



Seminar / Short Course:

Reliability Engineering for Mechatronic Systems in the Automotive Industry

Tuesday 14th May 2019, University of Bradford

Automotive Mechatronic systems have seen a significant evolution underpinned by technology advancements in materials, electronics, software and networks, and driven by the ambition to lead on consumer centric innovation and increased levels of autonomy, while improving the safety and environment footprint. In spite of technological and methodological developments in automotive product design and development, and significant advancements in manufacturing ensuring higher standards of quality and uniformity of parts, reliability remains a significant engineering challenge driven by the growing complexity and the interdependence / interconnectivity of systems.

You are cordially invited to join this **Reliability Engineering for Mechatronic Systems in the Automotive Industry** seminar organised by the Automotive Research Centre at the University of Bradford, and listen to a leading industry expert in reliability - **Professor David Delaux**, Past-President of the European Reliability Confederation CEEES, Head of Valeo Corporate Reliability, Regulation Director and Reliability Senior Expert. David will cover a range of topics on *reliability management (project development and warranty risks)* and *fatigue design of complex systems*.

The event will also include a suite of posters and presentation on the **Automotive Healthcare Analytics Factory** – sharing research insights from the *Advanced Automotive Analytics Laboratory*.

Target Audience

This seminar is primarily for graduate and postgraduate scholars, as well as academic researchers from a broad range of disciplines (including computer science) wishing to get an update of the current practice and trends in automotive systems reliability, including opportunities for big data and machine learning applied to this field. The seminar is also open for participation to engineers working in the automotive or related industries and the supply chain,

The seminar proposes a relaxed yet engaging approach, combining industry expert led sessions with both facilitated and open discussions. A Certificate of Attendance will be issued to all participants, serving as evidence of engagement with an organised Professional Development activity.



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Outline Programme

- 09.00 – 09.15 Arrival and Registration
- 09.15 – 09.30 Welcome and Agenda Prof Felician Campean, University of Bradford
- 09.30 – 11.30 *Short Course Part 1: Overview of Reliability Management (Projects and Risks) – from the Automotive Industry Perspective* Prof David Delaux, Valeo
- 11.30 – 12.00 *Reliability Discussion with the Industrial Expert: Q&A* Prof David Delaux, Valeo
- 12.00 – 13.30 *Networking Lunch, Tour of facilities, Research posters*
- 13.30 – 16.30 *Short Course Part 2: Reliability Engineering: Fatigue Life applied to Structural Complexity of Automotive Systems* Prof David Delaux, Valeo
- 16.30 – 17.00 *Reliability Discussion with the Industrial Expert: Q&A* Prof David Delaux, Valeo
- 17.00 – 18.00 *Networking break*
- 18.00 – 19.30 *The Automotive Healthcare Analytics Factory Framework: Plenary address followed by 6 research / case study presentations from young researchers entering the IET "Present Around the World" Competition.*

Biographical note



David joined Valeo in September 1997, as an Engine Cooling engineer, and progressed on to Project Manager, Lab Manager, Head of Material Department and Head of Reliability, overseeing warranty issues, reliability validations – corrosion, thermal shock, pressure pulsation, vibration. He is currently leading the global competency development and the reliability strategy for Valeo worldwide, and he is Regulation Director for Thermal System Business Group.

David holds a Doctorate in Mechatronic Reliability from INSA Rouen (National Institute of Applied Science), an Engineering Diploma from CESI Paris, and a Technical Diploma in Instrumentation & Measurement from Orsay University. David also has a certification in Finance from HEC Paris and a Diploma of Executive Management from INSEAD Paris.

Prof. David Delaux

David holds Visiting Professor appointments at Rouen University, UVSQ (Versailles), and ENSMA Poitiers. He has published 37 papers and 4 books on Reliability of High-Power Mechatronic Systems. As a Reliability Senior Expert, David has been involved with several scientific societies including taking position as a Board of Directors and Chairman of national research programmes, and President of European Reliability Confederation in 2016-2018.

For **registration** and **further enquiries** please contact **Ms. Yvonne Western** by email (Y.Western@Bradford.ac.uk) or telephone +44-1274-235401
<https://www.brad.ac.uk/automotive-research-centre/reliability-seminar-may19/>



We can't
predict your
future
but we can
help shape it