

## **Peter Walters PhD**

### **Education**

Sheffield Hallam University: PhD in Design. AHRC studentship. Feb 2002 to May 2006

Sheffield Hallam University: MA Industrial Design. Distinction. Sept 2000 to Jan 2002

Sheffield Hallam University: BA (Hons) Industrial Design (Applied Technologies).  
First Class Honours.

Sept 1996 to May 1999

### **Employment**

#### **University of the West of England, February 2007 to present**

RCUK Academic Fellowship: Rapid Prototyping. Centre for Fine Print Research.

My ongoing programme of research explores creative applications for new and emerging 3D printing technologies within art, craft and designer-maker practice.

Visiting Researcher: Bristol Robotics Laboratory. I am a member of the Soft Robotics Group. My research explores the digital design and fabrication of robots and smart devices.

#### **Sheffield Hallam University, January 2001 to November 2006**

Alongside my postgraduate studies I was employed as a regular visiting lecturer on the undergraduate and postgraduate design programme. Additionally I was engaged as a researcher within the Art and Design Research Centre, where I contributed to research projects funded by the UK Design Council (Design Against Crime) and B Braun, one of the world's largest medical device manufactures.

#### **Design Futures, Science Park, Sheffield, Jan 2000 to Sept 2002**

Industrial designer, design researcher: garden tool concepts for Spear and Jackson Limited; design and engineering of bank service counters for Lloyds TSB (Barlow Financial Interiors).

#### **Derbyshire County Council Architects Department, June 1999 to Dec 1999**

Contract designer: furniture for schools and public buildings.

#### **Leslie Associates: Structural Engineers, Matlock April 1995 - April 1996**

Design assistant and draughtsman/CAD technician working on a variety of civil and structural engineering projects.

### **PhD Supervision**

Isabelle Risner, University College Falmouth

Amy Bowers, University of Bristol

Sina Sareh, University of Bristol

### **Journal Articles**

Stanic, M. Lozo, B. Walters, P. (2010) *Reproduction in three-dimensional ink jet printing*. Journal of Imaging Science and Technology, Issue 54 (Vol 6). ISSN 1062-3701

Walters, P. and Davies, K. (2010) *3D printing for artists: research and creative practice*. Rapport: Journal of the Norwegian Print Association, Issue 1. pp. 12-15. ISSN 1891-0408

Walters, P. and Thirkell, P. (2007) *New technologies for 3D realization in Art and Design practice*. Artifact, Issue 1 (Vol 4). pp. 232-245. ISSN 1749-3463

### **Conference Papers**

Southerland, D. Walters, P. Huson, D. (2011) *Edible 3D Printing* Digital Fabrication, IS&T, October 2 - October 6 2011, Minneapolis, Minnesota (proceedings not yet published)

Walters, P. and McGoran, D. (2011) *Digital Fabrication of "Smart" Structures and Mechanisms—Creative Applications in Art and Design*. Digital Fabrication, IS&T, October 2 - October 6 2011, Minneapolis, Minnesota (proceedings not yet published)

Walters, P. McGoran, D. Ieropoulos, I. (2011) *Digital Fabrication of a Novel Bio-Actuator for Bio-Robotic Art and Design*. Digital Fabrication, IS&T, October 2 - October 6 2011, Minneapolis, Minnesota (proceedings not yet published)

Bowers, A. Rossiter, J. Walters, P. Ieropoulos, I. (2011) *Dielectric elastomer pump for artificial organisms (Proceedings Paper)*. In: Carpi, F. and Bar-Cohen, Y., eds. Electroactive Polymer Actuators and Devices (EAPAD) 2011 (Proceedings Volume). Proceedings of SPIE. SPIE. ISBN 9780819485380

Walters, P. Parraman, C. Huson, D. Stanic, M. (2009) *3D printing and colour: A multidisciplinary investigation*. In: Hoskins, S., ed. IMPACT 6 Multidisciplinary Printmaking Conference Proceedings. University of the West of England, Bristol, pp. 31-38.

Rossiter, J. Walters, P. Stoimenov, B. (2009) *Printing 3D dielectric elastomer actuators for soft robotics*. 11th SPIE Electroactive Polymer Actuators and Devices (EAPAD) conference, San Diego, California, USA, Proceedings Vol. 7287.

