PDC 7: Innovations in Advanced Packaging Technology

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Abstract:

The development of advanced IC packaging technology has moved rapidly during the past decade, as semiconductor node processing approached its limit. More than Moore solutions posed a great demand for innovations in the design, material, interconnection, and fabrication of highly complex 2.5D and 3D packaging. China has been building up a large backend assembly and test industry, to become a world-class leader, more fresh ideas and innovations are needed.

This course will provide a review and discussion of recent innovations as an inspiration to our engineers and scientists to generate new ideas that can help advancing the design and fabrication of heterogeneous integration packages for HPC, 5G, AI, and automotives, etc.

Outline:

The scope and outline will cover the design, material, and process innovations in

2.5D interposer on substrate: CoWoS, CoPoS, CoGoS, CoG

3D IC integration HBM technology

3.5D packaging

FOPLP, FO glass panel process

Embedded bridge interconnection

Chip in glass (CiG) , system in module (SiM)

High density interconnect (HDI) buildup and RDL material-ABF

Lecturer Biography:

Dr. Wei Koh has worked in the IC packaging and microelectronics assembly technologies for 40 years at Henkel, Motorola, and others. He is an IEEE Fellow with over 100 publications and 40 patents. He received his PhD from Cornell University.