

“There is strong industrial linkage with EADS, Airbus and the [Aerospace Research] Group is a preferred academic partner for BAE Systems”.¹

- University of Manchester website

University of Manchester 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)
74	£15,812,903	a) 10 th b) 10th	1) EPSRC 2) BAE Systems 3) Rolls Royce	1) Mechanical Aerospace and Civil Engineering 2) Materials 3) Engineering and Physical Sciences

School of Mechanical, Aerospace & Civil/Manufacturing Engineering

Source/ Sponsor/ Partner	Project	Amount	Year
EPSRC, BAE Systems	Panel Damping for Aircraft Fatigue Assessment-Estimation: Sources and Model Descriptions	£169,400	1998 – 2002 ²
BAE Systems	Application of Synthetic Jets to High Lift Flow Control	£28,000	2000 – 2001 ³
Dstl	Vortex Ring Interactions with Bodies Using Shock	£15,400	Jan 2000 - Dec 2008 ⁴
BAE Systems	Prediction of Non-Linear Aeroelastic Behaviour	£13,000	2001 ⁵
BAE Systems	Review of Smart Materials	£8,000	2001 ⁶
QinetiQ	Study into the Monitoring of the Rolls Royce Transverse Flux Motor	£87,830	2001 ⁷
DERA, BAE Systems	A Parametric Study of Circulation Control for High Lift Applications	£47,000	2001 - 2002 ⁸
BAE Systems	Application of Synthetic Jets for an Enhanced Control of Separated Flows	£18,000	2001 - 2003 ⁹
BAE Systems	Fluid Mechanics of Synthetic and Pulsed Jet Actuators	£201,000	2001 - 2004 ¹⁰
British Aerospace Plc	Flow Control Leading Edge Devices for High Lift	£28,000	2001 - 2005 ¹¹
QinetiQ Ltd	Non-Linear Acoustic Panel Response	£15,000	2002 ¹²
BAE Systems	Prediction of Non-Linear Aeroelastic	£31,400	2002 ¹³

Source/ Sponsor/ Partner	Project	Amount	Year
	Behaviour		
Department of Trade and Industry (DTI)	Travel Grant to Support PUMA DARP	£6,000	2002 ¹⁴
Dstl	Demonstrator Platform for Novel Control Technology	£47,000	2002 - 2003 ¹⁵
Dstl	Equipment Grant I & II	£450,000	2002 – 2004 ¹⁶
Dstl	Dstl equipment grant (eq)	£350,000	2004 ¹⁷
BAE Systems	Characteristics of Non-Linear Damping in Structural Acoustic Response Modelling Methods	£22,500	2002 - 2005 ¹⁸
BAE Systems	Fluidic Thrust Vectoring for Low Observable Flight Vehicles	£22,500	2002 – 2005 ¹⁹
QinetiQ	Novel Flow Control and the Control of UAV's	£441,000	2002 - 2005 ²⁰
EPSRC, BAE Systems, Ministry of Defence and others	PUMA DARP	£200,000	2002 - 2005 ²¹
BAE Systems	Fluid Mechanics of Synthetic Jets	£210,000	2002 - 2005 ²²
Defence Systems and Technology Laboratory and MOD	Shock Tube Studies and Instability Measurements	£40,000	2002 - 2005 ²³
Dstl	Shock tube studies: 1	£13,800	2002 ²⁴
Dstl	Shock tube studies: 2	£14,700	2002 ²⁵
Dstl	Shock tube studies: 3	£11,000	2004 ²⁶
Dstl	Shock tube studies: 4	£15,700	2005 ²⁷
Dstl	Shock tube studies: 5	£6,500	2006 ²⁸
Rolls Royce	Alternative Approaches to the Health Monitoring of Aero Engines - EngD	£47,500	2002 - 2006 ²⁹
EPSRC and MSTTAR DARP	Modelling and Simulation of Turbulence and Transition for Aerospace	£241,000	2003 – 2006 ³⁰
MSTTAR DARP, DTI	Modelling and Simulation of Turbulence and Transition for Aerospace	£9,300	2003 - 2006 ³¹
EPSRC, MSTTAAR DARP	Flow Over Swept Wings	£241,000	2003 - 2006 ³²
BAE Systems	Fluidic Thrust Vectoring for Low Observable Flight Vehicles	£22,000	2003 - 2006 ³³

