

"[Manufacturing Science & Engineering Research] Centre members are already collaborating with BAe Systems, QinetiQ and BOC Gases on the potential for exploiting CGDM [Cold Gas Dynamic Manufacturing] for the production of aerospace materials and components..."¹

-University of Liverpool website

University of Liverpool 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)
38	£17,581,758	a) 17th b) 9th	1) EPSRC 2) BAe Systems 3=) MoD, QinetiQ, Rolls Royce	1) Engineering 2) Geography

School of Aerospace Engineering

Source/ Sponsor/ Partner	Project	Amount	Year
BAe Systems	Undergraduate Third Year in Industry, Industrial Placement	£?	Recent as of 2006 ²
EPSRC, BAe Systems Avionics (Management) Ltd	Prospective Sky-Guides: Developing Guidelines for Pilot Vision Aids.	£292,718	May 2003 - May 2006 ³

School of Electrical Engineering and Electronics

Source/ Sponsor/ Partner	Project	Amount	Year
EPSRC, British Aerospace Plc, BAe Systems Operations Ltd, Ministry of Defence, Rolls Royce Plc and others	IMI: Fusion Welding Process Monitoring and Control (CEMWAM II)	£187,630	July 1999 - June 2002 ⁴
BAe Systems and others	Chromatic Based Sensing Technology for Aerospace Applications, Agile Technology Unit (ATU), Centre for Intelligent Monitoring Systems Research Group	£?	Current as of June 2006 ⁵

School of Engineering

NB The “Laser Engineering Research Group is a Preferred Academic Partner to BAE Systems” see footnote 33

Source/ Sponsor/ Partner	Project	Amount	Year
EPSRC, Rolls Royce Plc and others	Model Structure Determination	£148,183	Oct 1998 - July 2002 ⁶
EPSRC, Vosper Thornycroft (UK) Ltd and others	High Speed Automated Laser Cutting System For Sheet Metal Operations	£566,105	Oct 1999 - Mar 2002 ⁷
EPSRC, BAE Systems Plc and Rolls Royce Plc	Laser Forming of Aerospace Alloys - a Direct Fabrication Technique	£227,386	Sept 2000 - Aug 2003 ⁸
EPSRC, BAE Systems Plc and others Past collaborators include: • QinetiQ	Cold Gas Dynamic Manufacturing [CGDM] in the Manufacturing Science and Engineering Research Centre, Innovative Manufacturing Research Centre. Previous Projects include CGDM for the Production of Aerospace Materials	£900,163	Apr 2001 - Mar 2002 ⁹
EPSRC, British Aerospace Plc and others	Masters Training Programme [MTP] in Engineering Applications of Lasers	£463,930	June 2001 - Mar 2004 ¹⁰
EPSRC and AWE Aldermaston	Model Structure Determination VFII	£14,185	July 2001 - Oct 2001 ¹¹
EPSRC, Dstl Air Systems (Bedford), and others	Adaptive Pilot Model for Simulation Fidelity Assessment	£63,619	Sept 2001 - Aug 2003 ¹²
EPSRC and Westland Helicopters Ltd	Inverse Methods for Vibration Suppression using Structural Modifications	£208,546	Oct 2001 - Sept 2004 ¹³
EPSRC and BAE Systems	Innovative Manufacturing Technology Research Centre	£4,900,001	Apr 2002 - June 2003 ¹⁴
EPSRC and QinetiQ Group will involve: • Westland Helicopters	Garteur AG12; Validation Criteria for Helicopter Real Time Simulation Models	£5,507	Oct 2002 - Oct 2004 ¹⁵
EPSRC Collaborators include: • QinetiQ • Westland Helicopters • Rolls-Royce	Modal Analysis System for Structural Dynamics Research within the Dynamics and Control Research Group	£123,080	Jun 2003 - Jun 2006 ¹⁶

