# 28<sup>th</sup> MIRCE International Symposium 11 – 12 December 2018, Woodbury Park, Exeter, UK What is Beyond Reliability Function?



Have you ever asked this question?
 If NO, go to Registration Form, now!

- Do you know the answer to this question?
   If NO, go to Registration Form, now!
- Should you know the answer to this question?
   If YES, go to Registration Form, now!
- Do you wish to know the answer to this question?
   If YES, go to Registration form, now!

### Why is it IMPORTANT to know the answer?

Because the occurrence of the first failure event and all subsequent ones generate physically observable changes in the life of a system that are impossible to embrace by the "time-tofailure" approach to Reliability Function. Hence, how could predictions of functionable system reliability be "reliable" when lifelong physically observable events and associated human rules are totally excluded from the predictions?

# **The Symposium Programme at Glance**

>>>> Tuesday 11 <sup>th</sup> December 2018 <<<<<				
0830-0900	Registration and welcome coffee, Colin Chapman, Room, Woodbury Park Hotel,			
0900-1300	The Reliability Function, R <sub>s</sub> (t), defines the reliability of the system as a function of the reliability			
	of its consisting components and their configuration. Such mathematical expression is valid under			
	the following physical reality, ONLY:			
1045-1100	Components are mutually independent			
Coffee	No maintenance activities			
	• Continuous operation of a system			
	First observable failure is a system failure			
	<ul> <li>No environmental impacts on system reliability</li> <li>No Human impacts on system reliability</li> </ul>			
1300-1400	No Human impacts on system renability     Lunch Break			
1400-1730				
1400-1750	The occurrence of the first failure brings the following physical reality into the equation for system reliability:			
	Dependencies between components			
	<ul> <li>Initiates maintenance activities</li> </ul>			
1545-1600	<ul> <li>Interrupts continuous operation of a system</li> </ul>			
Tea break	• Component's failure could precede system's failure			
	Environmental impacts on system reliability			
	Human impacts on system reliability			
	Which the existing form of the reliability function cannot embrace at all !!!!!			
1900-1930	Get Together Sherry Reception at Woodbury Park Hotel			
1930-2230	Symposium Dinner & MIRCE Akademy Members Christmas Dinner			
	<b>S1.RC</b> Example 1 Brown & Education Contract (the MIDOE Ales house			
	Functionability I - Research & Education Centre, of the MIRCE Akade my			
	MIRCE Science based Announcement and Award of the			
	2018 Formula 1 Driver Functionability Champion			
	• 2018 Formula 1 Team Functionability Champion			
>>>> Wednesday 12 <sup>th</sup> December 2018 <<<<<				
0900-1300	MIRCE Science Philosophy			
	The philosophy of MIRCE Science is based on the premise that the purpose of existence of any			
	functionable system <sup>1</sup> is to do functionability work. The work is done when the expected			
	measurable function is performed through time.			
	However, experience teaches us that expected work is frequently beset by undesirable negative			
	iunctionability events, resulting from a variety of negative functionability actions (overstress,			
	nerformed on the systems to enable them to continue doing the work (repairing testing replacing			
	changing the mode of operation and similar). Thus, the complex interactions between positive and			
	negative functionability actions determine functionability performance of functionable systems,			
	which regrettably become known only at the end of functionable system in-service life, when			
	nothing could be done to influence it.			
	Thus the ability to accurately predict functionability performance of the future functionability			
	systems at the design stages would be invaluable to the chief designer's office, as decisions, made there have a direct impact on the expected; work, budget and the expected return on the			
	investment (e.g. profit, public benefit, reputation and similar).			
1300-1400	Lunch Break			
1400-1700	MIRCE Science answers to the question "What is Beyond Reliability Function?"			
	(scientific, mathematical, computational, educational, technological & professional)			
1700-1730	Book signing, group photo and departure			



**Exeter** is the most southwesterly Roman fortified settlement in Britain. Exeter Cathedral was founded in the early 12th century and has several notable features, including an early set of misericords, an astronomical clock and the longest uninterrupted vaulted ceiling in England.

Today, Exeter is identified as one of the top ten most profitable locations for a business to be based or to gain University education.

