

INDEX of RAeS Loughborough Branch Lectures (2005-2024)

Download this document for ease of reference : then click [here](#) for Past Lectures page

Title	Season	Lecturer
AERO ENGINES		
RR Trent 1000 - Boeing 787 Dreamliner	2006/07	Jonathan Windlass (Rolls-Royce)
Rolls-Royce Flying Test Beds	2007/08	Barry Hocking (Rolls-Royce)
Lower NOx Combustor Developments	2009/10	Prof Jim McGuirk (L'boro Univ)
Past, Present & Future Engine Trends	2009/10	Nick Howarth (Rolls-Royce)
Future Propulsion	2014/15	Rich Parker (Rolls-Royce)
SABRE and Skylon	2015/16	Mark Thomas (Reaction Engines)
RR Trent XWB-84 – A350XWB	2016/17	Mark Wainwright (Rolls-Royce)
RR Evolution of engines	2017/18	Prof Rick Parker (Rolls-Royce)
Engine Power: Where from in the future?	2021/22	Conrad Banks (Rolls-Royce)
Electric Propulsion for advanced air mobility	2022/23	Steve Mountain (Rolls-Royce)
Genesis of the Jet	2023/24	Ian Whittle (Son of Frank)
Sustainability in Aerospace - Combustion Perspective	2023/24	Dr Kenneth Young (Rolls-Royce Fellow)
AIRCRAFT LESS THAN 12,500lb		
Pilatus PC-21 – engineering	2005/06	B Cervia & E Burdock (Pilatus)
Eclipse 500 - development/certification	2006/07	Oliver Masefield (project designer)
Seawind – amphibious light aircraft	2011/12	Tony Irwin (pilot/developer)
Vans RV-6 - global flight by owner	2013/14	Manuel Quelrol (private pilot)
DH Tiger Moth – 70th year restoration	2014/15	Terry Dann (private pilot)
Auster Aircraft - rebuild/company history	2016/17	Terry Dann (private pilot)
Atlantic Microlight – Oshkosh and back	2016/17	Eddie McCallum (private pilot)
e-Go Aircraft Design	2017/18	Giotti Castelli (project designer)
AIRCRAFT: MODELS & SOLAR POWERED		
Large scale aircraft model kits	2013/14	Simon Owen Airfix)
Human powered aircraft	2015/16	Dr Bill Brooks (P&M Aviation Ltd)
Large Model Aircraft	2016/17	Tony Hooper (LMA Association)
Solar Stratos project	2018/19	Raphael Domjan (Solar Explorer)
AIRCRAFT: CIVIL AIRLINERS		
Airbus A380 - From Dream to Machine	2006/07	Rob Bray (Airbus UK)
Airbus A350 XWB	2008/09	Rob Bray (Airbus UK)
Concorde – Design Engineer recollections	2010/11	Ted Talbot (BAe Filton)
Boeing 787 Dreamliner	2011/12	Miguel Santos (Boeing)
Airbus A350 XWB	2012/13	Imran Khawaja (Airbus UK)
Airbus A300 'Voyager' - pax/tanker roles	2013/14	Geoff Winterbottom (Cobham)

