configuration - One

class to resolve all parts

Kaushal Vala, Krunal Kapadiya, Joseph Bauer and

Shyam Sharma

3A3:3812 - A Generic Clock UVC for Generating and

Testing of High Speed PLL and CDR

Dipanshu, Mukesh Gandhi, Arnab Ghosh & Parao

Lonkar

Lunch Break

Posters and Exhibitor Visit

Paper Session 3B

Design Verification - 3D IC/Chiplet

3B1:407 - Protocol Env: A Dynamic approach to Enable

Multi-Protocol UCle Design Verification

Vinit Sheth, Deepak Nagaria and Vikas Makhija

3B2:1272 - Beyond Boundaries: Overcoming Chiplet

Verification Challenges

Pankaj Singh

3B3:7052 - Navigating the Maze: Verifying Multi-Module

PHY designs in UCle Multi-Die Systems

K S Prasad Subudhi, Ashutosh Singh and Narasimha

Babu G V L

Tea Break & Networking

Paper Session 3C:

Design Verification - Coverage/Performance

3C1:4372 - Register model back door access

automation for a complex IP

Kilaru Vamsikrishna, Dhruv Ashvinbhai Donga and

Sushrut B Veerapur

3C2:5643 - Unified Coverage Methodology: Accelerated

Coverage Closure at SoC and IP level

Prateek Jain and Ajay Goyal

3C3:7227 - Simulation performance improvement with

Dynamic memory load & C model export

Varsha Antony and Mangesh Kondalkar

Best Paper Awards & Closing

Track 4 - Brain Box

Paper Session 4A:

Mixed Signal Design & Verification

4A1:639 - Accelerating Silicon Bug Detection and

Optimizing Execution Flow through Intelligent Adaptive

Glitch Detectors in AMS Verification

Aadhar Sharma, Avinash Chaudhary, Bhavya Shah and

Soorai Sekhar

4A2:9609 - ChipGuard : A Robust Automated System to

Streamline Design Verification Quality Parameters

Giridhar Rangarajan, Jitender Dahiya and Sriram K

Sounderrajan

A3:9754 - Analog Mixed Signal Verification & Validation

Methodology: Bridging the Gap between Pre Silicon

Verification and Post Silicon Validation

Vidya Timmanagoudar, Marcel Oosterhuis and Steef G

Paper Session 4B:

Low Power Design & Verification

4B1:8500 - Next-Gen Low Power Verification:

Empowering Shift-Left Predictive Analysis with Virtual

Instrumentation

Sachin Bansal, Yi Liu, M. Vaishnavi Reddy, Nupur

Gupta, Vishal Keswani and Manish Goel

4B2:1219 - Signal Integrity Challenges in rail-to-rail

Parallel Interfaces designed for MEMS, Automotive &

Infotainment Applications

Piyush Mishra, Suprbha Kumari and Anuj Gupta

4B3:3654 - Power Probe: Addressing Power Noise

Signal Integrity Challenges for Wide IO HBM Memories

Through Advanced Verification Approach

Giridhar Rangarajan, Chethan G B, Bhargava Krishna

Venigalla, Akbhobhya B and Anil Deshpande

Paper Session 4C:

Functional Safety / RISC-V

4C1:955 - Leveraging Statistical Random Fault (SRF)

Sampling for Efficient Functional Safety with reduced

efforts

Akshaya Kumar Jain, Udaykrishna J, Gaurav Goel and

Arun Gogineni

4C2:9497 - An Extension to RISC-V Test Generator : A

quick exception check

Ranjan Barik, Sai Krishna Pidugu, Manju Bhargavi and

Subhra Kanti Das

4C3:2603 - Verification Methodology for Debug Unit of

Superscalar RISCV Processor

Ajay Sharma, Afshan Anjum and Sourav Roy

Gulshan Kumar Sharma, Sougata Bhattacharjee

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Track 5 - Marquis

Paper Session 5A:

Design Verification - Scenario Generation/Usage

5A1: 296 - Accelerating Sign-Off Cycles: Automated

Scenario Extraction from Large Design Landscapes

Gaurav Pratap, Vishal Keswani and Sachin Bansal

5A2:7316 - Expanding Verification Horizons: OOPs-

Enhanced Script-Driven Verification using Auto PSS

Gen Utility (APGU).

Ashutosh Bisht and Manvendra Singh

5A3:5557 - Pragmatic use cases of ChatGPT in chip

verification

Ajeetha Kumari Venkatesan and Hemamalini Sundaram

Paper Session 5B:

Emulation

5B1:3974 - Expedited Gate Level Verification -

Unleashing the Potential of Netlist Integrated Emulation

Platforms

Samhith Kumar Pottem. Vasudeva Reddy Ambati.

Rahul S S, Sarang Kalbande, Garima Srivastava and

Hvundon Kim

5B2:6678 - Simulated Emulation: Methodology For a

Faster Turnaround on Emulation

Shalini Maheshwari and Ashok Kumar Bhatt

5B3:2224 - Unveiling Advance Hybrid Emulation

Methodology for Accelerated Android Home Screen

Bring-up and System Level Verification at Pre-Silicon

Rinkesh Yadav, Vishweswaran Kannan, Sarang

Kalbande, Garima Srivastava and Hyundon Kim

Paper Session 5C:

Post Silicon

5C1:344 - Video/JPEG Performance Analysis and

UseCases Validation in Post Silicon using SystemC and

OpenVINO based Neural Network models

Suresh Vasu and Palanivel Guruvareddia

5C2:6777 - Enhancing Post-Silicon Validation Through

Generative Adversarial Networks (GANs) for Test Case

Generation

Aditi Bharmaik and Vidhva Sagar 5C3:1035 - An Automated approach for optimizing

Circuit Marginality Validation methodologies

Vivek Sharma, Pankaj Sharma and Subrata Kumar

Behera