澳大利亚伍伦贡大学李卫华教授

学术讲座及学术交流通知

应福州大学机械工程及自动化学院（陈淑梅教授）的邀请，澳大利亚伍伦贡大学先进制造研究中心主任李卫华教授来我院交流并做学术讲座，欢迎师生届时参加讲座。

一、学术讲座

题目： 磁流变材料及其工程应用

时间： 2017 年 4 月 7 日（星期五）上午 9:30

地点： 机械工程及自动化学院北 415 会议室

二、学术交流

内容： 电磁流变技术与应用

时间： 2017 年 4 月 7 日（星期五）下午 2:30

地点： 机械工程及自动化学院南 101 实验室

机械工程及自动化学院南 401 会议室

三、学术交流

内容： 电磁流变技术与应用

时间： 2017 年 4 月 8 日（星期六）上午 8:30

地点： 机械工程及自动化学院

李卫华教授简介

李卫华博士，澳大利亚伍伦贡大学先进制造研究中心主任，首席教授。分别于 1992 年与 1995 年在中国科技大学获得学士及硕士学位，并于 2001 年获得新加坡南洋理工大学博士学位。2000 至 2003 年间，他曾在南洋理工大学机械与航空航天工程学院做博士后，自 2003 年起，在澳大利亚伍伦贡大学机械、材料及机电工程学院从事科研教学工作。

他的研究主要集中于智能材料及其应用、微流体、流变学以及智能机电一体化。他担任多种国际学术期刊的副主编，技术编辑或编委工作，其中包括 *IEEE/ASME Transactions on Mechatronics, Smart Materials and Structures, Scientific Reports, RSC Advances* 等等。他已发表期刊及会议论文 300 多篇，论文引用超过 5200 次。他为澳大利亚机械工程师学会会士、英国物理学会会士。获得澳大利亚研究奋进奖，日本学术振兴会海外研究将及多次会议最佳论文奖。

Brief Biography

Weihua Li, PhD, is a Senior Professor and Director of the Advanced Manufacturing Research Strength at the University of Wollongong. He completed his BEng (1992), MEng (1995) at University of Science and Technology of China, and PhD (2001) at Nanyang Technological University (NTU). He was with the School of Mechanical and Aerospace Engineering of NTU as a Research Associate/Fellow from 2000 to 2003, before he joined the School of Mechanical, Materials and Mechatronic Engineering as a Lecturer. His research focuses on smart materials and their applications, microfluidics, rheology, and intelligent mechatronics. He is serving as editor or editorial board member for several international journals, including *IEEE/ASME Transactions on Mechatronics, Smart Materials and Structures, Scientific Reports, RSC Advances*, etc. He has published more than 300 journal and conference papers with more than 5200 citations. He is a recipient of Fellow of the Engineers Australia, the Fellow of Institute of Physics (UK), Australian Endeavour Research Fellowship, JSPS Invitation Fellowship, Vice-chancellor's Award for Interdisciplinary Research Excellence, and numerous Best Paper Awards.

报告摘要

Topic: Magnetorheological Materials and Their Innovative Engineering Applications

Abstract Magnetorheological (MR) materials, including MR fluids and MR elastomers, are smart materials that their damping and stiffness can be controlled by an external magnetic field. These materials have attracted considerable interests in recent years because of its potential as a simple, quiet, and rapid-response interface between electronic controls and mechanical systems. This talk will present two current research projects on the application of MR technologies in two research fields: high speed trains and structural protection. The first topic aims to address the instability and ride comfort of current high speed trains when their running speeds are above 300 km/h. Both simulation and preliminary experimental work have demonstrated that MR dampers can improve train's critical speed and ride comfort. The second topic aims to develop semi-active MR elastomer isolators for structural control. We prototyped innovative multi-layer isolators and evaluated their performance under different external excitations. The long-term objective is to promote MR isolators for real structural control.

福州大学机械工程及自动化学院

2017-3-31