Title	Season	Lecturer
Airbus A318 – London-New York service	2013/14	Capt Tony Payne (BA)
Airbus A380-800 – wing design/build	2013/14	Huw Davies (Airbus UK)
Airbus Corporate Jet Cabins	2017/18	David Vellupilai (Airbus)
DH Comet – structural failure	2017/18	Dr Paul Withey (metallurgist)
Airbus Beluga XL - oversize Transport	2019/20	Veronique Roca (Airbus)
AIRCRAFT: MILITARY		
Airbus A400M Wing & Engine Development	2005/06	Roger Taplin (Airbus & Rolls-Royce)
BAE Harrier variants - Jet VTOL	2006/07	John Farley (BAE Systems)
BAE AEW Nimrod & Vulcan Tanker	2006/07	Wg Cdr Robby Robinson (RAF)
Lockheed-Martin F-35B Lightning II Update	2007/08	Ivor Evans (Lockheed-Martin UK)
Hawker Hunter - UK's Leading jet Fighter	2008/09	AVM H A Merriman (RAF)
ASTOR – covert surveillance	2010/11	Flt.Lt Coates & F/O Daerin
BAE Nimrod MRA4	2010/11	Paul Grady (BAE Systems)
Airbus A400M - towards entry to service	2012/13	Brian Kitson (Airbus UK)
Lockheed-Martin F-35B Lightning – cockpit	2013/14	Graham Tomlinson (BAE Systems)
Lockheed Martin F35B Lightning II	2014/15	Wg Cmr Jim Schofield (RAF)
Eurofighter/Typhoon Capability	2015/16	Mark Bowman (BAE)
Lockheed SR-71 Pilot's experience	2015/16	Richard Graham (ex USAF)
Lockheed SR-71 Mission to Murmansk	2016/17	Richard Graham (ex USAF)
McDD F-4 Phantom - Chasing Bears	2018/19	Nick Anderson (ex RAF)
Blue Steel – V-bomber weapon	2018/19	Air Cmr Norman Bonnor (ex RAF)
F-35B (JSF) - Boeing vs L-M fly-off	2019/20	Rr Admiral Simon Henley (Rolls-Royce)
High Alpha Testing and Flight Safety	2019/20	Terry Smith (BAE Systems)
Tempest - new technologies	2021/22	Steve Hopkins (BAE Systems)
RAF P-8A Poseidon	2021/23	Gp Cpt Jim Beldon, RAF ISTAR
F-35B / Carrier Flight Trials	2022/23	John Slater (BAeS Flight Systems)
Development of the F86 Sabre	2023/24	Rod Dean (Pilot & Aviation Consultant)
The Buccaneer	2023/24	Air Care (Retd) Graham Pitchfork
AIR TRANSPORT		
BMI baby - marketing and operations	2005/06	David Hodge (BMI Baby)
Low-cost Airlines – Challenges faced	2008/09	Dr Keith Mason (Cranfield Univ)
Environmental impact - Sustainability	2010/11	Prof Callum Thomas (Manchester Univ)
Lion Air 737Max Accident	2022/23	Bromfield/Jamieson (B'ham U & Jet2)
Silver City Airways - Innovators in Air Transport	2023/24	Stephen Hogarth (Branch Treasurer)
AIRPORTS & ATC		
UK Air Accidents Investigation Branch	2008/09	Alan P Simmons (AAIB)
East Midlands Airport - operations	2011/12	John Frogatt (EMA ops team)

Title	Season	Lecturer
Shannon Airport – past and future	2012/13	Joe Buckley (Shannon manager)
East Midlands - accident	2013/14	Blundell/Bromfield (CoventryUniv)
Heathrow Hub- 3rd runway proposal	2014/15	Jock Lowe (former BA captain)
Air Traffic Safety	2015/16	Dr Sam Espig (NATS)
HiAL Airports - remote base ops	2016/17	Andy Rackham (ops specialist)
Accident Investigation - overview	2016/17	Prof G Braithwaite (Cranfield)
Air Traffic Control System - Heathrow	2019/20	Adam Spink (NATS – Heathrow)
Air Accident Investigation Branch	2021/22	Peter Coombs (Ex AAIB Inspector)
Managing an Airport in Difficult Times	2022/23	Ioan Reed-Aspley (East Midlands Airport)
HISTORICAL		
Schneider Trophy	2005/06	Derek James
Barnes Wallis – his life and times	2007/08	Peter Rix
Leicestershire & Rutland Aviation History	2007/08	Mac Maccabee (Branch Committee)
British Aircraft Industry 1908 – 2008	2008/09	Dr R V Smith
Two Flights to Victory (USAF – Japan)	2008/09	David Styles
Mt Everest overfly in Westland Wallace	2008/09	Rt Hon Lord Selkirk QC
British Fighter & Interceptor Projects	2009/10	Tony Buttler
One of the Few (RAF career BofB to-59))	2009/10	John Shipman
Saunders-Roe Princess – flying boat	2010/11	Bob Wealthy
RAF WW2 conservation	2012/13	W/O Ken Ball (BBMF)
Schneider Trophy	2012/13	Mike Marsden
Army Plane No 1 – Farnborough Replica	2013/14	David Wilson
Lancaster lost – survivor story for WW2	2013/14	Laurie Tillen
Kingston 100yr of aircraft production	2014/15	Chris Farara
Melton Mowbray – WW2 ferrying ops	2014/15	Ray Flude
Rolls Royce Merlin engine development	2014/15	Peter Maynard (RAF engr)
RAeS – 150th Anniversary	2015/16	Air Cmdr Bill Tyack
Royal Aircraft Factory - Farnborough	2015/16	Dr Graham Rood (FAST)
Imperial Airways – UK-African 1932-36	2016/17	Mike Hirst (Branch Committee)
North American X-15 (Video)	2020/21	Roger Allton (Branch Committee)
Miles M52	2021/23	Mike Hirst (Branch Committee)
The People's Mosquito	2022/23	Ross Sharp (Director of Engineering)
V/STOL: British Ingenuity	2022/23	Graham Weller (Consultant)
A Lighter View of the Light Blue	2023/24	Kenneth Moore (Ex-RAF navigator)
MARITIME		
100 Years of Submarine Technology	2005/06	Tim Roberts (BAE Systems)
Astute Class Submarine	2012/13	Simon Purvis (BAE Systems)
QE Class Carriers – pre launch	2016/17	Andrew Matters (ACA)

