

"We have particularly strong links with...BAE Systems, QinetiQ and Dstl...Our research is funded roughly 50:50 by the Engineering and Physical Sciences Research Council (EPSRC) and industry/EU."

- University of Birmingham website

University of Birmingham's Military Projects 2001 - 2006

Overall Statistics

Total no. of projects	Minimum amount received from projects	Ranking by: a) no. of projects b) amount (£)	Top 3 funders (by no. of projects)	Top 3 departments (by no. of projects)
59	£11,606,978	a) 15th b) 12th	1) EPSRC 2) Rolls Royce 3) QinetiQ	1) Metallurgy and Materials 2) IRC in Materials Processing 3) Electrical and Electronic Engineering

Electronic, Electrical and Computer Engineering

Source/ Sponsor/ Partner	Project	Amount	Dates
EPSRC, DTI, QinetiQ, and others	Research in Modelling and Analysis of Systems Group	£?	May 2003 ²
EPSRC, and BAE Systems Advanced Technology Centre	Advanced Microwave Devices for Frequency-Agile Applications	£210,332	Nov 2005 – Nov 2008 ³
EPSRC, and Thales Research Ltd	Ultra Wide Band Signature Analysis for Detection of Weapons and Explosives	£204,366	Feb 2006 – Feb 2008 ⁴
BAE Systems, DTI, QinetiQ, and others	Miltrans: Research, Design and Development of a Range of Antennas Based on a Laminated Metallic Fabrication Technique	£?	Recently completed as of Nov 2006 ⁵
EPSRC, Ministry of Defence, BAE Systems, QinetiQ, and others	Research Funding for the Communications Engineering Group	Totals £1,000,000 in current grants and contracts	Current as of Nov 2006 ⁶
QinetiQ, and BAE Systems	Superconducting Delay Lines	£?	Current as of May 2007 ⁷
QinetiQ	Underwater Ad Hoc Networking (UAN)	£?	Current as

Source/ Sponsor/ Partner	Project	Amount	Dates
			of May 2007 ⁸

Metallurgy and Materials

Source/ Sponsor/ Partner	Project	Amount	Dates
EPSRC, and Rolls Royce Plc	Oxide Spallation and the Integrity of the Thermal Barrier Coating Systems	£168,810	Jan 1998 – Jun 2001 ⁹
EPSRC, Ministry of Defence, and BAE Systems Plc	Corrosion of Welds in High Strength Aluminium Alloys	£161,483	June 1999 – Oct 2002 ¹⁰
EPSRC, Rolls Royce Plc, and others	Durability Design Methodology for Structural Components Cast from Magnesium Alloys	£203,735	Oct 1999 – Sept 2002 ¹¹
EPSRC, Rolls Royce Plc, and others	The Fundamentals of Investment Casting	£642,387	Nov 1999 – Oct 2002 ¹²
EPSRC, Ministry of Defence, and Rolls Royce Plc	Fracture, Fatigue and Durability of High Strength Titanium Aluminides	£246,550	Apr 2000 – Mar 2003 ¹³
EPSRC, Rolls Royce Plc, and others	Integrated Process Modelling for Gas Turbine Manufacture. Project involves fundamental research by: <ul style="list-style-type: none"> University of Cambridge (Materials Science and Metallurgy Department), University of Birmingham, and Imperial College London 	? (NB £297,329 awarded to University of Cambridge)	Oct 2000 – Sept 2003 ¹⁴
EPSRC, Ministry of Defence, BAE Systems Plc, Rolls Royce Plc, and others	Engineering Doctorate Centre: Engineered Metals for High Performance Applications in Aerospace and Related Technologies	£697,012	Oct 2001 – Mar 2004 ¹⁵
EPSRC, and Rolls Royce Plc	Microstructure/ Property Relationships in B2 Nb (Al, V) Alloys for High Temperature Structural Use	£173,186	Dec 2001 – Nov 2004 ¹⁶
EPSRC, and Rolls Royce Plc	Thermal Cycling of TiAl-Based Alloys	£62,991	Oct 2002 – Sept 2005 ¹⁷
EPSRC, QinetiQ Ltd, and Rolls Royce Plc	DARP: Advanced Aero-Engine Materials (ADAM) DARPS Programme: Titanium MMC Behaviour and Lifting Studies	£214,192	Apr 2003 – Sept 2006 ¹⁸
EPSRC, Ministry of Defence, BAE Systems, Rolls Royce Plc,	Engineering Metals for High Performance Applications in Aerospace and Related Technologies	£837,760	Oct 2003 – Mar 2004 ¹⁹

