

INTELLIGENT SOFT MATERIALS FOR BIO-BASED APPLICATIONS**by** *Low Zhi Wei Kenny***Date: 29 July 2019****Time: 9am to 12pm****Venue: E3-06-01****Abstract**

Recent improvements in the mechanical properties of hydrogels have generated considerable interest in their use as intelligent soft materials for biomedical applications. This work focuses on the development of stimuli-responsive hydrogels for potential use in the areas of healthcare and biomedical devices. It starts with a brief introduction to the fields of soft materials, intelligent materials and biomaterials, followed by a literature review on recent findings and research directions in these areas. Specific experimental methods relevant to hydrogels are then discussed. A tough, physically crosslinked PVA-pectin hydrogel is then discussed based on structural, mechanical and biocompatibility studies. This material is subsequently incorporated with into a device for on-demand drug delivery applications.

Speaker *Low Zhi Wei Kenny***Biography**

Kenny Low is a Ph.D. candidate in Assistant Professor Loh Xian Jun's group in at the National University of Singapore (NUS) and Institute of Materials Research and Engineering (IMRE). He received his B. Eng from NUS in 2015 and his research interests include the mechanical properties of hydrogels, and design of biomaterials.

*ALL ARE WELCOME!***Prof Ding Jun Host**