Title	Season	Lecturer
QE Class Carriers – post-launch	2018/19	Mark Dannett (BAE Systems)
Quicksilver: World Water Speed Record	2019/20	Nigel McKnight
MILITARY (STRATEGY & OPERATIONS)		
Air Power & the Future	2005/06	AM Sir Peter Norriss (RAF)
Defence Technical Undergraduate Scheme	2005/06	WG Cdr Keith Pearce (RAF)
Operating the RAF C-17	2007/08	Ft Lt J J Jackson (RAF)
Red Arrows – pilot’s perspective	2012/13	Flt Lt Mike Child (RAF)
BAE Warton Superfighters	2015/16	Tony Wilson (BAE Systems)
ROTORCRAFT & LIGHTER THAN AIR		
Bristow Helicopters - North Sea Ops	2009/10	Capt David Higgins (Bristow)
CV-22 Osprey - tilt rotor	2015/16	Lt Col Jim Peterson (USAF)
Airlander – Hybrid Air Vehicle	2017/18	Andy Barton (Airlander)
Helicopter Operations	2018/19	Stephen Hogarth (ex Bristow)
The Fairey Rotodyne	2019/20	David Gibbins (ex Fairey)
HM Airship R-100	2020/21	Roger Allton (Branch Committee)
Selling Airlander	2023/24	George Land (Airlander Sales Director)
TEST PILOTS		
From Comet to Harrier	2005/06	Duncan Simpson (Hawker)
Training Pilots on Vintage Aircraft	2006/07	Roger Bailey (Shuttleworth)
Fighter & Test Flying Reminiscences	2006/07	Gp Capt Wally Bainbridge (RAF)
From VSTOL to Blind Landing	2007/08	Wg Cdr Clive Rustin (RAF)
Recollections of early test flying	2011/12	Capt Eric ‘Winkle’ Brown (RN & RAE)
Test Pilot – 1950s to EAP/Typhoon	2011/12	David Eagles (RN and BAe)
Flying the Spitfire - Rolls-Royce Heritage	2011/12	Paul O’Dell (RAF and Rolls-Royce)
SPACEFLIGHT		
Commercial Spaceflight	2018/19	Dr Patrick Artis (Virginia Tech)
Nanosatellites: Enabling Technologies	2019/20	Dr Katharine Smith (Manchester Univ)
James Webb Space Telescope	2021/22	John Thatcher
Beagle 2 Mars	2022/23	John Thatcher
Lockheed Martin Space in the UK	2023/24	Grant Lewis (Project Manager)
TECHNOLOGY		
Innovation - How Did They Think of That?	2005/06	Chris Clarkson (BAE Systems)
Micro Air Vehicles, Tools or Toys?	2006/07	Gordon Dickman (BBRL)
How Wings Work	2007/08	Holger Babinsky (Cambridge Univ)
Tornado to Typhoon and Beyond	2007/08	Billy Beggs (BAE Systems)

Title	Season	Lecturer
Marshall Aerospace	2008/09	Martin Broadhurst (Marshall CEO)
Formula One Aerodynamics	2009/10	Geoff Richards (Ex McLaren F1)
Towards a Silent Aircraft	2009/10	Dr Tom Hynes (Cambridge Univ)
Composites	2010/11	David Abraham (Cobham)
Ejection Seat - F35	2010/11	Steve Roberts (Martin Baker)
Formula Student – racing cars	2010/11	Scot Layton (Loughborough Univ)
Bio Fuel	2011/12	Chris Lewis (Rolls-Royce)
Cutaway Drawings	2011/12	Tim Hall (Flight International)
Flight Simulation	2011/12	Mike Southworth (BAE Warton)
Aircraft Survivability	2012/13	Dr Andrew Irwin/Dr Peter Render
ASTRAEA – autonomous flight Jetstream	2012/13	Lambert Dopping-Hepenstall
Bird Strikes and airframe design	2014/15	David Coldbeck (Spirit Aerospace)
Early aircraft handling qualities	2015/16	Roger Bailey (Shuttleworth Collection)
3D Printing – digital technology	2016/17	Kevin Smith (Voxejet)
Bloodhound SSC	2017/18	Richard Noble (Team manager)
Graphene – A new material for Aviation	2017/18	Dr Mattheiu Gresil (Manchester Univ)
Sopwith Camel & Eurofighter Typhoon	2017/18	Dr Eric Gilles (Glasgow Univ)
CFD & Aircraft Design	2018/19	Prof Gary Page (Loughborough Univ)
Helmet Displays – development stages	2018/19	Alec Cameron (BAE Systems)
Hybrid Electric Aircraft	2018/19	Dr Panis Lascaridis (Cranfield Univ)
Avian flight mechanics (Video)	2020/21	Dr Peter Thompson (Hertfordshire University)
Air Race E - propulsion futures	2021/22	Richard Glassock, Nottingham University
Decarbonising Aerospace	2021/22	Dr Mark Taylor (Rolls Royce Fellow)
Electric Flight	2021/22	Dr Guy Gratton (Cranfield University)
C21 Renaissance of Transonic Wind Tunnels	2022/23	Dr Doug Greenwell (Consultant)

