

MSc STO | INDUSTRY GUEST LECTURE SERIES

Accelerating Semiconductor Innovation

Bridging Technology Development and
Design with DTCO

2 November 2026 | 6:00–9:00 PM | LT3

Dr Colin Chiu Wing Hui

Deputy Director, Commercial Platforms and Solutions
GlobalFoundries



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From Technology Development to Design

ABOUT THE TALK

This lecture explores Design-Technology Co-Optimization (DTCO) as a strategic methodology for aligning semiconductor design with process technology to improve manufacturability, performance and yield. It follows the DTCO flow from device modelling and standard-cell design through layout verification and optimisation, highlighting how foundries and EDA tools address advanced-node challenges.

KEY TOPICS

DTCO · TCAD Simulation · DFM · Equation-Based DRC · Double Patterning
Pin Accessibility · Context-Aware DFM Scoring

Connecting classroom learning with semiconductor industry practice

Dr Colin Chiu Wing Hui

Deputy Director, Commercial Platforms and Solutions – GlobalFoundries

ABOUT THE SPEAKER

Dr Colin Hui is a seasoned semiconductor industry executive with over 30 years of fabless and fab experience. A pioneer in Design for Manufacturing (DFM), his expertise spans Design-Technology Co-Optimisation (DTCO), technology enablement, DFM rule characterisation, process modelling and design optimisation.

HIGHLIGHTS

- 30+ YEARS – Semiconductor Industry Experience
- 3 US PATENTS – Technology Innovation
- 12 PUBLICATIONS – DFM & DTCO Research
- PhD · CEng – Professional Credentials



Learn from the people shaping the semiconductor industry