

Advances in Techniques, Tools and Technologies

16th International MIRCE Symposium

Managing In-Service Reliability, Cost and Effectiveness

**Woodbury Park
Exeter
United Kingdom
6 – 8 December 2006**

**Presentations
Workshops
Exhibition
Publications**

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The Symposium now in its sixteenth year is dedicated entirely to professional engineers, analysts and managers involved in –

- *System Architecture,*
- *System Design,*
- *Component Design*
- *Durability,*
- *Maintainability,*
- *Supportability,*
- *Reliability,*
- *Operability,*
- *Availability,*
- *Costing and Economics,*
- *Maintenance,*
- *Logistic Support,*
- *Customer Support,*
- *Software,*
- *Human Factors,*

and other specialist functions that are critical for Managing In-Service. Reliability, Cost and Effectiveness.



The 16th International MIRCE Symposium

6 – 8 December 2006

The Symposium

Managing In-Service Reliability, Cost and Effectiveness

The International MIRCE Symposium, now in its sixteenth year, offers a focused programme of cutting-edge presentations blended with practical workshops, an exhibition of software and other tools, technical visit and networking events.

It is a unique forum that is designed to update knowledge, share best practice and stimulate new ideas in Managing In-Service Reliability, Cost and Effectiveness.

The Symposium is organised by the MIRCE Akademy – an independent science-based organisation that uniquely specialises in developing knowledge, people, processes, methods and tools for managing in-service reliability, cost and effectiveness of technical systems. The Akademy is widely recognised as a global centre of excellence and is a key source of applied research and professional development for industry and government.

Benefits

- Access to advanced developments
- Speakers from leading industrial and research organisations
- Industry best practice
- Practical workshops
- Exhibition of software and other technologies
- Access to expert practitioners
- Professional development
- Networking opportunities
- Technical discussion and guidance

Cost

The full Symposium Package includes – All Sessions, Supporting Materials, Technical Visit, Lunches and Light Refreshments, Symposium Dinner and Awards Ceremony.

The cost of the full Symposium Package is just £695-00 + VAT per person.

Group Discounts are available – please contact the MIRCE Akademy for details.

Day One – Wednesday 6 December 2006

0830 – 0900	Registration and Coffee
0900 – 0915	Opening Welcome
0915 – 1000	Keynote Presentation A Method for the Determination of Weibull Parameters Based on the Multi-Factorial Experimental Approach, formulated by Dr Milijka Koldzic (1951-2006), Dr Jezdimir Knezevic, Founder and President, MIRCE Akademy
1000 – 1030	Optimization of System Resources in RAM Problems using Genetic Algorithms, Aviv Gruber, School of Engineering Sciences, University of Southampton
1030 – 1100	Morning Coffee
1100 – 1130	Human Centred System Development, Simon Gill, Human Factors Specialist and Research Fellow, MIRCE Akademy
1130 – 1200	Time to Next Overhaul (TTNO) – Interaction of MTBF/Overhaul Period/Stock Levels on the TTNO of the Replacement Item, John Thompson, Logistic Modelling Manager, Westland Helicopters
1200 – 1230	Supportability Quantitative Assessment During Design Trade-Offs, Emmanuel Hugues, Operational Reliability Manager, Airbus France
1230 – 1300	Energy Based Methods for GSM Cellular Network Resources Optimization, Francis Chinyama, Master Fellow, MIRCE Akademy
1300 – 1400	Lunch
1400 – 1530	Workshop Understanding the Effective Management of Aging Systems, Jonathan Rees, BMT Reliability Consultants It is well understood that as time passes, the rate of failure of a mechanical system, or any system, will change and usually increase. Various management techniques, such as preventive maintenance, are used to discipline a system's behaviour but the issue always becomes, when is the most effective time to apply these techniques. This workshop will explore some of the root causes of these failure rate changes and will introduce a robust technique for modelling and optimizing the management of these aging systems.
1530 – 1600	Afternoon Tea
1600 – 1700	Workshop Understanding the Effective Management of Aging Systems Continued
1730 – 1800	Technical Visit F1 Reliability and Effectiveness, A technical visit to the MIRCE Akademy F1 Reliability and Effectiveness Centre followed by a visit to the Nigel Mansell World of Racing (1992 F1 and 1993 Indy Champion) Presented by Dr Jezdimir Knezevic, Founder and President, MIRCE Akademy
1900	Getting Together Reception

Cutting-Edge Workshops

Day Two – Thursday 7 December 2006

0900 – 0945	Keynote Presentation The Reliability and Use of Parametric Cost Estimating Techniques, Arthur Griffiths, Director, HVR Consulting Services
0945 – 1030	An Investigation into Reliability Growth Methods, Dr John Crocker, Fellow, MIRCE Akademy
1030 – 1100	Morning Coffee
1100 – 1130	Reliability Study of an ABS Control Unit, Ian Zaczyk, Master Diploma Student, MIRCE Akademy
1130 – 1200	A 'Common Sense' Approach to Equipment Reliability, Vaughan Russon, Fellow, MIRCE Akademy
1200 – 1230	What to Look For in a Simulation Language for Modelling Logistic Support, Qing Sheng, CPDA, University of Bristol
1230 – 1300	Reliability within Avionic Systems, Steve Robb, Principal Logistics Engineer, BAE Systems
1300 – 1400	Lunch
1400 – 1530	Information Technology in RMS Business Engineering Processes, Snezana Pantelic, Industrial Fellow, MIRCE Akademy Continuous gathering and analysis of data is required for timely and effective decisions to be made in managing RMS business processes. The success of this process requires a systems approach to the organisation as a whole with an information system (IS) based on modern information and communication technologies (ICT) and modern information technology (IT) architect that supports the whole product/service life cycle. This presentation addresses major issues in the systems approach to business analysis and modelling including – business processes and key performance indicators (KPI), organization structure and management by process, company and IT architecture, IT for operational management integration, object-orientated models, IT for asset and financial management. A case study will show the information system in a road transport organisation (management of transportation services in an integrated IS including interfaces with vehicle maintenance IS, fleet and driver database, and RMS cost calculations).
1530 – 1600	Afternoon Tea
1600 – 1700	Information Technology in RMS Business Engineering Processes Continued
1930 – 2300	MIRCE Traditional Christmas Dinner Fellowship and Formula 1 Reliability Championship Awards

