数学与系统科学研究院

计算数学所学术报告

报告人： **Prof. DRJ Owen**

(Professor in University of Wales Swansea, British Fellow of the Royal Academy of Engineering)

报告题目：

Modelling issues for multi–fracturing materials and particulates

邀请人： **崔俊芝院士**

报告时间： **2010 年 3 月 16 日(周二)**

下午 3:00—4:00

报告地点： **科技综合楼三层 311**

计算数学所报告厅

简历和择要： **Professor David Roger Jones Owen**

Date of Birth: **27th May 1942**

E–mail: d.r.j.owen@swansea.ac.uk

Academic Qualifications

Ph. D. 1967 **Northwestern University, USA**

D. Sc. 1982 **University of Wales, UK**

Membership of Professional Bodies

Fellow of the Institution of Civil Engineers 1983

Awards and Distinctions

Elected Fellow of the Royal Academy of Engineering in 1996.

Awarded an Honorary D.Sc. by the University of Porto, Portugal in 1998.

Received the Computational Mechanics Award of the International Association for Computational Mechanics (IACM) in 2002 for "outstanding contributions in the field of computational mechanics". Awarded the Warner T. Koiter Medal

of the American Society of Mechanical Engineers (ASME) in 2003 for "contributions to the field of theoretical and computational solid mechanics". Awarded the Gauss–Newton Medal of IACM in 2004 for "outstanding contributions in the field of computational mechanics". Awarded the Gold Medal of the University of Split, Croatia in 2004 for "international achievements in the field of computational mechanics" Awarded the Premium Medal of the Spanish Society for Computational Mechanics (SEMNI) in 2005 in "recognition of his outstanding scientific work". Awarded an Honorary D.Sc. by Ecole Normale Superieure de Cachan, France in 2007.

Elected Fellow of the Royal Society in 2009.

Elected Honorary Emeritus Professor of the Welsh Institute for Mathematics and Computational Science (WIMCS) in 2009.

Elected Honorary Member of the Croatian Society of Mechanics in 2009.

Elected Founding Fellow of the Learned Society of Wales in 2010. JSCES Grand Prize (Japan Society for Computational Engineering and Science) 2010.

Professor Owen, an international authority on finite element and discrete element techniques, is the author of six textbooks and over four hundred scientific publications. In addition to being the editor of thirty monographs and conference proceedings, Professor Owen is also the editor of the International Journal for Engineering Computations and is a member of several Editorial Boards. His involvement in academic research has lead to the supervision of over sixty Ph.D. students. Professor Owen's research, in the field of solid and structural mechanics, has centred on the development of solution procedures for non−linear problems encountered in science and engineering. After undertaking his initial degrees at University of Wales Swansea, he completed his Ph.D. at Northwestern University, USA, under the guidance of Prof. T. Mura, in the field of Theoretical and Applied Mechanics. This work, and also his early

post–doctoral experience as Walter P. Murphy Research Fellow at Northwestern, involved both the analytical and computational study of fundamental plastic material deformation described by continuously distributed dislocation mechanisms. Professor Owen subsequently returned to University of Wales Swansea to take up an academic post in the Department of Civil Engineering, where under the influence of Prof. O. C. Zienkiewicz, he developed an interest in computational methods. From that time, Prof. Owen has contributed prominently to the development of computational strategies for plastic deformation problems, both for fundamental material studies and for application to engineering structures and components. Over the last two decades, Prof. Owen's work has focused on the development of discrete element methods for particulate modelling and the simulation of multi–fracturing phenomena in materials, where much of his research has been pioneering. This work has extended developments in the continuum modelling of finitely deforming solids by including damage/fracture based failure and

introducing material separation on a local basis to permit simulation of the degradation of a continuum into a multi−fractured particulate state. Based upon this methodology, contributions have been made to fundamental understanding in several key application areas; including explosive simulations which necessitates coupling of the multi−fracturing solid behaviour with the evolving detonation gas distribution, deep level mining/oil recovery operations, slope stability, defence problems related to high velocity impact involving penetration of metallic and ceramic materials and structural failure predictions for impact, seismic and blast loading.

欢迎大家参加！