

30TH
CPDM DISTINGUISHED LECTURE ON

ADVANCED DESIGN AND MANUFACTURING



Centre for Product Design and Manufacturing

Venue: Classroom near CPDM office
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High speed AM with Design for AM

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Abstract:

High speed Additive manufacturing AM (AM2.0) will be presented in a scientific description in terms of energy applied and pattern fabrication. AM has revolutionized the manufacturing industry by providing enormous design freedom. AM enables the manufacturability of complex structures, including topology- optimized structures, multi-material designs, functionally graded parts, and bio-inspired mesoscale lattice structures such as sea urchins, honeycombs, and trabecular cones. However, complex structural designs are process and material specific. Under these circumstances, the design for additive manufacturing (DfAM) tool is necessary to enhance the printability, by utilizing the capabilities and constraints of AM. DfAM enables efficient mass customization, material selection, weight reduction, and improvement in part performance.

Bio :

Professor JY Jeng is the only one has been served in University (Professor and administrative positions), private sector and public diplomatic experience in Taiwan. He is the Director and PI of "High Speed 3D Printing Research Center" founded by Taiwan Minister of Education. Both of the research performance of High Speed 3D Printing and the Q1 Journal paper publication in the Design for Additive Manufacturing is the leading position worldwide. He was the 3D Printing Fellow Professor of XYZ Printing Inc. and the consultant to several Taiwan 3D Printing companies or business, like FoxConn, PouChen, Franz, and AvioCast. Currently, he serves the Independent Director of GlobalWafer, Actron and ANT Precision Co. Ltd. He was also the Founder and President of Taiwan 3D Printing Association and Taiwan 3D Tech LLC with the business of Smartphone 3D Printer. Dr. Jeng served as the Dean of College of Engineering and R&D Office at National Taiwan University of Science and Technology (Taiwan Tech) during 2013/8- 2016/7 and 2007/8-2009/7 respectively. He was on leave from Taiwan Tech to serve as the Diplomatic Director of Science and Technology Division in Taipei-Moscow Representative Office in Moscow during Jan. 2010- July 2012, and to establish and serve as the Director General of Teco Group Research Institute Taiwan during 2005-2007. He was the Founder of EU FP7 National Contact Point Taiwan in 2008. He graduated from National Cheng Kung University in 1985 in Tainan, Taiwan for the bachelor degree in mechanical engineering. And then he gained the Advanced Manufacturing Technology MSc from The University of Manchester (Institute of Science and Technology) in 1990, and Laser Material Processing PhD from The University of Liverpool in 1992 UK. He was also the visiting scholar in UC Santa Barbara USA in 2002 and The Cambridge University UK in 2008.