Source/ Sponsor/ Partner	Project	Amount	Year
<ul style="list-style-type: none"> • AWE-Aldermaston • Ministry of Defence 			
EPSRC, Westland Helicopters Ltd, BAE Systems Avionics (Management) Ltd, QinetiQ	Active Control Concepts for Handling Qualities, Envelope Protection and Structural Load Alleviation	£512,365	Sept 2003 - Mar 2007 ¹⁷
North West Laser Engineering Consortium (NWLEC), which includes: <ul style="list-style-type: none"> • BAE Systems • Rolls Royce Strategic alliance with: <ul style="list-style-type: none"> • Manchester University 	The Laser Group at Liverpool. Involves a visiting Professor from British Aerospace (Sowerby Research Laboratory)	Total Project over £2,500,000	2005 ¹⁸
EPSRC FLAVIIR involves: <ul style="list-style-type: none"> • BAE Systems, • BAE Sowerby Research Laboratories • MPhil/ PhD involves working at BAE Sowerby Research Laboratories. 	Offered: MPhil/ PhD Project and Research Studentships (FLAVIIR DTA studentships) in Smart Functional Components for Aerospace Applications as part of the FLAVIIR project with the Laser Group at University of Liverpool	£?	Jan 2005 ¹⁹
EPSRC Collaborators include: <ul style="list-style-type: none"> • QinetiQ • Westland Helicopters • Rolls-Royce • AWE-Aldermaston • Ministry of Defence 	Linux Cluster for Structural Dynamics Research within the Dynamics and Control Research Group	£53,187	Jan 2005 - Jan 2008 ²⁰
EPSRC, BAE Systems Avionics (Management) Ltd, Dstl (Farnborough), Eurocopter France, Eurocopter Germany	Optimising Handling Qualities for Future Tilt Rotor Aircraft	£356,864	Feb 2005 - Jan 2008 ²¹
EPSRC Other participants include: <ul style="list-style-type: none"> • QinetiQ • Thales • EADS • USAF • Lockheed-Martin 	International Exercises on Validation of Delta Wind Simulation	£4,023	Oct 2005 - Jan 2006 ²²
EPSRC and PUMA DARP	DARP: Unsteady Aerodynamics Prediction and Simulation for Airframe and Turbomachinery Applications (PUMA) DARP	£40,779	Oct 2005 - Mar 2006 ²³

Source/ Sponsor/ Partner	Project	Amount	Year
EPSRC, EADS Astrium, EADS France, EADS Deutschland	Novel Cellular Structures for Enhanced Impact Performance	£244,214	Oct 2005 - Oct 2008 ²⁴
EPSRC, EADS Astrium, EADS France, EADS Deutschland GmbH	High Throughput Selective Laser Melting of Cellular Components	£1,083,781	Oct 2005 - Sept 2009 ²⁵
EPSRC	High Performance Computing for High Fidelity, Multi-Disciplinary Analysis of Flow in Weapon Bays including Store Release	£104,075	Nov 2005 - Oct 2009 ²⁶
EPSRC Includes participation of: <ul style="list-style-type: none"> • PUMA and Rotor DARPS • Rolls Royce (Hydra) • Westland Helicopters WHL (HMB) 	Supercomputer Resources for the UK Applied Aerodynamics Consortium	£15,397	Dec 2005 - Aug 2007 ²⁷
European Aerospace and Defence Systems (EADS)	MSc (Eng) Studentships (3) provided as part of EADS Corporate Responsibility Programme	£?	2006 ²⁸
EPSRC, Dstl (Farnborough)	Airdyn - An Airwake Dynamometer. Developing an Instrument for Measuring the Effect of Ship Airwakes on Helicopter Operations	£457,062	Jan 2006 - Dec 2009 ²⁹
EPSRC and BAE Systems Advanced Technology Centre	Advanced Aerodynamic Modelling for Flight Dynamics Applications	£208,352	Apr 2006 - Apr 2009 ³⁰
EPSRC and Eurocopter Germany	Prediction and Assessment of Aircraft/ Rotorcraft-Pilot Coupling Phenomena	£235,430	May 2006 - May 2009 ³¹
Funded by: EPSRC, QinetiQ, EU Beneficiaries/ organisational links include: Ministry of Defence, United States Department of Defence, Royal Navy	Various Projects within the Flight Science and Technology Research Group	£?	Current as of May 2007 ³²

