ON THE OPTIMIZATION
OF CONDITION-BASED MAINTENANCE DECISIONS

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Summary

Condition-based maintenance continues to be a popular maintenance tactic for expensive, complex, and multi-component assets. The proliferation of condition-monitoring techniques and the ubiquity of maintenance databases make it possible to employ a wide variety of data-driven, evidence-based maintenance policies. In this presentation some recent developments in condition-based maintenance for repairable equipment are described. We consider optimizing maintenance decisions that include minimizing cost and maximizing asset availability, as well as optimizing the condition-monitoring inspection interval. We also present a framework for elicitation of expert knowledge when reliability data are sparse or unavailable. We will provide real-world industrial examples of these techniques. Case studies will include food processing industry (vibration monitoring), mining and shipping equipment such as diesel engines (oil analysis) and transportation equipment such as traction motor bearings (visual inspection).

The presentation will also illustrate what the new EXAKT software for condition-based maintenance may be able to do to assist in smart CBM developed at the C-MORE Center at the University of Toronto.

Modalità di partecipazione

L’incontro è aperto al pubblico e non prevede quote di partecipazione. Si richiede, per esigenze organizzative, di comunicare la propria adesione entro martedì 25 maggio, compilando il modulo on-line alla pagina web www.amegmi.org/eventi.

Per maggiori informazioni su come raggiungere la sede dell’incontro, è possibile consultare il sito dell’Università degli Studi di Bergamo (www.unibg.it) alla voce “Sedi Universitarie”.

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Andrew K. S. Jardine, PhD, CEng, MI MechE, MIET, PEng is Professor and Director of the Centre for Maintenance Optimization and Reliability Engineering in the Department of Mechanical and Industrial Engineering at the University of Toronto.

Dr. Jardine is the author of the economic life software AGE/CON and PERDEC licensed to organizations in transportation, mining, electrical utilities, and process industries, and is author of the OREST software used for optimizing component preventive replacement decisions and forecasting demand for spare parts. In addition to writing software, Dr. Jardine is a prolific researcher and proselytizer of advances in maintenance decision-making, and his views are regularly advocated through industrial consultation, published papers, professional seminars and conferences.


Professor Jardine was the 1993 Eminent Speaker to the Maintenance Engineering Society of Australia and in 1998 was the first recipient of the Sergio Guy Memorial Award from the Plant Engineering and Maintenance Association of Canada in recognition of his outstanding contribution to the maintenance profession. At the 2008 conference of the European Federation of National Maintenance Societies in Brussels, Professor Andrew Jardine received the Award for The Best Paper presented in the category Academic Developments, sponsored by the Salvetti Foundation. He is listed in the Canadian Who's Who.

http://cmore.mie.utoronto.ca/people_jardine.html