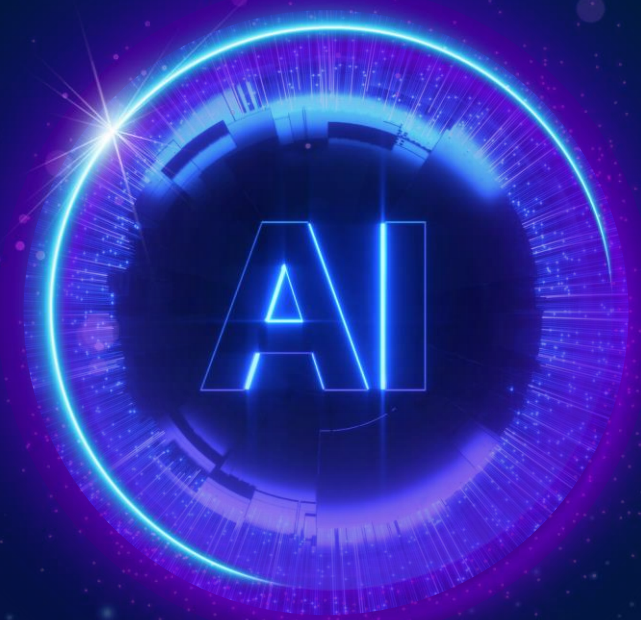


# Artificial Intelligence Executive Conference

*explore the power of AI to transform semiconductor design & manufacturing*

**AI for Test**  
**Challenges & Approaches**

**Marc Jacobs**  
Fabless Solutions



*This presentation and discussions resulting from it may include future product features or fixes, or the expected timing of future releases. This information is intended only to highlight areas of possible future development and current prioritizations. Nothing in this presentation or the discussions stemming from it are a commitment to any future release, new product features or fixes, or the timing of any releases. Actual future releases may or may not include these product features or fixes, and changes to any roadmap or timeline are at the sole discretion of PDF Solutions, Inc. and may be made without any requirement for updating. For information on current prioritizations and intended future features or fixes, contact [sales@pdf.com](mailto:sales@pdf.com).*

*PDF Solutions, Exensio, CV, Cimetrix, the PDF Solutions logo, and the Cimetrix logo are registered trademarks of PDF Solutions, Inc. or its subsidiaries. All other trademarks cited in this document are the property of their respective owners. Exensio visualizations Powered by TIBCO®.*

*© 2024 PDF Solutions, Inc. or its subsidiaries. All rights reserved.*

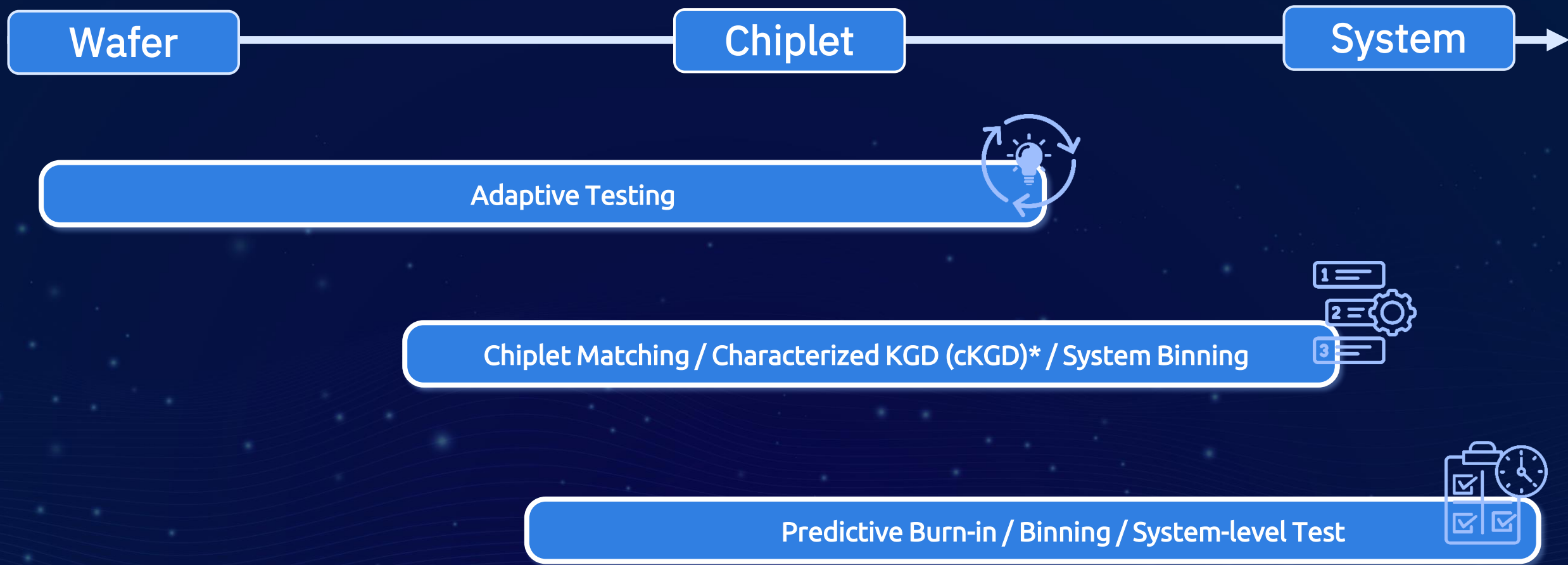
# 01.