Walters, P. (2009) *3D printing and fabrication of "Smart" responsive devices: A comparative investigation*. In: NIP25: International Conference on Digital Printing Technologies and Digital Fabrication, Louisville, Kentucky. Society for Imaging Science and Technology. ISBN 978-0-89208-287-2

Stanic, M. Walters, P. Lozo, B. (2009) *Image analysis of surface elements reproduction quality in 3D ink-jet printing*. NIP25: International Conference on Digital Printing Technologies and Digital Fabrication, Louisville, Kentucky, USA. ISBN 978-0-89208-287-2

Walters, P. Rossiter, J. (2008) *Three-dimensional fabrication of smart actuators: design applications*. In: NIP24: International Conference on Digital Printing Technologies and Digital Fabrication Pittsburgh, Pennsylvania, USA. Society for Imaging Science and Technology. ISBN 978-0-89208-279-7

Parraman, C., Walters, P., Huson, D. Reid, B. (2008) *Specifying colour and maintaining colour accuracy for 3D printing*. Proceedings of Electronic Imaging, Society for Imaging Science and Technology/Society of Photographic Instrumentation Engineers, San Jose, CA, USA, Proceedings Vol. 6805.

Walters, P. Chamberlain, P. Press, M. Tomes, A. (2004) *Designing by numbers? Keeping the human in human-centred design* refereed conference paper in the proceedings of *Pixel Raiders 2* Sheffield Hallam University, 6 – 8 April 2004 ISBN 1843 870 606 available from the British Library

Walters, P. Chamberlain, P. Press, M. (2003) *'In Touch: An investigation of the benefits of tactile cues in safety critical product applications'* refereed conference paper in the proceedings of *Techne: The Design Wisdom* Fifth European Academy of Design Conference, Barcelona University, 28 – 30 April 2003

## **Presentations**

*'Made in Future'* A demonstration of research into 3D printing technology, Antenna Event at the Science Museum London in collaboration with EADS and Renishaw, June 2011

*'Novel 3D Printing'* University of Bristol Institute of Advanced Studies lecture series on Printing Smart Materials and Devices, 25 February 2011

*'Hands-on human-centred design'* invited presentation at the Informatics Research Institute, Newcastle University, 7 August 2006

*'Knowledge in the making: Design research from MA to PhD'* guest lecture at Duncan of Jordanstone College of Art and Design, University of Dundee, 26 May 2006

Walters, P (2005) *'Prototyping and human-centred design practice'* invited presentation at *'The Artefact and Knowledge'* Arts and Humanities Research Council consortium conference on practice-based research in art and design, University of Leeds, 27 September 2005

Taylor, J. and Walters, P. (2004) *'Do not look at my songs! The craft of creative education'* invited presentation at the 10th Leeds International Jazz Conference, International Association of Jazz Educators, Leeds College of Music, 2 - 4 April 2004

## **Patent Applications**

International Patent Filing (2004) PCT/GB2004/001745 *'Identification system for compatible components and apparatus for use with such systems'* inventors: Paul Chamberlain and Peter Walters

UK Patent Filing (2003) GB0306742.8 *'Hand Tool with Internal Drive Means'* inventor: Peter Walters

## **Selected Exhibitions and Awards**

Artefact: 'Pulsar', authors Davies, K; Walters, P, exhibited in 3D 2D: Object and Illusion in Print Edinburgh Printmakers Gallery, 18 September - 30 October 2010. Reviewed in Printmaking Today

Committed to Print. Royal West of England Academy, Bristol. Group exhibition by the Centre for Fine Print Research, University of the West of England, June - July 2007.

Intelligent Design: An Exhibition of Industrial Design. Millennium Galleries, Sheffield. Group exhibition by the Art and Design Research Centre, Sheffield Hallam University and Design Futures, November 2003

Worshipful Company of Armourers and Brasiers, London and Company of Cutlers in Hallamshire: Design Travel Award, March 2003

## **Selected Consultancy Work**

Richard Hamilton Medal of Dishonour commissioned by the British Medals Trust for the British Museum. Walters undertook 3D modelling and CNC machining of master patterns (2008)

Heart Robot, EPSRC funded project led by Dr Matt Studley, Dr Clare Rocks and David McGoran. Walters contributed to the design and production of soft elastomer components for the beating heart mechanism of a hybrid robot/puppet (2008)

Aardman Animation, a feasibility study of 3D printing for stop motion animation applications (2008)