Source/ Sponsor/ Partner	Project	Amount	Year
EPSRC and Dstl	DARP: Unsteady Aerodynamics Prediction and Simulation for Airframe and Turbo-Machinery Applications	£0	2003 - 2006 ³⁴
EPSRC, BAE Systems Operations Ltd and QinetiQ Ltd	Identification of Non-Linear Continuous Structures	£205,387	Apr 2003 - Mar 2006 ³⁵
EPSRC, BAE Aerospace Plc, QinetiQ Ltd and Rolls Royce Plc	DARP: Highly Swept Leading Edge Separations - Experimental Investigations	£241,038	Apr 2003 - Sept 2006 ³⁶
EPSRC, BAE Systems Operations Ltd, QinetiQ Ltd, Rolls Royce Plc and others	DARP: Unsteady Aerodynamics Prediction and Simulation for Airframe and Turbomachinery Applications (PUMA) DARP	£137,665	Apr 2003 - Sept 2006 ³⁷
EPSRC, BAE Systems	Flapless Flight Control Demonstrator	£497,000	2004 - 2008 ³⁸
EPSRC, Dstl (Farnborough) and others	NETWORK: Network for the Development of Industrial Computational Tools for the Design of Composite Components & Structures (CODECO)	£65,977	Feb 2004 - Jan 2007 ³⁹
BAE Systems	Hire of Centrifuge in Peter W Rowe Laboratory	£10,500	2005 ⁴⁰
Atomic Weapons Establishment (AWE)	Race & Sex Equality in the Construction Industry, Partners In Innovation (PII)	\$104,700	2001 ⁴¹
EPSRC and Rolls Royce	High Temperature Measurements Using Smart Coatings	£89,000	2005 - 2009 ⁴²
Industrial members include: <ul style="list-style-type: none"> BAE Systems (Sowerby Research Centre) Organising committee members include: <ul style="list-style-type: none"> QinetiQ 	UK Consortium for Photonics and Optics. University members of the Optics and Photonics committee include: <ul style="list-style-type: none"> Cranfield University University of Durham Heriot-Watt University Imperial College, London King's College London Kingston University Liverpool John Moore University Loughborough University Nottingham University University of Oxford 	?	2005 onwards ⁴³

Source/ Sponsor/ Partner	Project	Amount	Year
	<ul style="list-style-type: none"> St Andrews University 		
EPSRC, Rolls-Royce Plc and others	A Scientific Base for Laser Net Shaping of Superalloys with Custom Distributed Properties	£424,479	Jan 2005 - Dec 2007 ⁴⁴
Dstl	Investigation of the Effects of Driver Length on the Development of Ring Vortices from a Shock Tube	£11,000	Feb 2005 - Mar 2005 ⁴⁵
EPSRC, Heriot-Watt University, University of Cambridge, Cranfield University, University of Nottingham, Rolls Royce Plc and others	Next Generation Industrial Lasers for Super-high Speed Precision Manufacturing (NEGLAP)	£581,997	Jan 2006 - Jan 2008 ⁴⁶
EPSRC, Rolls-Royce Plc and others	An Experimental Study of Unsteady Wake-Induced Boundary Layer Transition in Turbomachinery	£200,361	Feb 2006 - Feb 2009 ⁴⁷
EPSRC, BAE Systems	<p>FLAVIIR Integrated Research Programme: A Research Project looking at technologies for future Unmanned Air Vehicles (UAVs). Participating universities include:</p> <ul style="list-style-type: none"> Cranfield University Imperial College of Science Technology and Medicine University of Leicester University of Liverpool University of Wales, Swansea University of Nottingham University of Southampton Warwick University University of York 	<p>Total Project £6,200,000</p> <p>Funding has been split into a 3-year research phase, followed by a 2-year demonstration phase.</p>	Current Five Year Project as of Jan 07 ⁴⁸
Rolls Royce and others	Engineering Doctorate Studentships	Approx £140,000	Recent as of Jan 2002 ⁴⁹
DERA, BAE Systems and others	CASE studentships	Approx. £60,000	Recent as of Jan 2002 ⁵⁰
Rolls Royce	Engineering Doctorate Award. Online Engine Health Monitoring using Blade Tip Timing	£35,000	2005 ⁵¹