Source/ Sponsor/ Partner	Project	Amount	Dates
and others			
EPSRC, Rolls Royce Plc, and others	The Oxidation Of SmCo-Based Permanent Magnets	£149,034	Apr 2005 – Apr 2008 ²⁰
EPSRC, and Rolls Royce Plc	Research Chairs: EPSRC/ Rolls-Royce Star Appointment in Casting Technology	£653,533	May 2005 – Apr 2010 ²¹
EPSRC, Vosper Thornycroft (UK) Ltd, Westland Helicopters Ltd, and others	Self-Sensing Fibre Reinforced Composites: A Novel Technique for Process and Structural Health Monitoring	£328,954	Oct 2005 – Sept 2008 ²²
EPSRC, QinetiQ Ltd, Rolls Royce Plc, and others	Alloys By Design - A Materials Modelling Approach	£506,275	Oct 2006 – Mar 2010 ²³
QinetiQ (Malvern)	Damage Detection in Carbon Fibre Composite Structures Using Polymer Fibres and Triboluminescent Damage Sensors	£?	Current as of May 2007 ²⁴

Manufacturing and Mechanical Engineering

Source/ Sponsor/ Partner	Project	Amount	Dates
EPSRC, and Rolls Royce Plc	High Speed Milling of Nickel Based Superalloys	£188,277	Apr 1998 – Mar 2001 ²⁵
EPSRC, Rolls Royce Plc, and others	Machining of Nickel Based Superalloys using Mounted Grinding Points fitted to a High Speed Maching Centre	£95,371	Sept 1999 – Aug 2001 ²⁶
EPSRC, Rolls Royce Plc, and others	Feasibility Study on the Design/ Evaluation of a Duplex HSM/ EDM System for Rapid Production of Components	£83,696	Dec 1999 – May 2001 ²⁷
EPSRC, BAE Systems Plc, and others	Quality Surface Wrapping for Manufacture	£120,967	Dec 2000 – Mar 2004 ²⁸
EPSRC, BAE Systems Plc, Rolls Royce Plc, and others	Point-Based Plug-Ins to Enhance the Quality of Geometric Data for Computer Aided Engineering	£289,957	Sept 2001 – Jan 2005 ²⁹
EPSRC, and Rolls Royce Plc	Visiting Fellowship: The Interaction of Solidification and Infiltration in Metal Matrix Composite Processing	£53,540	Mar 2006 – Sept 2006 ³⁰

School of Computer Science

Source/ Sponsor/ Partner	Project	Amount	Dates
QinetiQ, and DTI	A Future Of Reliable Wireless Ad Hoc Networks of Roaming Devices (FORWARD)	£80,000 approx.	2003 – 2005 ³¹
EPSRC, and QinetiQ (Malvern)	Automated Verification of Probabilistic Protocols with PRISM (Probabilistic Symbolic Model Checker)	£181,509	Apr 2003 – June 2006 ³²
EPSRC, DTI, Rolls Royce, QinetiQ, and others	A Midlands e-Science Centre of Excellence Proposal: Modelling and Analysis of Large Complex Systems	£150,092	Sept 2003 – Dec 2005 ³³
Thales	Case Studentship with Thales	£3,629	2005/ 2006 Financial Year ³⁴
EPSRC, QinetiQ (Malvern), and others	UbiVal: Fundamental Approaches to Validation of Ubiquitous Computing Applications and Infrastructures	£510,904	Oct 2006 – Mar 2010 ³⁵

IRC in Materials Processing

Source/ Sponsor/ Partner	Project	Amount	Dates
EPSRC, Rolls Royce Plc, and others	Low Cost Near Net-Shape Manufacture of Turbine Engine Ring Components	£181,022	Mar 1998 – Mar 2001 ³⁶
EPSRC, and Rolls Royce Plc	Atomisation, Spray Forming and Processing of Ti-Based Alloys	£370,635	Oct 1999 – Sept 2002 ³⁷
EPSRC, and Rolls Royce Plc	Novel Oxide Fibres for Ceramic Matrix Composites	£139,704	Oct 1999 – Sept 2002 ³⁸
EPSRC, Ministry of Defence, Rolls Royce Plc, and others	Net Shape Casting of TiAl Components	£324,529	Sept 2000 – Aug 2003 ³⁹
EPSRC, and Rolls Royce Plc	Ductility and Cracking in High Nb TiAl Alloys	£216,046	Apr 2001 – Mar 2004 ⁴⁰
EPSRC, and Rolls Royce Plc	Process and Alloy Development of Beta Ti Alloys	£250,537	Jan 2002 – Jan 2005 ⁴¹
EPSRC, QinetiQ Ltd, Rolls Royce Plc, and others	Development and Evaluation of Novel Low Cost Oxide/ Oxide CMC Components For Gas Turbine Engines	£202,268	Jul 2002 – Mar 2006 ⁴²
DTI, Rolls Royce, and	Net Shape HIPping of Engineering Components (ADAM-DARPs)	£?	2003 – 2007 ⁴³

