

**Funding received for formal research projects from "arms companies" between 1 January 2017 and 5 April 2025**

COMPANY	START YEAR	END YEAR	PROJECT TITLE	EXPENDITURE, AGGREGATED AND ROUNDED
Airbus	2021	2021	Language-grounded Explainable Reinforcement Learning for Human-Robot Cooperation	£0 to £100,000
Airbus Defence and Space Limited	2016	2019	Project costing for Airbus Defense and Space - Studentship	£250,001 to £500,000
	2018	2020	Engineered Ionic Liquids: Airbus Defence and Space	
Airbus Operations Ltd	2018	2024	RAEng Chair with Airbus	£100,001 to £250,002
Aircraft Strength Research Institute, AVIC	2018	2023	AVIC-ASRI Research Agreement	£750,001 to £1,000,000
AVIC Manufacturing Technology Institute	2012	2022	AVIC Centre for Structural Design & Manufacture	£5,000,001 to £6,000,000
AWE Plc	2012	2019	Governing the Enhancement of AWEs Hydrodynamic Science Capability	£6,000,001 to £7,000,000
	2013	2018	CIFS renewal	
	2013	2018	Formal Verification of Arms Control and Dismantlement	
	2014	2018	Continuum damage mechanics modelling for ductile and brittle failure of metallic systems	
	2014	2018	The Effect of Hydrogen on the Mechanical Properties in Steel (Nuclear CDT)	
	2015	2018	Micromechanics modelling of plastic bonded explosives	
	2015	2020	Integrity and Certification of AM Components	
	2015	2021	Part-time PhD studentship: Investigation into the Atomic physics of plasmas	
	2016	2017	AWE - CEMS kickstart Flexi Funding	
	2016	2017	PhD studentship support: Enhancement of temperature diagnostics with application to dynamically compressed materials	
	2016	2019	An investigation into helium mobility and bubble formation in Fcc metals (Nuclear CDT)	
	2016	2019	Imperial College Centre for Inertial Fusion Studies (CIFS)	
	2016	2021	Design for Life of a Surety Mechanism - CDT	

	2016	2021	PhD Development of a Semi-automated SHPB Facility	
	2017	2021	Exotic search for dark matter using lepton jets (Research Fellows Enhancement Award 2017)	
	2017	2021	New models of the radiative opacity of Stellar material - Studentship	
	2017	2023	Magnetically driven inertial confinement fusion - Studentship	
	2018	2022	Rad- hydro modelling of Hohlraum energetics - Studentship	
	2019	2023	William Penney Fellowship	
	2020	2024	CDT PhD Mathematical and Computational Modelling for Nuclear Criticality Safety Analysis and Assessment of Interacting Arrays of Loosely Coupled Systems containing Special Nuclear Materials (SNMs)	
	2021	2025	Micromechanical modelling of plastic bonded explosives incorporating binder ageing	
BAE Systems (Operations) Limited	2017	2018	Sky Swarm Feasibility Assessment	£100,001 to £250,000
	2019	2019	Sky Swarm 2	
	2020	2021	Delineating Cognition to Assess Performance for Defence Personnel: Cognitive Assessment Toolkit (CAS	
Defence Science and Technology Laboratory (DSTL)	2020	2021	MIMO Radar: Combat UAV Swarms	£0 to £100,000
General Electric (Switzerland) GmbH	2014	2019	Combustion Modelling PhD Studentship	£100,001 to £250,000
Lockheed Martin UK Ampthill Limited	2014	2018	Hypersonic Aerodynamics: Effect of roughness on transition	£0 to £100,000
MBDA UK Limited	2022	2022	Novel Ceramic Matrix Composite Integrated Thermal Protection System for Missiles	£100,001 to £250,002
	2022	2023	Generation after next hypersonic structures	
	2023	2024	Heat3D and Fenics Assessment	
QinetiQ Limited	2016	2023	Multi-source data fusion in enterprise cyber-security	£250,001 to £500,000
	2023	2025	Control of Hypersonic Boundary Layer Transition	
Rolls-Royce Deutschland Ltd & CoKG	2016	2017	HPC Computing Grant	£250,001 to £500,000
	2017	2017	RRD-Drum-AgCl	