All prices are in GB Pounds	11 - 12 December		
Service	Price	VAT	Total
Participant	495.00	99.00	<b>594.</b> 00
Retired participants	295.00	59.00	354.00
University students	275.00	55.00	330.00
MIRCE Akademy Members	375.00	75.00	450.00
MIRCE Akademy Fellows	395.00	79.00	474.00
MIRCE Akademy Students	205.00	41.00	246.00
Symposium Dinner only	60.00	12.00	72.00



#### Special Christmas present to each paid participant from the MIRCE Akademy

A signed copy of the book "The Origin of MIRCE Science", by J. Knezevic, published by MIRCE Science in December 2017, 232 pages, A4 format, published price £ 50.00.

Physical and mathematical reality of a life of a system beyond the reliability function are fully, presented, analysed, understood and presented through a set of axioms and MIRCE Functionability Formulas that deal with all operational, maintenance and support processes and events expected to take place during the life of a system, currently totally ignored by existing reliability function.



## About the Venue

Woodbury Park is a magnificent 500 acre complex set among rolling hills above the South West English coastline, only a few miles from Exeter.

Communication between Exeter and other parts of the United Kingdom are excellent.

**<u>Bv road</u>**, the M5 motorway links Exeter to London, the Midlands, Scotland and Wales. Regular rapid coaches run services to and from London and Heathrow Airport. **<u>Bv rail</u>**, 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.

Among the outstanding leisure facilities at Woodbury Park are two golf courses including the magnificent Oaks Championship course, tennis courts, a swimming pool, spa, sauna and fully equipped gymnasium and well appointed lounge areas and bars.

Woodbury Park, Woodbury, Exeter, EX5 1JJ, United Kingdom

- -+44 (0) 1395 233 384
- enquiries@woodburypark.co.uk www.woodburypark.co.uk

#### About the MIRCE Akademy

MIRCE Akademy is an independent research and educational institution devoted to the enhancement and applications of MIRCE Science – theory for predicting functionability performance of functionable system types.

The knowledge and methods of MIRCE Science have benefited designers, manufacturers, constructors, operators, service-providers, regulators and others in the aerospace, automotive, communication, construction, defence, transport, service, utility sectors and other areas of business and government.

Benefits of a scientific based knowledge are experienced through significant increase in system reliability and availability, while drastically reducing costs of making, running and disposing systems.



#### Phone: + 44 (0) 1395 233 856 Email: <u>quest@mirceakademy.com</u> Web: <u>www.mirceakademy.com</u>



## 28<sup>th</sup> MIRCE International Symposium: 11 – 12 December 2018 Reliability Beyond First Failure

THIS FORM MAY BE COPIED

**Registration Form** 

Email: <u>quest@mirceakademy.com</u>

Phone: +44 (0) 1395 233 856 Mail: MIRCE Akademy, Woodbury Park, Exeter, EX5 1JJ, United Kingdom Web site: <u>www.mirceakademy.com</u>				
Please select appropriate level of service and corresponding fee.	PERSONAL DETAILS (Please print clearly)         Surname			
Group discounts are available please contact us.	First name			
<ul> <li>The Symposium Fees includes:</li> <li>Attendance</li> <li>Symposium Material and Supporting Materials</li> <li>Lunches and Light Refreshments</li> <li>Book "The Origin of MIRCE Science"</li> <li>Christmas Dinner on 11th December</li> <li>Free Parking</li> </ul>	Organisation			
Value Added Tax (VAT)				
Unless special exemption exists, under UK Customs and Excise regulations delegates from all countries are required to pay UK VAT @ 20 % 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.	Postcode         Country           Tel         Fax           E-mail         Fax			
	Special requirements Yes No			
PAYMENT DETAILS Please invoice my organisation (Note: UK MOD personnel can pay by BACS through the DBA –	Please specify			
Contractor Number will be supplied with invoice)	I understand and accept the registration terms and conditions as shown			
For the attention of	conditions as shown			
Purchase Order No	Signature Date			
Please Charge credit card £	Terms and Conditions			
Visa MasterCard Amex	Substitution of participants may be made at any time. If			
Cardholder Card No Expiry Date Security Number	('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 organiser cancels the Event.			
Signature	The organiser reserves the right to alter the programme or cancel the Summer School at its discretion. All places offered are subject to availability			