Keynote speaker:

Name: **Christopher Bailey**
Job position: **Professor**
Company: ***University of Greenwich UK***
e-mail: **C.Bailey@greenwich.ac.uk**

Title of the Presentation:

Design Challenges for Advanced Packaging of Electronic Systems

Biography:

Chris Bailey is President of the IEEE Electronics Packaging Society and Director of the Computational Mechanics and Reliability Group at the University of Greenwich, UK. He has a PhD in Computational Modelling and an MBA in Technology Management. He has published over 300 papers on the topic of Design, Modelling and Simulation of Electronics Packaging. Chris has served on several external government committees, which includes the 2014 UK Research Excellence Framework, to assess research outputs and research impact across UK universities. He is a member of the EPSRC College (UK Equivalent to the NSF in the USA); and associate editor for the IEEE Transactions of Components, Packaging, and Manufacturing Technology. He is also co-chair for the Modeling and Simulation technical working group on the Heterogeneous Integration Roadmap.

Abstract:

Summary: The Electronics Packaging Society (EPS), through its strategic plan (2019-2024) [1], is supporting the Heterogeneous Integration Roadmap (HIR) [2[, which contains 23 chapters covering future trends and innovations in electronics packaging. Design and Modelling Tools are a key part of this roadmap, which details the need for new developments in these key enabling technologies.

Motivation and Results: Heterogeneous Integration, through Advanced Packaging, is a critical enabling technology for future electronic systems. The 2019 edition of the HIR details the technical challenges and potential solutions for advanced packaging and its applications over a 15-year timeframe. In terms of design, modelling and simulation, there is a need for new methodologies - including co-design, multi-physics, and AI - to address these challenges (see figure 1).

This presentation will discuss the state-of-the-art in co-design and modeling tools, the challenges that need to be overcome, and potential technical solutions to these challenges for the design of future electronic systems.

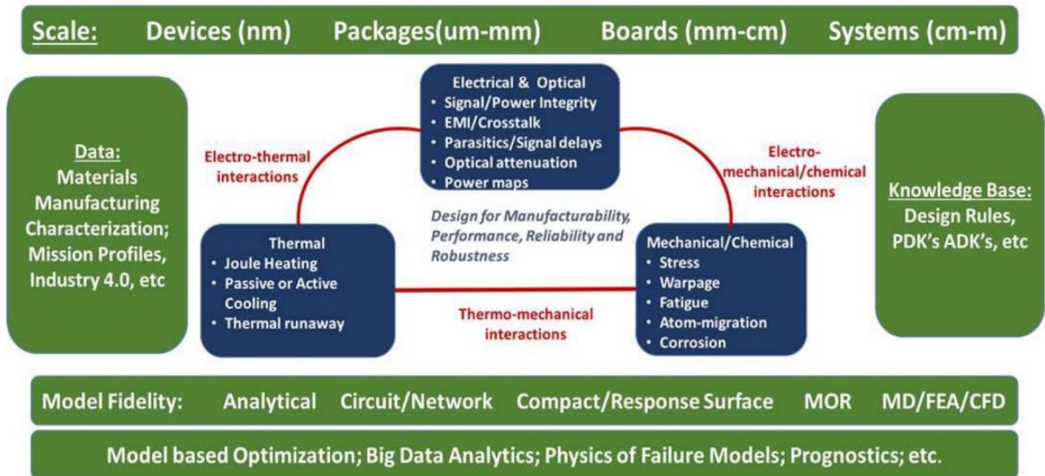

Figure 1: Design, Modelling and Simulation needs for Advanced Packaging

References:

1) Electronics Packaging Society Strategic Plan (2019-2024), https://eps.ieee.org/images/files/BoG/EPS-Strategic-Plan-BoGVersion_FINAL_VERSION_NEW_FOI_Feb_2020.pdf

2) HIR, 2019 Edition, https://eps.ieee.org/technology/heterogeneous-integrationroadmap/2019-edition.html.