

GEORGE MATHER

Email: gmather@lincoln.ac.uk

Web: www.georgemather.com

ORCID 0000-0002-3102-4828

EDUCATION

- 1976 - 1979 University of Reading
PhD in Visual Psychophysics.
- 1973 - 1976 University of Sheffield
B.A.(Hons) in Psychology.

EMPLOYMENT

- 2011 – present University of Lincoln, School of Psychology
Professor of Vision Science
- 1984 - 2011 University of Sussex, School of Psychology
Professor of Experimental Psychology (from 2000)
- 1983 - 1984 University College London, Department of Psychology
Associate Research Fellow, MRC funded
Principal Investigator: Prof. M. J. Morgan
- 1982 - 1983 York University, Canada, Department of Psychology
Research Fellow, NSERC funded
Principal Investigator: Prof. S. M. Anstis
- 1979 - 1982 University of Reading, Department of Psychology
Research Fellow, SERC funded
Principal Investigator: Prof. B. Moulden

PROFESSIONAL MEMBERSHIPS

Experimental Psychology Society

Applied Vision Association

RESEARCH

My long-standing research interests are in human vision, especially in visual movement perception, visual illusions and after-effects, and the perception of visual art. Recent research on motion perception has been funded by a research grant from the ESRC, and has studied judgements of human walking speed. Research on visual art has investigated the role of image statistics in aesthetic judgements. Published studies in these areas are listed in my publications. My current research activities include several active collaborations:

Prof. Mark Georgeson (School of Life & Health Sciences, Aston University): Illusions of visual movement from flicker.

Prof. Ian Thornton (Faculty of Media and Knowledge Sciences, University of Malta): Perception of walking speed in crowds.

Prof. Robert Pepperell (Cardiff School of Art & Design, Cardiff Met University): The geometry of visual experience.

Simon Breivik (Head of Fitness & Medicine, PGMOL): Use of videos reviews by VARs in professional football.

Prof. Patrick Cavanagh (Department of Psychological and Brain Sciences, Dartmouth College, USA): Illusions of visual movement from static patterns.

Research funding as Principal Investigator

2013 - 2016 ESRC Research Grant

The Influence of the human form on visual judgements of movement

£286,945

2008 - 2011 Wellcome Trust Research Grant

Computational and psychophysical studies of polarity effects in human visual motion processing

£126,654

2004 - 2005 EPSRC Network Grant

- Network: Art and Science of Motion Perception
£15,259.
- 2000 - 2003 Wellcome Trust Research Grant
Integrating models of motion analysis in the human visual system.
£116,520
- 1997 - 2000 EPSRC Research Grant
The use of image blur as a depth cue in human vision.
£137,017
- 1993 - 1996 EPSRC Research Grant
Psychophysical studies of interactions between first-order and second-order motion stimuli.
£98,565
- 1991 - 1993 MRC Project Grant
Temporal properties of low-level motion processes in human vision.
£46,155
- 1990 - 1993 SERC Research Grant
Perceptual studies of high level motion processing in the human visual system.
£58,477
- 1988 - 1991 SERC Research Grant
Psychophysical studies of the aperture problem in motion processing.
£47,707
- 1985 - 1988 MRC Project Grant
Spatial and temporal primitives involved in early processing of visual motion.
£12,756

PUBLICATIONS (please see separate list)

Research Papers

67 papers published in peer-reviewed journals. In March 2018 my Google Scholar citation count stood at about 4500, with an *h*-index of 29 and *i10*-index of 55.

Book chapters

Seven chapters in edited books.

Books

One co-edited book, three sole-authored books. The third edition of my textbook (*Foundations of Sensation and Perception*) was published in 2016.

Conference abstracts

Over 60 published conference abstracts.

RESEARCH ESTEEM INDICATORS (since 2000)

- Invited symposium speaker at the *Visual Science of Art Conference*, Trieste (Aug 2018).
- Nominated for REF2021 panel membership by two external bodies (2017): The Applied Vision Association (AVA), and the Research and Enterprise Network for Universities (RENU).
- Invited presentations at international research workshops at Milan-Bicocca (2017), Università Vita-Salute San Raffaele (2017), and University of Liverpool (2016).
- Member of the editorial board of *Proceedings of the Royal Society, Series B* (2014-present).
- Member of the editorial board of *Perception/i-Perception* (2013-present).
- Member of the Scientific Committee of the *European Conference on Visual Perception*.
- Member of Scientific Committee of the *Visual Science of Art Conference*.
- Member of the ESRC Peer Review College (2015-present).
- External PhD supervision and seminars on Visual Communication with Al Rees, Royal College of Art (up to 2011).
- External PhD examiner at Universities of Nottingham (2016), Cardiff (2015) Cardiff Met (2015), Nottingham (2013), Bristol (2009), Cambridge (2006), Nottingham (2005), Newcastle (2004), Birmingham (2003), Oxford (2001), Reading (1998), Sheffield (1997).
- Invited symposium speaker at the *European Conference on Visual Perception*, St Petersburg (2006).
- Prizewinner at the inaugural international 'Illusion of the Year' competition at the *European Conference on Visual Perception*, La Coruna, Spain (2005) with the illusion "Two-stroke apparent motion". The illusion is on display at Barcelona Science Museum.
- Associate Editor of the *Quarterly Journal of Experimental Psychology* (1999-2002).