School of Physics

Source/ Sponsor/ Partner	Project	Amount	Year
EPSRC, BAE Systems Marine Ltd and others	DTI TP: Portable Gamma-Ray Spectrometer	£274,587	Sept 2005 - Aug 2008 ³³
EPSRC, BAE Systems Marine Ltd and others	DISTINGUISH: Detection of Explosive Substances by Tomographic Inspection using Neutron and Gamma-Ray Spectroscopy	£169,231	Jan 2006 - Jan 2009 ³⁴

School of Geography

Source/ Sponsor/ Partner	Project	Amount	Year
Ministry of Defence and Dstl	Soil Magnetic Maps For Demining Activities	£76,000	Jan 2003 - Dec 2004 ³⁵
Ministry of Defence and Dstl	Soil Magnetic Maps For Demining Activities	£142,637	Jan 2004 - Dec 2005 ³⁶
Ministry of Defence and Dstl	Soil Magnetic Maps For Demining Activities: Supplementary Contract To Carry Out Soil Testing	£2,721	November 2004 ³⁷

School of Computer Science

Source/ Sponsor/ Partner	Project	Amount	Year
EPSRC Partners include: • University of Southampton • University of Birmingham • BAE Systems	Market-Based Control of Complex Computational Systems	£1,500,000	2004 - 2009 ³⁸
EPSRC Project partners included: • BAE Systems	Agent-based computing, Agentlink	£1,500,000	2005 ³⁹

Notation

£? Denotes projects whose value and/or date we were unable to discover.

Other projects/ information of note

Project ending 2000, Department of Engineering

Source/ Sponsor/ Partner	Project	Amount	Year
BRITE EURAM Framework 4 Programme. Project involved: • BAE Systems	Lightweight Composite Structures in Aircraft	Approx. £3,000,000	Pre-June/ July 2000 ⁴⁰

Centre for e-Business Research
<ul style="list-style-type: none"> The University of Liverpool's Centre for e-Business Research, within the Innovative Manufacturing Research Centre. Past collaborators include BAE Systems and Westland Helicopters.⁴¹
Military Education Committee
<ul style="list-style-type: none"> University of Liverpool has a "Military Education Committee" which describes its purpose as "[t]o act as a liaison between the University and Her Majesty's Forces in matters of military education ..., [t]o organise lectures, seminars and other events relating to matters of Service interest..., [and] [t]o consider and advise upon such matters in the field of military education as may be referred to the Committee by the Council."⁴²
Other miscellaneous funding
<ul style="list-style-type: none"> University of Liverpool is known to have received the following funding between 2001 and 2006, although the project titles for which the money was allocated, and the departments were not discovered: British Aerospace Ltd (£16,400); Rolls Royce PLC (£157,100); MoD via Faraday Foresight Initiative (£123,000); MoD via DERA (£98,000); MoD via DST Laboratory (£457,000); MoD 'Other' (£3,000); and, MoD providing student fees for three postgraduate students.⁴³

Endnotes

¹ "Manufacturing Science and Engineering Research Council", Research Intelligence. Issue 11, December 2001. <http://www.liv.ac.uk/researchintelligence/issue11/>. 18 December 2006.

² "Industrial Placements", University of Liverpool, Aerospace Engineering. http://google.liv.ac.uk/search?q=cache:4GneNLJviCIJ:www.aerospace.liv.ac.uk/placements.html+bae+systems&access=p&output=xml_no_dtd&site=default_collection&ie=UTF-8&client=default_frontend&oe=UTF-8&proxystylesheet=default_frontend. 4 January 2007.

³ "Details of Grant", Engineering and Physical Sciences Research Council. <http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/R84795/01>. 18 December 2006.

⁴ "Details of Grants", Engineering and Physical Sciences Research Council. <http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/M24134/01>. 18 December 2006.

⁵ "Centre for Intelligent Monitoring Systems Research Group", University of Liverpool, Department of Electrical Engineering and Electronics. <http://www.liv.ac.uk/eee/research/cims/project10.htm>. 5 January 2007.

⁶ "Details of Grant", Engineering and Physical Sciences Research Council. <http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/M08622/01>. 18 December 2006.

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¹⁷ “Details of Grant”, [Engineering and Physical Sciences Research Council](#).
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¹⁸ “New Initiative to Strengthen Manufacturing Industry”, [Research Intelligence](#). Issue 26, November 2005.
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