School of Engineering and Physical Sciences

Source/ Sponsor/ Partner	Project	Amount	Year
EPSRC Collaborative Research Partners have included:	Development of a Wing Buffet Prediction Process for High Performance Combat Aircraft.	£115,589	Mar 1998 - Aug 2001 ⁵²

Source/ Sponsor/ Partner	Project	Amount	Year
<ul style="list-style-type: none"> British Aerospace 			
EPSRC and BAE Systems Plc	Prediction of Aircraft Aeroelastic Instabilities for Non-Linear Aerodynamics	£102,418	June 1998 - June 2001 ⁵³
EPSRC and BAE Systems Plc	Estimation of Panel Damping in Aircraft Structures	£169,506	Dec 1998 - Mar 2002 ⁵⁴
EPSRC, BAE Systems Plc, Ministry of Defence, Rolls Royce Plc and others	Faraday Partnership: INTERSECT: The Application of Data Fusion to a Multi Sensored Intelligent Engine	£109,674	Jan 1999 - Mar 2002 ⁵⁵
EPSRC, BAE Systems Operations Ltd and others	Joint Research Equipment Initiative (JREI) Laser Anemometry Systems for Process Mixing and Aerospace Studies	£91,245	May 1999 - May 2002 ⁵⁶

School of Chemical Engineering and Analytical Science

Source/ Sponsor/ Partner	Project	Amount	Year
EPSRC, Dstl (Fort Halstead)	Rapid In-Field Detection of Inorganic Species of Explosives Significance by Microfabricated (Lab-on-a-Chip) Multidimensional Isotachopheresis.	£176,688	Apr 2005 - Mar 2007 ⁵⁷

School of Electrical and Electronic Engineering

Source/ Sponsor/ Partner	Project	Amount	Year
EPSRC and Rolls Royce Plc	Basic Technologies: The Development of Terahertz Technology for Physical, Biological, and Medical Imaging and Spectroscopy	£627,865	Oct 2002 - Jan 2007 ⁵⁸
EPSRC Project involves: <ul style="list-style-type: none"> BAE Systems Plc University of Sheffield University of Wales, Aberystwyth Bristol University University of Oxford University of Cambridge University of Dundee 	REVERB (Reverse Engineering the Vertebrate Brain)	£1.9 million	2005 - 2010 ⁵⁹
EPSRC, Rolls-Royce Plc and others	Advanced Marine Electric Propulsion Systems (AMEPS)	£163,173	Jan 2005 - Dec 2007 ⁶⁰
EPSRC,	Real-Time Modelling for Condition	£126,382	Oct 2005 -

Source/ Sponsor/ Partner	Project	Amount	Year
QinetiQ Ltd, Rolls Royce Plc and others	Monitoring and Performance Optimisation of Gas Turbine Engines		Sept 2008 ⁶¹

