



Executive Connect 2020

Breakout Summaries

7 Strategies for Accelerating Advanced Electronics Design, Verification, and Test

Session Abstract

Senior leaders from Cadence and NI will host a discussion outlining state-of-the-art electronics trends and changing methodologies, including the capability to combine simulation and real-world data for machine learning (ML) and data-driven decisions to accelerate time to market for new semiconductors and electronic systems.

Discussion Topics

- Addressing design complexity and time to market by balancing heterogenous design and disaggregation for advanced node semiconductors (Moore's Law), chiplets, 3DIC design, and advanced packaging ("more than Moore")
- "Shift Left" using hardware/software co-implementation, speeding product development and enabling continuous, comprehensive verification
- Integrated chip/package/module/PCB RF and mmWave solutions for advanced 5G mobile/networking, mil-aero, automotive, and IoT
- Design-to-test optimization, synchronizing pre-silicon verification of analog/RF/digital and post-silicon test
- Reuse of test and verification plans using portable stimulus from pre-silicon verification to physical test
- New ideas on re-use of design/test data, leveraging ML algorithms to speed products to market
- Understanding the hyperscaler cloud phenomenon: data strategies from sensors through networks to storage

Expected Learnings and Takeaways

- Extend your professional network with additional senior leaders with whom you can collaborate
- Share experiences, best practices, and lessons learned by participating in a group discussion
- Gain ideas about current and future approaches leveraging data to reduce time to market
- Influence and steer investments from industry leaders like Cadence and NI

About Cadence Design Systems

Cadence is a leader in computational software and electronic design, including simulation, hardware/software co-verification, semiconductors, advanced IC packaging, PCB, and systems analysis (power, thermal, signal integrity, electromagnetic).

Meet
Your Moderators



Tom Beckley

Sr. VP and GM, Cadence



George Zafiropoulos

VP Solutions Marketing, NI

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Key Discussion Topics

- Design is shifting from ICs to systems, leading to increased chip complexity with typically a wireless element
- System design leads to a need for multi-physics system analysis
- Linking and optimizing design-to-test workflows allows accelerated time-to-market schedules
- More complex designs generate more design/test data
- Artificial Intelligence and ML provide opportunities to continue with data-driven designs while dealing with an increase of data

Requirements for Success

- Innovation in product design workflows, which breaks down historical barriers between groups
- Organization infrastructure and support to make the development process more efficient
- Change management and engineering buy-in for new workflows and data-driven development
- Shift from executing engineering tasks to driving product impact through engineering data-driven insights
- Test automation, AI, and ML increases the ability for engineers to drive product improvements

Next Steps

- Reach out for a personal discussion with George.Zafiropoulos@ni.com and Beckley@cadence.com
- Connect with [George Zafiropoulos](#) and [Tom Beckley](#) on LinkedIn
- Watch for virtual events focused on semiconductor topics in Q4 that your leaders and engineers can attend
- Visit [our website](#) to learn more about our approach to semiconductor test
- Follow us on [LinkedIn](#)