

## Prof David Ewins FRS FRAEng 2018 年台灣參訪 公開演講日程表

David Ewins 教授為英國皇家學會院士 (FRS)、皇家工程院院士 (FRAEng)，曾為英國倫敦帝國學院振動學講座教授，並曾擔任該校國際事務副校長及多國大學之訪問教授。Ewins教授之主要研究方向為振動學、實驗模態分析及轉子動力學，其著作「Modal Testing: Theory and Practice」為相關領域之權威參考書。

Ewins教授除在實驗模態分析領域外，亦長期研究飛機之結構動力學。從1990年起，他即與勞斯萊斯飛機引擎公司 (Rolls-Royce plc, RR) 合作，於帝國學院成立RR之首批大學科研中心 (University Technology Centre, UTC)，每年受RR公司資助達五十萬英鎊 (約二千萬元新台幣)。Ewins教授於2007年轉往布里斯托大學 (University of Bristol) 擔任研究中心主任，並與AugustaWestland (英規阿帕蒂直升機之廠商) 簽訂為期四年之UTC合作合同，總額達二百萬英鎊 (約八千萬元新台幣)。

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### 中部科學園區演講 - 「智能化製造技術」論壇

- 日期：107年09月25日 (星期二)
- 時間：13:20 – 15:00
- 地點：中部科學工業園區管理局行政大樓401會議廳 (臺中市西屯區中科路2號4樓)
- 報名截止時間：107年9月24日12:00 (額滿為止)
- 報名網址：[goo.gl/EqxCCK](http://goo.gl/EqxCCK)
- 查詢：Email或致電 (04-36068996 吳滇伊主任分機 4501、鄭艷秋專員分機1007)

### Smart Dynamic Testing for Verification, Certification and Endurance Qualification

In many high-technology industries where structural integrity is a primary requirement - such as Aerospace Defence and High-performance Power Generation - physical testing to demonstrate endurance, reliability and maintenance of functional performance is mandatory. Endurance tests are conducted in advance of actual service life to verify these critical features. These tests have been conducted in much the same way for decades and it is well known that they are often less reliable than is needed. Vibration levels under test conditions can be orders of magnitude higher, or lower, than those experienced in service. Recent developments – described in this talk - in which theoretical models of the test structure and setup are used to enhance the actual test, have led to a dramatic reduction these large discrepancies. An unexpected benefit from these advances is a considerable reduction in the cost of the actual testing.

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## 中區學術演講

- 日期：107年09月26日（星期三）
- 時間：15:10 – 17:00
- 地點：國立中興大學機械系館130視聽教室（台中市南區興大路145號）
- 查詢：Email: [d107061002@mail.nchu.edu.tw](mailto:d107061002@mail.nchu.edu.tw) 羅奕鈞同學 /電話（04-22840165，分機5292 羅奕鈞同學 /5291 郭威伸博士）

### **Exciting Vibrations: the Role of Testing in an Era of Supercomputers and Uncertainties**

This lecture presents the case for achieving an optimum balance between, and integration of, test and Simulation in modern Vibration Engineering. This is necessary to resolve the many issues and structural dynamics problems encountered in practice because of the inevitable systematic and stochastic uncertainties which are encountered at every stage of product development. These problems can be overcome through effective implementation of modern validation and verification procedures which will be shown to require the most advanced testing technologies to match those in simulation which are driven by continuing advances in computation technology. The lecture draws on examples spanning more than half a century's practical experience in a range of industrial applications and focuses on two specific major issues: (i) the difficulties encountered when trying to model and measure the dynamics of structural joints and (ii) the growing importance and need to include nonlinear behaviour in modern structures.

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## 北區學術演講

- 日期：107年09月27日（星期四）
- 地點：國立台灣大學工學院綜合大樓734室
- 時間：13:30 – 15:30
- 查詢：[weijiunsu@ntu.edu.tw](mailto:weijiunsu@ntu.edu.tw) 蘇偉老師
- 演講題目：（同中區學術演講）