**School of Materials/Materials Engineering/Manchester Materials Science
Centre/Materials Science & Metallurgy**

Source/ Sponsor/ Partner	Project	Amount	Year
EPSRC and British Aerospace Plc	Surface Strain Mapping as a Tool for the Study of Materials Behaviour Across a Range of Scales	£200,008	Jan 1999 - Mar 2002 ⁶²
EPSRC, Ministry of Defence, British Aerospace Plc, BAE Systems Operations Ltd, Rolls Royce Plc and others	IMI: Cost Effective Manufacture: Welding Aerospace Materials (CEMWAM II)	£248,630	Apr 1999 - Mar 2002 ⁶³
EPSRC, Rolls Royce Plc	Metallurgical and Internal Stress Development During Inertia Welding	£338,937	Oct 1999 - Sept 2002 ⁶⁴
EPSRC, Rolls Royce Plc and others	Joint Research Equipment Initiative (JREI) Fracture Research Facilities at the Manchester Materials Science Centre	£50,000	May 2000 - May 2001 ⁶⁵
EPSRC and Los Alamos National Laboratory	Measurement and Modelling of Intergranular Strains in Two Phase and Low Symmetry Polycrystalline Materials	£140,239	June 2001 - Dec 2004 ⁶⁶
EPSRC, Rolls Royce Plc and others	An Engineering Body Scanner for 3D Stress and Damage Measurement and Co-visualisation.	£597,776	Oct 2001 - Sept 2004 ⁶⁷
EPSRC, Rolls Royce Plc and others	A Novel Technique for Fabrication of Ceramic Coatings	£279,314	Oct 2001 - Sept 2005 ⁶⁸
EPSRC, QinetiQ Ltd and Rolls Royce Plc	Micromechanics of TI/ SIC Fibre Composites	£189,017	July 2002 - June 2005 ⁶⁹
BAE Systems	PhD Project: Hybrid Friction Stir Welding	£?	2004 ⁷⁰
BAE Systems	Control of Residual Stresses in Welding Al-Aerospace Alloys by Mechanical and Thermal Tensioning; - EngD	£?	2004 ⁷¹
Cranfield University, QinetiQ and others	DEFUSE - Development of Fusion Welding Methods for Wing Primary Structures	£158,000	Apr 2004 ⁷²

Source/ Sponsor/ Partner	Project	Amount	Year
EPSRC, Loughborough University, Rolls Royce Plc and others	FARADAY: Suspension-Based Fabrication Of Nanostructured Materials for Engineering Applications	£100,128	Nov 2004 - Jan 2007 ⁷³
EPSRC, BAE Systems and others	New Portfolio Partnership: Light Alloys for Environmentally Sustainable Transport	£5,983,207	Apr 2005 - Mar 2010 ⁷⁴
EPSRC and Rolls Royce Plc	A 3D Journey Through a Jet Engine	£19,600	Nov 2005 - Apr 2006 ⁷⁵

Other projects of note

Project starting 2007, School of Mechanical Aerospace and Civil Engineering			
Source/ Sponsor/ Partner	Project	Amount	Year
EPSRC, Rolls Royce Plc and others	Coupling between Strain Induced Damage, the Degradation of Thermal Properties and Stress- Strain Response of Ceramic Matrix Composites	£288,575	Jan 2007 - Dec 2009 ⁷⁶

Notation

£? Denotes projects whose value we were unable to discover.

Endnotes

¹ "Introduction," University of Manchester, Mechanical, Aerospace, and Civil Engineering Department.
<http://www.mace.manchester.ac.uk/research/groups/aerospace/>. 04 June 2007.

² "Prof Jonathon Cooper," University of Manchester, School of Mechanical, Aerospace and Civil Engineering
<http://www.mace.manchester.ac.uk/aboutus/staff/academic/profile/grants/index.html?staffId=59>.
04 June 2007. And; "S Olutunde Oyadiji: Research Grants,"
University of Manchester, School of Mechanical, Aerospace and Civil Engineering
<http://www.mace.manchester.ac.uk/aboutus/staff/academic/profile/grants/index.html?staffId=236>.
04 June 2007.

³ Webpage no longer available online. University of Manchester, School of Mechanical, Aerospace and Civil Engineering.
<http://www.mace.manchester.ac.uk/research/researchgroups/aerodynamics/listofgrantsfrom2001/>

⁴ Webpage no longer available online. University of Manchester, School of Mechanical, Aerospace and Civil Engineering.
<http://www.mace.manchester.ac.uk/research/researchgroups/advancedflowdiagnosticsinstrumentation/listofgrantsfrom2001/>

⁵ "Prof Jonathon Cooper," University of Manchester, School of Mechanical, Aerospace and Civil Engineering
<http://www.mace.manchester.ac.uk/aboutus/staff/academic/profile/grants/index.html?staffId=59>.
04 June 2007.

⁶ "Prof Jonathon Cooper," University of Manchester, School of Mechanical, Aerospace and Civil Engineering
<http://www.mace.manchester.ac.uk/aboutus/staff/academic/profile/grants/index.html?staffId=59>.
04 June 2007.

⁷ "Research grants," University of Manchester, School of Mechanical, Aerospace and Civil

Engineering

<http://www.mace.manchester.ac.uk/research/groups/design/grants/index.html?year=All>. 04 June 2007.

