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**Title:**

**Semiconductor Manufacturing Excellence through Automation**

**Abstract:**

In the post Moore law's generation, learn about how our implementation helped us overcome industry challenges like rapidly increasing demand, shortened product lifecycles, and reduced margin. With 20 years of semiconductor manufacturing experience, I will use manufacturing theories to explain how to improve manufacturing performance through automation. We'll cover a range of topics that have enabled us to achieve our goals around operational excellence, among them: automating our processes for a more consistency and repeatability with advanced process control capabilities; integrating our global supply chain for improved traceability; and gaining visibility into real-time analytics for improved efficiency, utilization and yield.

**Biography:**

Jonathan Yung-Cheng Chang has worked in semiconductor manufacturing for more than 20 years, including IT manager and Manufacturing manager in TSMC 200mm FAB (Singapore), 300mm GIGAFAB (Taiwan) and TSMC 450mm program; Manufacturing director in Qimonda 300mm FAB (Richmond, Virginia); Global IE/PC (Industrial engineering / production control) director in MEMC for 9 factories in 6 countries. He is presently Senior Director of Factory Integration in Infineon BE where he is responsible for Infineon's BE factory integration (operation method and automation system) to improve MFG performance (Cost, Quality, OEE, CT, CLIP) in 8 sites across US, ASIA and Europe.

Jonathan received his Ph.D. degree from the Institute of Manufacturing Information and Systems, National Cheng Kung University and M.S. degree in Industrial Engineering and Management from National Chiao Tung University. His research interests and papers include e-Manufacturing, Supply Chain, Engineering Chain, MES, Advanced Process Control, Advanced Equipment Control, Virtual Metrology, Factory Automation, 300mm FAB productivity analysis and dispatching systems. He has produced world-wide best semiconductor manufacturing performance in 300mm and world-wide first 450mm production specification. He has published more than 15 Journal and conferences papers and also owned 16 patents in semiconductor supply-chain and manufacturing areas. Also he is currently member of FI chapter in ITRS (industry technology roadmap for semiconductor) to design semiconductor industry roadmap.