## Challenges & Approaches

---

**PDF**  
**SOLUTIONS™**

# Market: System Quality, Cost, Differentiation



*\* Source: Intel, ERI Summit 2023*

# Infrastructure





# Remaining Challenges

---



**Traceability** through a complex and distributed supply chain



Learning from **small amount** of data



Learning across factories and designs



Balancing **AI/ML** with human knowledge



# Ming Zhang

**PDF / SOLUTIONS™**

*VP of Fabless Solutions*

Dr. Ming Zhang is currently VP of Fabless Solutions at PDF Solutions, a leading provider of end-to-end analytics for semiconductors. He was formerly Distinguished Architect at Synopsys, driving chiplet technology strategy and new EDA market development. Prior to Synopsys, he was founding CEO of a Silicon Valley chiplet startup, zGlue. His experience at Intel and at the Samsung foundry focused on manufacturing process/circuit modeling and robust chip design. He holds a Ph.D. in EE and M.S. in MEMS from UIUC, and a B.S. in Physics from Peking University. Ming is passionate about catalyzing agility, customizability, and security of future semiconductors. He stays connected with frontier technologies and markets while advising global VCs and startups.

Qualcomm



MICHAEL CAMPBELL

Senior Vice President of Engineering

cerebras



JEAN PHILIPPE FRICKER

Founder and Chief System Architect

intel



AZIZ M. SAFA

VP and GM Analytics and Automation

PDF/SOLUTIONS™



MING ZHANG

VP of Fabless Solutions

# AI FOR TEST, CHALLENGES AND APPROACHES





# Michael Campbell

Qualcomm

*Senior Vice President of Engineering*

Michael Campbell is the Senior Vice President of Engineering at QUALCOMM CDMA Technologies, overseeing QCT Product and Test, Test Automation, Failure Analysis, and yield since joining in 1996. He established the FA department and has led various teams, including Design Automation and Quality. Michael has also set up Design and Test facilities in several countries. Currently, he focuses on integrating machine learning into PTE and FA processes. Before QUALCOMM, he worked at Mostek, INMOS, and Honeywell, and he holds a BSEE & CE from Clarkson University.



# Jean Philippe Fricker



Jean-Philippe (J.P.) is Chief System Architect at Cerebras Systems. Before co-founding Cerebras, J.P. was Senior Hardware Architect at rack-scale flash array startup DSSD (acquired by EMC). Prior to DSSD, J.P. was Lead System Architect at SeaMicro where he designed three generations of fabric-based computer systems. Earlier in his career, J.P. was Director of Hardware Engineering at Alcatel-Lucent and Director of Hardware Engineering at Riverstone Networks. He holds an MS in Electrical Engineering from EPFL – École Polytechnique Fédérale de Lausanne, Switzerland, and has authored 41 patents.