Cutting-Edge Workshops

Formula 1 Reliability Championship Awards 2006



F1RE Centre Driver and Team Reliability Championship Awards for the 2006 F1 Season

presented by

Nigel Mansell OBE
Grand Fellow of the MIRCE Akademy

Day Three – Friday 7 December 2006

0900 – 1030	Workshop Design for Human Performance in Maintenance, Clive Nicholas, Director, MIRCE Akademy Human performance is increasingly recognised as a key element of safe and effective maintenance. Although human performance in maintenance is determined by many factors, the design of systems and components plays an important role in relation to the demands placed on the maintainer. Good design can improve performance and reduce the likelihood of maintenance error – this will clearly have a significant impact on availability and operational effectiveness. The workshop will show how human performance engineering can be successfully integrated into the design process.
1030 – 1100	Morning Coffee
1100 – 1230	The Mechanics of HUMS for Defence Land Systems, Dr Jezdimir Knezevic, Founder and President, MIRCE Akademy The UK MOD Policy for Health and Usage Monitoring Capability for Defence Land Systems (endorsed 4 November 2003) states that 'All future land systems will be fitted with a Health and Usage Monitoring capability'. It is considered that a sophisticated Health and Usage Monitoring System (HUMS) will be a key element to reduce the logistical footprint, to increase availability and to ensure that Whole Life Cost for land systems is controlled. However, there is one fundamental condition in respect of delivering all the expected benefits of HUMS – understanding the mechanics of change in the condition of components and systems. This presentation will demonstrate a new method for Health Based Reliability and Maintenance predictions developed at the MIRCE-Mechanics Laboratory. This method will be of use in effectively realising the benefits of HUMS.
1230 – 1330	Lunch
1330 – 1500	The Mechanics of HUMS for Defence Land Systems Continued
1500	Afternoon Tea and Close

The Venue

The Symposium will be held at **Woodbury Park Hotel, Golf and Country Club**, which is approximately eight miles from Exeter by road.

Communication between Exeter and other parts of the United Kingdom are excellent. By road, the M5 motorway links Exeter to London, the Midlands, Scotland and Wales. Regular rapid coaches run services to and from London and Heathrow Airport. By rail, a regular fast service is available to and from Exeter (St David's Station) and London (Paddington Station). By air, Exeter Airport offers regular flights to many British and Continental destinations and is situated near to Woodbury Park. Travel between Exeter and Woodbury normally requires a car or taxi.

Delegates are responsible for the arrangement and payment of their own travel and accommodation. Delegates wishing to take advantage of preferential room rates should contact Woodbury Park Hotel Reservations quoting 'MIRCE'.

Woodbury Park Hotel, Golf and Country Club, Woodbury, Exeter, EX5 1JJ, United Kingdom

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16th International MIRCE Symposium 2006 Registration

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 Phone +44 (0) 1395 233 856
 Mail MIRCE Akademy, Woodbury Park, Woodbury, Exeter, EX5 1JJ, United Kingdom
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SYMPOSIUM PRICES (in GB Pounds £)

Package (please tick box)	✓	Fee	VAT	Payable
Full Three Day Symposium Programme and Supporting Events		695.00	121.63	816.63
Two Day Programme <i>Please tick the two days that you wish to attend</i>		595.00	104.13	699.13
Wednesday	<input type="checkbox"/>			
Thursday	<input type="checkbox"/>			
Friday	<input type="checkbox"/>			
One Day Programme <i>Please tick the day that you wish to attend</i>		395.00	69.13	464.13
Wednesday	<input type="checkbox"/>			
Thursday	<input type="checkbox"/>			
Friday	<input type="checkbox"/>			
<i>Please note that the Two and One Day Programmes exclude the Symposium Christmas Dinner and Awards Ceremony – if you wish to attend see below.</i>				
Other Rates				
Symposium Christmas Dinner and Awards Ceremony		42.55	7.45	50.00

Terms and Conditions

Substitution of participants may be made at any time. If you intend to do this, please advise the MIRCE Science ('the organiser') as soon as possible. Cancellation of a booking must be received in writing by the organiser at least 14 days before the commencement of the Symposium. MIRCE Science regrets that no refunds or credits will be made after the deadline unless the Symposium is cancelled by the organiser. The organiser reserves the right to alter the programme or cancel the Symposium at its discretion. All places offered are subject to availability.

PAYMENT DETAILS

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Special requirements Yes No

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I understand and accept the registration terms and conditions as shown

Signature _____ Date _____

VALUE ADDED TAX (VAT)

Unless special exemption exists, under UK Customs and Excise regulations delegates from all countries are required to pay UK VAT @ 17.5% on all courses taking place in the UK. Non-UK delegates may be able to recover VAT incurred via the relevant tax authority in the country of origin of the delegate.