Rolls-Royce Plc	2011	2017	Power Turbine Outer Diffuser Cracking Aero-mechanics Investigation	£14,000,001 to £15,000,000
	2012	2017	Damping measurements for super elastic alloys	
	2012	2017	Turbines Mechanical Technology Developments 2012	
	2012	2017	Virtue Engine Preliminary Geometry Modelling	
	2012	2017	WCCFDDFN Nuclear UTP Project: Natural Circulation Flow Analysis	
	2012	2018	2012 Bonding Project: Developing understanding of adhesive bond performance	
	2012	2019	Core Support for Compressor Applications 2012-2014	
	2012	2019	Open Rotor - Aeroelasticity	
	2013	2017	Embedded Blade Row Flutter	
	2013	2022	Nuclear UTP Core Costs 2013	
	2014	2017	AU3D ESS Interaction Noise	
	2014	2017	Studentship - 3 Year Funding	
	2014	2018	Characterisation of measured non-linear frequency response functions WP3.4	
	2014	2018	Embrittlement of Ni-based superalloys by oxygen - TSM-CDT leveraged funding	
	2014	2019	Flutter behaviour of fan blades in novel architectures'	
	2015	2017	Hydra validation for compressors & implementation of deterministic stresses in the mixing plane research by vibration UTC	
	2015	2017	Multiscale Flow Dynamics	
	2015	2018	Modelling methodologies for microstructurally sensitive fatigue crack nucleation and growth in Zirconium alloys (50% DTA leverage funding)	
	2015	2019	Alternate Passage Divergence Research at vibration UTC	
	2015	2019	Leveraged PhD studentship - Contribution for a PhD working within the Strategic Partnership Theme 4 (Titanium Aluminides)	
	2015	2019	Leveraged PhD studentship	
	2015	2019	PhD Studentship concerning Low temperature embrittlement of low alloy pressure vessel steels (CDT PhD studentship)	
	2015	2020	Predictive Models and Experimental Analysis of Delayed Hydride Cracking	
	2015	2020	RAEng Research Chair in Integrative Mechanistic Design	
	2016	2017	Extension of low-fidelity non-axisymmetric bypass duct aerodynamic tools	
	2016	2017	Guided Wave Inspection and Condition Monitoring for Planar Defects	

	2016	2018	Environmental barrier coatings for jet engine's application - Rolls Royce Imperial Junior Research Fellowship	
	2016	2018	Improvement of FORSE/JM62 Architecture	
	2016	2018	Improvements to VGrain Virtual Microstructure Software	
	2016	2018	Tip-Blowing Research, with 80k CUED subcontract	
	2016	2019	Review of advanced methods for dynamic simulation	
	2016	2019	CDT	
	2016	2019	Study of micropitting damage in rolling/sliding contacts of coated surfaces under conditions pertinent to gear applications	
	2016	2020	block diagram	
	2016	2020	Development of BTT techniques for analysis of complex vibration responses	
	2016	2020	Nuclear UTC PhD Studentship Support	
	2016	2020	The fundamentals of titanium alloys - alpha 2 ordering and the effect of interstitial solutes. PhD-CDT support	
	2016	2020	The Temperature Sensitivity of Galling in Hard-facing Alloys	
	2016	2021	Blade Shaft Coupling	
	2016	2021	Nuclear Modelling and Simulation	
	2016	2021	Off design Aeroelasticity PhD	
	2016	2021	Rotor to Rotor cross excitation	
	2016	2021	Tip Rub Research PhD	
	2016	2022	Studies on high temperatre and pressure water lubricated rolling element bearings	
	2017	2017	High Temperature EMATs	
	2017	2018	Specifications of the work on high order methods for fan broadband noise prediction	
	2017	2020	CDT Theory and Simulation Studentship	
	2017	2020	Titanium Hot Salt Stress Corrosion Cracking and Fatigue Striations - PhD support	
	2017	2021	Development and evaluation of in-plane fracture toughness of SIC based ceramic matrix composite	
	2017	2021	Dislocation Mechanisms in Co/Ni Superalloys - PhD support	
	2017	2021	Low-activation wear-resistant matrices - PhD student support	