# Aziz M. Safa

---



*VP and GM Analytics and Automation*

Aziz M. Safa is Intel Corporation's Chief Data Officer and Vice President of Information Technology. He oversees data management, governance, compliance, and internal analytics services, along with business platforms for Finance, HR, Supply Chain, and Sales and Marketing. His role includes IT platform architecture, engineering, big data, and business intelligence. Since joining Intel in 1993, Safa has held various roles, including general manager of IT enterprise solutions and director for factory automation systems. He earned an Intel Achievement Award for his work in automation and has a background as a software engineer at Advanced Micro Devices Inc. Safa holds bachelor's and master's degrees in computer science from Texas State University.



# AI FOR TEST: CHALLENGES AND APPROACHES

ADVANTEST



KEN BUTLER

Senior Director of Applications Marketing

SIEMENS



MARC HUTNER

Director Product Management

PDF/SOLUTIONS™



MARC JACOBS

Senior Director, Fabless Solutions

TERADYNE



ELI ROTH

Product Manager

PDF/SOLUTIONS™



MING ZHANG

VP of Fabless Solutions





# Ken Butler

**ADVANTEST**<sup>®</sup>

*Senior Director of Applications Marketing*

Ken Butler is a Senior Director of Applications Marketing in the Advantest Cloud Solutions (ACS) data analytics platform group at Advantest. Prior to that, he worked for more than 36 years at Texas Instruments in DFT and test generation, semiconductor reliability, analog product and test engineering, and data analytics. Ken has a BS from Oklahoma State University and an MS and PhD from the University of Texas at Austin, all in electrical engineering. He is a Fellow of the IEEE, a Golden Core member of the IEEE Computer Society, and a Senior Member of the ACM.



# Marc Hutner

---

## SIEMENS

### *Director Product Management*

Marc Hutner has been innovating in the areas of Design, Test, DFT and Data Analytics for more than 20 years. In June of 2023, he joined Tessent as the Product Management Director of Silicon Learning enabling how silicon data is applied to yield improvement and silicon debug. Previously, he worked for proteanTecs as Sr Director of product Marketing and Teradyne as a system/silicon architect. A recognized thought leader for design and test at conferences, publications, podcasts, and industry roadmaps. Marc has a Bachelor of Computer Engineering (B.Eng) from McGill University in Montreal Canada and a Master of Science in Engineering Management (M.Sc.EM) from Tufts University in Boston MA.





# Marc Jacobs

**PDF / SOLUTIONS™**

*Senior Director, Fabless Solutions*

Marc Jacobs has over 35 years experience in the semiconductor industry and has deep experience in New Product Development, Cost Reduction, and Quality Improvement. Before joining PDF Solutions in 2022, Marc was responsible for Operations Engineering at a large California based fabless company. He has managed product engineering, Test Engineering and packaging across multiple businesses.



# Eli Roth

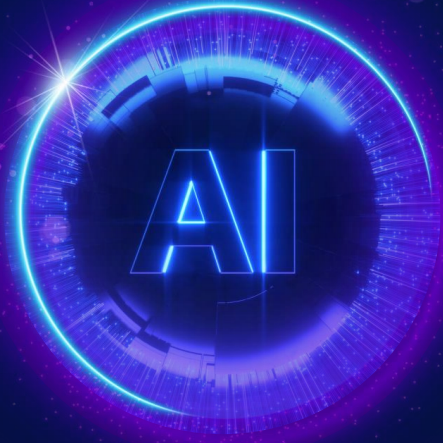
---

## TERADYNE

*Product Manager*

Eli Roth is the Product Manager for Smart Manufacturing at Teradyne, where he is responsible for product strategy and roadmap for Teradyne's Archimedes Analytics Platform. Prior to Teradyne, he was the Director of Engineering at Advanced Energy. He holds a degree in Computer Engineering from Iowa State University.





# Thank You

**PDF / SOLUTIONS™**



TWITTER  
@pdf\_solutions



FACEBOOK  
pdfsolutionsinc



LINKEDIN  
@pdf-solutions