Andrew Starr – Curriculum Vitae

Professor Andrew Starr holds a PhD in condition monitoring of robotic production systems (Manchester). He is a Chartered Engineer, a Fellow of the Institution of Mechanical Engineers, a Fellow of the Royal Aeronautical Society, a Member of the British Institute of NDT, a member of the Institute of Asset Management, and member of the International Society of Condition Monitoring. His career started with British Aerospace, before working for the University of Manchester, University of Huddersfield, and the University of Hertfordshire as head of School of Aerospace, Automotive and Design Engineering.

At Cranfield University he is Professor of Maintenance Systems and Head of the Through-life Engineering Services (TES) Institute. His research is in condition monitoring of mechanical systems with a special interest in gears, sensor systems, and maintenance optimisation through data fusion.

Qualifications & Professional affiliations

2011:	Member	Institute of Asset Management
2009:	Fellow	Institution of Mechanical Engineers
2008:	Fellow	Royal Aeronautical Society
2003:	Chartered Engineer	Engineering Council
2000:	Member	British Institute of NDT
1993:	Ph.D. in Engineering	University of Manchester
1987:	B.Eng. in Mechanical Engineering	University of Leeds

Recent career overview

2011-	Cranfield University: Professor of Maintenance Systems
2009-2011	University of Hertfordshire: Director, Centre for Sustainable Communities
2007-2009	University of Hertfordshire: Head of School of Aerospace, Automotive and Design Engineering
1997-2007	University of Manchester: Lecturer, Senior Lecturer

Clients

- BAE Systems
- Bombardier Transportation
- Engineering and Physical Sciences Research Council
- European Commission
- GE Avio Aero
- Ministry of Defence
- National Nuclear Laboratory
- Network Rail
- Procter & Gamble
- QinetiQ
- Rolls-Royce
- Schaeffler
- Schlumberger
- Sellafield Ltd
- Thales
- Unipart Rail

Current and recent research grants

- 2018-2019, Shift2Rail track and smart systems projects with Network Rail, £350k
- 2016-2018, Cleansky 2 738144 iGear: Intelligent Gearbox for Endurance Advanced Rotorcraft, with Active Space Technologies; €200k of €500k;
- 2015-2018, 'Customer Loyalty and Dynamic Seat Reservation System (CLoSeR)', Shehab (PI), Starr (CI), Named researchers Kirkwood, Court, Innovate UK "Enhancing Customer Experience in Rail Industry" with partners UniPart, First Great Western and WMG. £320,561 of £1,997,856
- 2015-2017, Cleansky 2 687091 iBearing: with Active Space Technologies and Schaeffler, €201k of €500k, named researcher Durazo-Cardenas
- 2014-2017, AMSCI CHARIOT: Creating High vAlue compact paRtIcular prOducts to exTend UK's supply chain reach, with Procter & Gamble et al £570k of £16M
- 2013-2017, EPSRC Autonomous and Intelligent Systems, EP/J011630, Integrated through-life support for high-value systems, with Network Rail et al £920k
- 2012-2014, EASA HUMS sensor development programme, VHM.2012.OP.13, €150k
- 2008-2011, Gearbox degradation, with QinetiQ & RAF £220k
- 2005-2008, EU FP6 IP017498: DYNAMITE: Dynamic decisions in maintenance, with VTT Finland and 16 other partners €6.1M

Taught programmes and seminars

- Managing Assets and Value 2019-
- MSc Through-life Systems Sustainment, Cranfield: Course Director 2011-17
- Omaintec workshop programmes Dubai 2019, 2014, Jeddah 2013, Beirut 2012
- Asset management, Saudi Arabia Council of Engineers, Riyadh 2015

Selected publications

www.researchgate.net/profile/Andrew_Starr   orcid.org/0000-0001-9046-560X

- Rzeszucinski PJ, Sinha JK, Edwards R, Starr A, Allen B, 2012, Amplitude of probability density function (APDF) of vibration response as a robust tool for gearbox diagnosis, *Strain*, *International Journal of Experimental Mechanics*, Volume 48, Issue 6, pp510-516 10.1111/j.1475-1305.2012.00849.x.
- C. Ruiz-Carcel, A. Starr, E. Nsugbe, 2018, Estimation of powder mass flow rate in a screw feeder using acoustic emissions, *Powder Technology*, ISSN 0032-5910, v336 pp122-130 https://doi.org/10.1016/j.powtec.2018.05.029
- Durazo Cardenas I, Turner C, Kirkwood L, Bevilacqua M, Starr A, Tiwari A, Shehab E, Tsourdos A, Baguley P, Xu Y, Emmanouilidis C, 2018, An autonomous system for maintenance scheduling data-rich complex infrastructure: fusing the railways' condition, planning and cost, *Transportation Research Part C, Emerging Technologies*, v89 pp234-253 https://doi.org/10.1016/j.trc.2018.02.010 SCR 2016 Q1 1.935
- Ruiz-Carcel C and Starr A., 2018, Data-based Detection and Diagnosis of Faults in Linear Actuators, *IEEE Transactions on Instrumentation and Measurement*, vol. 67, no. 9, pp. 2035-2047. ISSN 0018-9456 doi: 10.1109/TIM.2018.2814067
- E Nsugbe, A Starr, I Jennions and C Ruiz-Carcel, Online particle size distribution estimation of a particle mixture in free fall with acoustic emission, *Particulate Science and Technology*, ISSN 0272-6351 (print) 1548-0046 (online), published online 28 Nov 2018, doi:10.1080/02726351.2018.1473540

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