IMAC XXX Honorary Session

David J. Ewins
University of Bristol
Imperial College London

Tuesday, January 31, 2012 • Session 15

ORGANIZED BY: **N.M.M. Maia**, IDMEC/IST, Technical University of Lisbon; **D. Di Maio**, University of Bristol

IMAC-XXX holds its traditional Honorary Session dedicated to a retired member of the IMAC community. This year's session recognizes Prof. David J. Ewins, Director of BLADE, University of Bristol and Imperial College, London, UK, for his outstanding contributions to the field of modal analysis and to both the IMAC conferences and scientific community.

Talking about Modal Analysis and not thinking or mentioning David Ewins is virtually impossible, such has been the importance of his name in this field of science. He has been an inspiration to many young engineers starting their careers, as well as to many senior professionals, either in academia, research labs or in industry. He is the author of the very first textbook on Modal Analysis and one of the very few attending all IMAC conferences since the very first, back in 1982, presenting very high quality papers, which are always well attended. He has been a member of the IMAC Advisory Board since its inception in 1982.

In this honorary session, colleagues and former students will talk about the man, about the professor and about episodes and experiences shared with him, together with some technical papers:

An Overview of the Transmissibility Concept and its Application to Structural Damage Detection
N.M.M. Maia, Instituto Superior Tecnico; A.P.V. Urgueira, R.A.B. Almeida, Universidade Nova de Lisboa

Ewins Versus Structural Dynamics
D.J. Inman, University of Michigan

From Discretization to Continuous: Advanced Mechanical Measurements Using Continuous Scanning Methods
D. Di Maio, University of Bristol

Modal Correlation Methods to Speed up Design and Test for Variant Design
P.G. Blaschke, TH Wildau (FH)

Measurement of Friction Contact Parameters for Nonlinear Dynamic Analysis
C.W. Schwingshackl, Imperial College London

David Ewins has spent the past 50 years studying and measuring vibration in a range of application areas - mostly in aerospace, defence and other hi-tech industries. Having studied at Imperial College London and Cambridge University, he has been based at Imperial, throughout his career, and as Professor of Vibration Engineering since 1983, with periods as Visiting Professor overseas in the USA, France, Switzerland and Singapore. Following partial 'retirement' in 2005 (he still spends 1 day per week at Imperial) , he now spends much of his time at Bristol University where he is Director of the BLADE laboratories and Director of the AgustaWestland UTC in Vibration Reduction. He is also the Chairman of the EU CleanSky Scientific and Technology Advisory Board.

His research has focused on two main areas - Modal Testing (and its applications) and Vibrations in Turbomachinery, in the latter case, working closely with Rolls-Royce since 1963. Current research priorities are (i) developing new test strategies to improve the effectiveness of vibration testing by an order of magnitude, including the development of new laser-based measurement techniques; (ii) properly accounting for the effects that structural joints have on the dynamics of engineering structures and (iii) incorporating robustness characteristics in dynamic analysis and design.

He founded the Dynamic Testing Agency in 1990 (now the Dynamics and Testing Working Group in NAFEMS), has published a textbook and many papers on Modal Testing, and a total of more than 300 papers on structural dynamics in general. He set up the first Rolls-Royce University Technology Centre (Vibration UTC) at Imperial College on 1990 and is currently running the new AgustaWestland UTC in Vibration Reduction at Bristol University. Between these two projects, as the first Temasek Professor in Singapore (at Nanyang Technological University), he set up the Centre for the Mechanics of Microsystems (CMMS) between 1999-2002.

He is a Fellow of the Royal Society and of the Royal Academy of Engineering.