

ADDITIVE MANUFACTURING OF CERAMIC STRUCTURES AND CORRESPONDING APPLICATIONS

by *Chen Zhe*

Date: 12 November 2019 (Tuesday)

Time: 10 am to 1pm

Venue: E1-06-08

Abstract

Ceramic has been a kind of attractive material ranging from functional to structural applications. However, it's still a tough issue to fabricate geometrically complex ceramic components. In this presentation, additive manufacturing (3D printing), is proposed as a revolutionary solution for sophisticated structures manufacturing. Specifically, both direct (selective laser melting) and indirect (digital light processing) printing methods are employed, and systematic studies are conducted on feedstock fabrication, laser absorption, light scattering, and rheological behavior to improve ceramics printability and resolution. Ceramic parts with reliable mechanical properties and various lattice configurations are finally achieved. Integrated with surface modification, such cellular structures are promisingly applied to environmental fields, including water purification and organic matter degradation.

Speaker *Chen Zhe*

Biography

Chen Zhe is currently a PhD candidate under Prof. Ding Jun's supervision, in Department of Materials Science and Engineering, National University of Singapore. He received master's degree in Harbin Institute of Technology. His research interests are mainly concerned with ceramics processing, printing and related applications.

ALL ARE WELCOME!

Dr Tan Swee Ching Host