Source/ Sponsor/ Partner	Project	Amount	Dates
QinetiQ			
EPSRC, QinetiQ Ltd, Rolls Royce Plc, and others	Modelling, Microstructure and Properties of Nickel Superalloys Processed by Centrifugal Spray Deposition	£264,004	Jan 2003 – Dec 2005 ⁴⁴
EPSRC, Rolls Royce Plc, and others	FARADAY: Developing a Paste Formulation Criterion	£69,118	Apr 2004 – Mar 2007 ⁴⁵
EPSRC, Rolls Royce Plc, QinetiQ, Ministry of Defence, and others	A Feasibility Study of Bonding of Powder Silicides for Application to Aero and Land-Based Turbines. Part of DTI Funded Powermatrix Faraday Initiative	£284,753 £312 from Rolls-Royce £4,200 from QinetiQ	Oct 2004 – Sept 2007. 2005/ 2006 Financial Year 2005/ 2006 Financial Year ⁴⁶
EPSRC, Rolls Royce Plc, and others	Measurement and Modelling of Electrical, Transport and Phase-Change Phenomena and Application to Vacuum Arc Remelting for Optimal Material Quality	£169,410	Dec 2006 – Dec 2009 ⁴⁷

Business Strategy and Procurement

Source/ Sponsor/ Partner	Project	Amount	Dates
EPSRC, Rolls Royce Plc, and others	IMI Competitive Advantage Through Supply Performance	£228,971	Jan 2001 – Feb 2003 ⁴⁸

School of Physics and Astronomy

Source/ Sponsor/ Partner	Project	Amount	Dates
EPSRC, and Dstl	Ion and Electron Swarm Studies of Relevance to Plasma Processing	£148,202	Apr 1999 – Sept 2002 ⁴⁹
EPSRC, and Dstl	Sensitive and Selective On-Line Trace Gas Analysis Using a Proton Transfer Reaction-Mass Spectrometer	£47,430	Jul 2001 – Jul 2004 ⁵⁰
EPSRC, and BAE Systems	Spherical Superconducting Torsion Balance as a Detector in a Precision Determination of Casimir Force	£?	Current as of May 2007 ⁵¹

Centre of Excellence for Research in Computational Intelligence (CERCIA)

Source/ Sponsor/ Partner	Project	Amount	Dates
Industrial partners of the centre include: <ul style="list-style-type: none"> • BAE Systems, • QinetiQ, • Rolls Royce, and • Thales 	The Centre for Excellence for Research in Computational Intelligence and Applications	£?	2003 to present ⁵²

School of Mathematics

Source/ Sponsor/ Partner	Project	Amount	Dates
QinetiQ (Rosyth)	Cavitation and Bubble Dynamics. Project involves 3 studentships during the period 2000 to 2003	£120,000	2001 – 2003 ⁵³

Chemical Engineering

Source/ Sponsor/ Partner	Project	Amount	Dates
QinetiQ	Production of Ultra-Fine Energetic Materials	£?	Current/ Recent as of May 2007 ⁵⁴

Sport and Exercise Science

Source/ Sponsor/ Partner	Project	Amount	Dates
QinetiQ	Metabolic Responses in Acute Bouts of Exercise During Pregnancy and Postpartum	£61,151	2005/ 2006 Financial Year ⁵⁵
QinetiQ	Exercise metabolism in pregnant women	£260,000	Current as of Jan 2007 ⁵⁶

Medicine

Source/ Sponsor/ Partner	Project	Amount	Dates
QinetiQ	Metabolic Responses in Acute Bouts of Exercise During Pregnancy and Postpartum	£48,441	2005/ 2006 Financial Year ⁵⁷

Engineering

Source/ Sponsor/ Partner	Project	Amount	Dates
BAE Systems	Millimetric Transceivers for Transport Applications – Foresight Vehicle Programme	£843	2005/ 2006 Financial Year ⁵⁸

Source/ Sponsor/ Partner	Project	Amount	Dates
Rolls Royce	Faraday: Developing a Paste Formulation Criterion	£13	2005/ 2006 Financial Year ⁵⁹
Dstl	Case Award	£1,359	2005 – 2006 Financial Year ⁶⁰

Other projects of note

Projects starting 2007			
EPSRC, QinetiQ (Malvern), and others	Automated Quantitative Software Verification with PRISM (Probabilistic Symbolic Model Checker)	£583,565	Jan 2007 – June 2010 ⁶¹
EPSRC, and Smiths-Detection	Fundamentals, Development and Applications of Ion Mobility Spectrometry (IMS) for Enhanced Trace Detection of Threat Agents	£527,052	Mar 2007 – Feb 2011 ⁶²

Notation

? Denotes projects whose value we were unable to discover.

Endnotes

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