UAV Loughborough University – MEng project presentations

UAV Systems – Breakthroughs /Hurdles	2010/11	Dr Aryhus Richards
Reaper UAV	2017/18	Paul Clarke (Qinetiq)
ODYSSEY High-speed transport	2023/24	Dewar Donnithorpe-Tait (UAV specialist)
AIRCRAFT FOR AFRICA Autogyro		
VIPER Lunar resource exploration		

2014/15

SOFA	General Aviation Jet Aircraft
ASTERIA	Spacecraft to explore asteroid 2-Pallas
LEAF	222 seat – Loughborough Environmental Aircraft for the Future
HELIOS	Human powered aircraft
ZEUS	IMechE UAS challenge – design

2015/16

SURGE	Electric Aerobatic Racer
LASARIUS	Planetary defence system (deep space)
HUMMINGBIRD	Solar-powered round-the-world airship
PROVIDENCE	UAS to Fiji Government spec (low-cost maritime surveillance)
MRT	Multi-role transport – 250,000kg mass, 5,000n.m. range
AUXILIUM	IMechE UAS challenge – design*

* IMechE UAS challenge is an annual “design and demonstrate” competitive event open to education-based teams throughout the UK. Full information at:

<https://www.imeche.org/events/challenges/uas-challenge>

2016/17

NEMESIS	Autonomous fighter for the future
CASIUS	Manned mission to Mars (912 days – 524 days on surface)
SKELRON	Supersonic Transport – trans pacific at Mach 2.5
PEGASUS	Military Flying Car – potential replacement for V-22 Osprey
ATLAS	IMechE UAS challenge design*

2017/18

AMPLUS	Stationary X-Ray (Legrange point – behind the Moon)
MAKO	Wing in ground effect vehicle – 85km/hr, 1.5hr, range 121km
ANDRASTE	Autonomous UAV
AMP-AIR	Hybrid electric airliner
HEGASass	Hybrid G.A. aircraft – 100n.m. 200kts, petrol/electric
MEDIFETCH	Medical express UAV (60km out-back range/1hr delivery)
PHOENIX UAS	IMechE UAS challenge – design*

2018/19

SLUAV	Submarine launched UAV – able to use existing torpedo tube
ADRS	Autonomous disaster relief system – based Haiti earthquake
SKYRIDE	Hybrid air taxi – 4 pax/155nm/65min – good pax comfort able
MASCOT	Orbital UAV – in atmosphere of Titan (Moon of Saturn)
LUNAR ACCESS	Based on NASA requirement - support crew of 4 for 8 days

2019/20

EVOLVE	Human powered aircraft
MAP MAKER	Aerial mine protection and clearance system
VAULT	VA400 Short haul airliner
STRATOSPACE	High altitude pseudo satellite
GLASIES	Comet interceptor (fast catch mission)
TALON	Future theatre lift aircraft

2020/21

HERMAN	Offshore windfarm maintenance system
HYGEIA	Pandemic-proof plane

THEIA	Mars flyer
YELLOWFIN	Maldives transport aircraft
CHIMERA	Combat recovery aircraft
ASTRAEUS	Lunar tourism transport

2021/22

NERODIA	Fire fighting aircraft
MISSION TO VENUS	Orbiter, blimp & lander
ACHELOS	RNLI support UAV
HY500	Future of sustainable aviation fuel

2022/23

SDRS	Space Debris Removal System
ARGO	Supersonic Dual-Variant Aircraft
PLATYPUS	Amphibious Air Tai
FF-12 GRIFFIN	Autonomous Air Cargo System
SKY ROVER	Versatile Utility Aircraft

2022/23

ORCD	Communications Satellite for Oceana
HLMP	Heavy Lift Mobility Platform