	2017	2021	Specification for the purchase of support at Imperial College for CASE student award	
	2017	2022	Nuclear CDT leveraged studentship - Quantification of Residual Stresses by High Resolution Electron Backscatter Diffraction	
	2018	2018	Guided Wave Inspection and Condition Monitoring for Planar Defects ext.	
	2018	2018	Seal Flutter Research - Application & Deployment	
	2018	2019	Material Sensitivity to Cold Dwell Fatigue	
	2018	2019	Materials research into the property balance achievable in alpha-beta Ti alloys	
	2018	2019	Support CTI project (Innovate UK)	
	2018	2020	Developing an Alternative Rapid Texture Measurement Method	
	2018	2020	Development of Structural Health Monitoring Techniques for Planar Defects in NSRP Components	
	2018	2021	ATI - CEMTEC - environmental degradation of SiC/SiC ceramic matrix composites (CMC)	
	2018	2021	Next Generation Pipes. Predictive Methods for Pipe System Damping	
	2018	2022	Modelling Methods for Optimal Functionally Graded Materials by Novel Processing - CDT PhD studentship	
	2018	2022	PhD studentship - 50% DTP leverage funding	
	2018	2022	Rolls-Royce Top up funding for studentship	
	2018	2024	Support for Research activities at Imperial College London for development of OBRS EBC Systems	
	2019	2019	Investigation into Metallic Inclusion Formation in Hard Facing Materials	
	2019	2020	Hot Salt Stress Corrosion Cracking - Envelope Testing (NaCl)	
	2019	2020	Processing, characterisation and initial testing of Ti-Al-Mo alloys	
	2019	2020	Specification for the purchase of methodologies for processing of sparse engine aerothermal measurement data	
	2019	2023	Fast Efficient Microscale Modelling of Hydrides in Zirconium Alloys - Rolls Royce CDT 50% Leveraged PhD studentship	
	2019	2023	PhD Studentship in hot corrosion of nickel superalloys for aero-engine applications at Imperial College - Leveraged DTP studentship	
	2019	2023	Rolls Royce PhD studentship	

	2019	2024	PhD Studentship in oxidation of nickel superalloys for aero-engine applications at Imperial College - Leveraged DTP studentship 2	
	2019	2025	Crack Path Damage, CDT in Advanced Materials Characterisation - PhD leveraged funding	
	2020	2024	High-Performance, Self-Adaptive, Space-Angle Discontinuous Galerkin (DG) Methods for Local Angular Refinement for a Sweep Based Ray-Effect Mitigation Approach to Radiation Shielding Modelling and Simulation	
	2020	2024	Notched high cycle fatigue macrozones	
	2020	2024	Nuclear CDT studentship - Modelling Delayed Hydride Cracking and Crack Growth in Zr Cladding	
	2021	2022	Demonstration of the Benefits of the Virtual Elements Method on Naval Reactor Cores	
	2021	2022	low activation hard facing galling alloy development	
	2021	2022	The effect of fibre interface chemistry and thickness on CMC mechanical and environmental performance	
	2021	2023	Crystal Plasticity Finite Element Modelling work in support of MAI PW-24 Cold Dwell programme	
	2021	2023	MALIT WP3.3 Development to FORSE Multi Harmonic Balance	
	2021	2024	Enabling crystal plasticity modelling of Widmanstätten structures	
	2021	2024	Hydride Misfit and Ratcheting under Thermomechanical Loading	
	2022	2023	Surrogate Modelling for Coupled CFD and Thermal Stress Modelling within the T-Junction of PWRs	
	2022	2024	Development of heat exchanger model in AU3D	
	2022	2024	KOmpakt Multistage coupling	
	2023	2023	FY2022 RR11 rolling and development testing for BETA	
	2023	2023	PDRA Support for low activation hard facing galling alloy development	
Rolls-Royce Submarines Limited	2021	2023	Spatially Dependent Stochastic Neutron Kinetics Methods for Modelling and Simulating Naval Nuclear Power Plant (NPP) Start-up Physics	£750,001 to £1,000,000
	2022	2023	Nucleonics Research (Neutron Flux Measurements in PWR)	
	2023	2024	Elevated Temperature Galling Testing of Hard facing Alloys	

	2023	2024	A feasibility study of the use of adaptive optics for measurements in flows with refractive index variations	
	2024	2025	Research into Boron-Coated Tubelet and Plasma Panel Neutron Detector Design	
Thales Alenia Space UK Limited	2018	2018	Mylar Beam Splitter pre-development activities	£0 to £100,000