Department of **Materials Science & Engineering** seminar series 2019

Fabrication of advanced ceramics via additive manufacturing

Speaker: Li Yuemeng

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Date: **07th Nov 2019, Thursday**
Time: **3:00 to 3:30 pm**
Venue: **EA-06-03**

Abstract

Advanced ceramic has been a kind of material that can offer unique and exceptional physical, thermal and electrical properties. Based on the limits of conventional processes to fabricate ceramics, advanced ceramic components with geometrical complexity are still challenging to be produced. Additive manufacturing (3D printing) provides a revolutionary way to pattern ceramic materials in three dimensions (3D). In this presentation, direct 3D printing (selective laser sintering) and indirect printing (digital light processing) method are utilized, and feedstock fabrication, laser absorption, optimization of laser parameters and rheological behaviour of slurry are discussed to improve printability. Ceramic components with complex structure and reasonable mechanical properties are finally achieved. Diverse applications for additive manufacturing of ceramics are being explored.

Li Yuemeng received his M.Sc. degree from the Materials Science & Engineering Department at National University of Singapore. He is currently a Ph.D. candidate in Department of MSE under the supervision of Prof. Ding Jun, focusing on the additive manufacturing of ceramic materials. His current research interests are aimed to develop corresponding ceramic printing processes and related applications.

ALL ARE WELCOME!

Host: A/P Xue Junmin