EXTERNAL ENGAGEMENT AND CONSULTANCY (since 2000)

- Current collaboration with PGMOL (Professional Game Match Officials Limited) to evaluate use of slow-motion video by Video Assistant Referees (VAR) in football, 2018.
- Catalogue essay on "Getting the measure of perception", published for the art exhibition *Euan Uglow/Sargy Mann*, 24th Sept 2016 - 8th Jan 2017 at the Collection Gallery, Lincoln.
- Public lecture on sensation and perception at the New Scientist *How your Brain Works* "Instant Expert" event in London, May 2016.
- Curated and presented an exhibit on visual perception at the *State of Mind Consciousness Expo*, Brighton, 2012.
- Invited gallery talk on motion illusions during the art exhibition *On the Move* at the Estorick Collection, London, curated by Jonathan Miller, 2010.
- Interview on ABC "Nightline" TV program on my motion perception research, 2008.

- Consultancy for The Viral Factory, London, 2008.
- Curated and co-presented an interactive exhibit on motion perception for the British Council at French Science Week, Jardin de Luxembourg, Paris, 2006.
- Consultancy for Sharp Laboratories Europe Ltd, 2005.
- Collaboration with artists at the Royal College of Art for the art installation, "Generic Sci-Fi Quarry", Oxfordshire, 2002.

ACADEMIC LEADERSHIP (since 2000)

In my most recent formal leadership role I was Director of Research in the College of Social Science, University of Lincoln, 2013-2016. The College is a Faculty-level university body comprising approximately 300 academic staff and 70 professional support staff in six Schools (Education, Health & Social Care, Law, Psychology, Social and Political Sciences, Sport and Exercise Science). My responsibility as College Director of Research was to lead the development of the College's research strategy, infrastructure and culture.

At University of Lincoln

- 2013 – 2016 Director of Research, College of Social Science
- 2011 – 2013 Psychology Laboratories Director
- 2011 - 2013 Perception Action, & Cognition Research Group lead

At University of Sussex

- 2010 - 2011 Psychology School Director of Doctoral Studies
- 2007 - 2011 Cognitive Psychology Research Group lead
- 2006 - 2010 Life Sciences Director of Taught Postgraduate Programmes
- 2004 – 2006 Chair of Psychology Postgraduate Examination Board
- 2001 – 2003 Head of Experimental Psychology
- 2000 – 2001 BPS and QAAHE reviews coordinator for Psychology

TEACHING

Modules organised

- 2007-present Years 2 and 3 elective modules on the psychology of visual art
- 2011-present Year 2 seminars on Research Methods
- 1990-2004 Year 3 elective modules on understanding vision
- 1984-2011 Year 2 core modules on sensation and perception

Graduate supervision

- Successful supervision of six PhD students (one as external supervisor at the Royal College of Art).

- Several of my former research students and post-doctoral fellows have now established careers as academics in Psychology including: Kevin Brooks (Associate Professor at Maquarie University, Australia); Kirsten Challinor (Lecturer at University of New South Wales, Australia); David Smith (Senior Lecturer at University of Hull, UK); Ben Thompson (Associate Professor at Waterloo University, Canada).

Teaching exchanges

I have set up Erasmus teaching exchanges with Italy both at Sussex (Padua) and at Lincoln (Padua and Milano-Bicocca). A number of Italian Masters/PhD students have visited my laboratory for periods of up to six months each, and I have made two teaching trips to Italy. These teaching exchanges have served to enhance research collaboration between the two institutions.

TEACHING ESTEEM INDICATORS (since 2000)

- Fellow of the Higher Education Academy.
- My textbook "*Foundations of Sensation and Perception*" has been adopted as a course text in over 40 universities worldwide including institutions in the UK, USA, Canada, Ireland and Hong Kong. It is a 'recommended' text at many other institutions, and currently sells approximately 1500 copies per year.
- External Examiner for BSc degrees in Psychology at University of Liverpool (2016-present).
- External Course Assessor for Open University course SD329 Signals and Perception: the science of the senses (2001-2002).
- External Examiner for BSc degrees in Anatomy and Neuroscience at University College London (1997-2000).