8 Webpage no longer available online. University of Manchester, School of Mechanical, Aerospace and Civil Engineering. <http://www.mace.manchester.ac.uk/research/researchgroups/aerodynamics/listofgrantsfrom2001/>

9 "Research Grants," University of Manchester, School of Mechanical, Aerospace and Civil Engineering <http://www.mace.manchester.ac.uk/research/sigs/aerodynamics/grants/>. 04 June 2007. And; "Dr Artur J Jaworski," University of Manchester, School of Mechanical, Aerospace and Civil Engineering <http://www.mace.manchester.ac.uk/aboutus/staff/academic/profile/grants/index.html?staffId=148>. 04 June 2007.

10 "Recent aerospace grants," Northwest Science, Aerospace Insider Business Guide www.northwestscience.co.uk/uploads/documents/apr_06/northwestscience_1144666206_Aerospace2004.pdf. 04 June 2007. And; Webpage no longer available online. <http://www.mace.manchester.ac.uk/research/researchgroups/aerodynamics/listofgrantsfrom2001/>

11 Webpage no longer available online. University of Manchester, School of Mechanical, Aerospace and Civil Engineering. <http://www.mace.manchester.ac.uk/research/researchgroups/aerodynamics/listofgrantsfrom2001/>

12 "Prof Jonathon Cooper," University of Manchester, School of Mechanical, Aerospace and Civil Engineering <http://www.mace.manchester.ac.uk/aboutus/staff/academic/profile/grants/index.html?staffId=59>. 04 June 2007.

13 "Prof Jonathon Cooper," University of Manchester, School of Mechanical, Aerospace and Civil Engineering <http://www.mace.manchester.ac.uk/aboutus/staff/academic/profile/grants/index.html?staffId=59>. 04 June 2007.

14 "Prof Jonathon Cooper," University of Manchester, School of Mechanical, Aerospace and Civil Engineering <http://www.mace.manchester.ac.uk/aboutus/staff/academic/profile/grants/index.html?staffId=59>. 04 June 2007

15 Webpage no longer available online. University of Manchester, School of Mechanical, Aerospace and Civil Engineering. <http://www.mace.manchester.ac.uk/research/researchgroups/aerodynamics/listofgrantsfrom2001/>

16 Webpage no longer available online. University of Manchester, School of Mechanical, Aerospace and Civil Engineering. <http://www.mace.manchester.ac.uk/research/researchgroups/advancedflowdiagnosticsinstrumentation/researchgrantsfrom2001/>

17 "Dr Konstantinos Kontis," University of Manchester, School of Mechanical, Aerospace and Civil Engineering <http://www.mace.manchester.ac.uk/aboutus/staff/academic/profile/grants/?staffId=168>. 04 June 2007.

18 Webpage no longer available online. University of Manchester, School of Mechanical, Aerospace and Civil Engineering. <http://www.mace.manchester.ac.uk/research/researchgroups/dynamicsaeroelasticity/researchgrantsfrom2001/>

19 "Recent aerospace grants," Northwest Science, Aerospace Insider Business Guide www.northwestscience.co.uk/uploads/documents/apr_06/northwestscience_1144666206_Aerospace2004.pdf. 04 June 2007. And; Webpage no longer available online <http://www.mace.manchester.ac.uk/research/researchgroups/aerodynamics/listofgrantsfrom2001/>.

20 Webpage no longer available online. University of Manchester, School of Mechanical, Aerospace and Civil Engineering. <http://www.mace.manchester.ac.uk/research/researchgroups/aerodynamics/listofgrantsfrom2001/>

21 Webpages no longer available online. University of Manchester, School of Mechanical, Aerospace and Civil Engineering. <http://mace.stage.manchester.ac.uk/stage/people/academic/grants/index.htm?staffId=59>. <http://www.mace.manchester.ac.uk/aboutus/people/academic/professors/cooper/>

22 "Research grants," University of Manchester, School of Mechanical, Aerospace and Civil Engineering <http://www.mace.manchester.ac.uk/research/sigs/aeroelasticity/grants/>. 04 June 2007.

