

## EINLADUNG

zum Gastvortrag

von

*Professor Cheng Yan*

Queensland University of Technology, Brisbane, Queensland, Australia

am

**Donnerstag, 05. April 2018, 14:00 Uhr**

Technische Universität Wien, Karlsplatz 13, 1040 Wien  
Seminarraum 202 (Stiege 2, 2. Stock + Halbstock)

### **Development of advanced manufacturing and modeling techniques for bone tissue engineering**

Many biological composite materials such as bone have demonstrated unique mechanical performance, i.e., a combination of superior stiffness and toughness. It has become increasingly clear that the constituents at the nano- and micro- length scales play a critical role in determining the mechanical performance of these biological composites. Therefore, it is important to understand the underlying mechanisms governing the mechanical behavior of the bone like biomaterials. On the other hand, porous cellular structures are increasingly used in bone tissue engineering as they can provide mechanical and biological environments closer to the host bone. However, poor internal architectural designs may lead to premature failure. In this presentation, our recent work on fabrication and characterization of the mechanical performance of some biomaterial interface and porous structures will be introduced.

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**Biosketch:** Cheng Yan got his PhD from the University of Sydney in 1998. He is a professor in the School of Chemistry, Physics and Mechanical Engineering, Queensland University of Technology, Australia. His main research interests include mechanical behavior of composites and biomaterials. He has generated 200 journal publications and received A\$7 million research fund. He was awarded several competitive fellowships from the Australian Research Council (ARC APD and ARC ARF). He has chaired many international conferences and been associate editor or board member for four international journals.