-
- 23 Webpage no longer available online. University of Manchester, School of Mechanical, Aerospace and Civil Engineering.
<http://www.mace.manchester.ac.uk/research/researchgroups/advancedflowdiagnosticsinstrumentation/researchgrantsfrom2001/>
- 24 “Dr Konstantinos Kontis,” University of Manchester, School of Mechanical, Aerospace and Civil Engineering <http://www.mace.manchester.ac.uk/aboutus/staff/academic/profile/grants/?staffid=168>. 04 June 2007.
- 25 “Dr Konstantinos Kontis,” University of Manchester, School of Mechanical, Aerospace and Civil Engineering <http://www.mace.manchester.ac.uk/aboutus/staff/academic/profile/grants/?staffid=168>. 04 June 2007.
- 26 “Dr Konstantinos Kontis,” University of Manchester, School of Mechanical, Aerospace and Civil Engineering <http://www.mace.manchester.ac.uk/aboutus/staff/academic/profile/grants/?staffid=168>. 04 June 2007.
- 27 “Dr Konstantinos Kontis,” University of Manchester, School of Mechanical, Aerospace and Civil Engineering <http://www.mace.manchester.ac.uk/aboutus/staff/academic/profile/grants/?staffid=168>. 04 June 2007.
- 28 “Dr Konstantinos Kontis,” University of Manchester, School of Mechanical, Aerospace and Civil Engineering <http://www.mace.manchester.ac.uk/aboutus/staff/academic/profile/grants/?staffid=168>. 04 June 2007.
- 29 “Research grants,” University of Manchester, School of Mechanical, Aerospace and Civil Engineering <http://www.mace.manchester.ac.uk/research/sigs/reliability/grants/>. 04 June 2007.
- 30 Webpage no longer available online. University of Manchester, School of Mechanical, Aerospace and Civil Engineering.
<http://www.mace.manchester.ac.uk/research/researchgroups/aerodynamics/listofgrantsfrom2001/>
- 31 Webpage no longer available online. University of Manchester, School of Mechanical, Aerospace and Civil Engineering.
<http://www.mace.manchester.ac.uk/research/researchgroups/aerodynamics/listofgrantsfrom2001/>
- 32 Webpage no longer available online. University of Manchester, School of Mechanical, Aerospace and Civil Engineering.
<http://www.mace.manchester.ac.uk/research/researchgroups/aerodynamics/listofgrantsfrom2001/>
- 33 “Recent aerospace grants,” Northwest Science, Aerospace Insider Business Guide www.northwestscience.co.uk/uploads/documents/apr_06/northwestscience_1144666206_Aerospace2004.pdf. 04 June 2007. And; Webpage no longer available online
<http://www.mace.manchester.ac.uk/research/researchgroups/aerodynamics/listofgrantsfrom2001/>
- 34 “Prof Jonathon Cooper,” University of Manchester, School of Mechanical, Aerospace and Civil Engineering <http://www.mace.manchester.ac.uk/aboutus/staff/academic/profile/grants/index.html?staffid=59>. 04 June 2007. And; “Professor Jan Wright: Curriculum Vitae”, University of Manchester, School of Mechanical, Aerospace and Civil Engineering. <http://www.mace.manchester.ac.uk/media/media,36029,en.pdf>. 11 January 2007.
- 35 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/S06769/01>. 11 January 2007.
- 36 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/S27443/01>. 11 January 2007.
- 37 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/S18236/01>. 11 January 2007.
- 38 Webpage no longer available online. University of Manchester, School of Mechanical, Aerospace and Civil Engineering.
<http://www.mace.manchester.ac.uk/research/researchgroups/aerodynamics/listofgrantsfrom2001/>

-
- 39 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/S60228/01>. 11 January 2007.
- 40 Webpage no longer available online. University of Manchester, School of Mechanical, Aerospace and Civil Engineering.
<http://www.mace.manchester.ac.uk/research/researchgroups/geo-engineering/researchgrantsfrom2001/>
- 41 “Research grants,” University of Manchester, School of Mechanical, Aerospace and Civil Engineering <http://www.mace.manchester.ac.uk/research/sigs/management/grants/>. 04 June 2007.
- 42 Webpage no longer available online. University of Manchester, School of Mechanical, Aerospace and Civil Engineering.
<http://www.mace.manchester.ac.uk/research/researchgroups/advancedflowdiagnosticsinstrumentation/researchgrantsfrom2001/>
- 43 Webpage no longer available online. “Photon 06”, University of Manchester,
http://photon06.org/L%20PHTN_1call.pdf. 11 January 2007.
- 44 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=EP/C00194X/1>. 11 January 2007.
- 45 Webpage no longer available online. University of Manchester, School of Mechanical, Aerospace and Civil Engineering.
<http://www.mace.manchester.ac.uk/research/researchgroups/advancedflowdiagnosticsinstrumentation/researchgrantsfrom2001/>
- 46 “Details of Grant”, Engineering and Physical Sciences Research Council
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=EP/C013352/1>. 11 January 2007.
- 47 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=EP/C536215/1>. 11 January 2007.
- 48 “Innovation Through Partnership”, FLAVIIR: Innovation Through Partnership.
<http://www.flaviir.com/home.htm> And; “Experimental aerodynamics,” University of Manchester, School of Mechanical, Aerospace and Civil Engineering. <http://www.mace.manchester.ac.uk/research/sigs/aerodynamics/>.
04 June 2007.
- 49 “Professor Jan Wright: Curriculum Vitae”, University of Manchester, School of Mechanical, Aerospace and Civil Engineering. <http://www.mace.manchester.ac.uk/media/media,36029,en.pdf>. 11 January 2007.
- 50 “Professor Jan Wright: Curriculum Vitae”, University of Manchester, School of Mechanical, Aerospace and Civil Engineering. <http://www.mace.manchester.ac.uk/media/media,36029,en.pdf>. 11 January 2007.
- 51 “Dr Grigorios Dimitriadis,” Engineering and Physical Sciences Research Council
<http://www.mace.manchester.ac.uk/aboutus/staff/academic/profile/grants/index.html?staffId=80>. 04 June 2007.
- 52 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/L58279/01>. 11 January 2007.
- 53 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/L95175/01>. 11 January 2007.
- 54 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/L97551/01>. 11 January 2007.
- 55 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/M44484/01>. 11 January 2007.
- 56 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/M30715/01>. 11 January 2007.
- 57 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=EP/C008081/1>. 11 January 2007.

-
- 58 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/R88113/01>. 11 January 2007.
- 59 “Manchester Develops Vision Chip for New Generation of ‘Human’ Robots”,
University of Manchester, Press Office. <http://www.manchester.ac.uk/press/title.26468.en.htm>.
10 January 2007.
- 60 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/S85962/01>. 11 January 2007.
- 61 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=EP/C015185/1>. 11 January 2007.
- 62 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/M29177/01>. 11 January 2007.
- 63 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/M24127/01>. 11 January 2007.
- 64 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/M63836/01>. 11 January 2007.
- 65 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/M92034/01>. 11 January 2007.
- 66 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/R08124/01>. 11 January 2007.
- 67 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/R38774/01>. 11 January 2007.
- 68 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/R32215/01>. 11 January 2007.
- 69 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/R99089/01>. 11 January 2007.
- 70 Webpage no longer available online. University of Manchester, School of Materials.
<http://www.materials.manchester.ac.uk/content/school/staff/pages/PhilPrangnell.htm>
- 71 Webpage no longer available online. University of Manchester, School of Materials.
<http://www.materials.manchester.ac.uk/content/school/staff/pages/PhilPrangnell.htm>
- 72 Webpage no longer available online. University of Manchester, School of Materials.
<http://www.materials.manchester.ac.uk/content/school/staff/pages/PhilPrangnell.htm>
- 73 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=GR/S84484/01>. 11 January 2007.
- 74 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=EP/D029201/1>. 11 January 2007. And; “£6m to transform
planes, trains and automobiles,” University of Manchester, Press Releases.
<http://www.manchester.ac.uk/aboutus/news/pressreleases/>. 04 June 2007.
- 75 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=EP/D030781/1>. 11 January 2007.
- 76 “Details of Grant”, Engineering and Physical Sciences Research Council.
<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=EP/D056276/1>. 11 January 2007