



Professor Iain Gilchrist
B.Sc.(Dunelm.), Ph.D.(Birm.)

Professor of Neuropsychology

Head of School

Area of research

Visual exploration

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Summary

Research interests

My research is focused on how humans gather information about their visual environment. Vision provides information so that we can interact with the world but that information is often not immediately available. As a result we have to sample the world to find the goal relevant information. This sampling involves a range of motor systems including eye, arm, head, and whole body movements and is a decision making process. One major focus of our work has been to understand how and why we move our eyes to sample the world, another is the mechanisms that support human foraging.

Current larger grants

GLANCE: GLAncible Nuances for Contextual Events (2016-2020). EPSRC Awarded to Mayol-Cuevas, Gilchrist, Damen and Ludwig; £807,000

Vision for the Future (2015-2020) EPSRC Platform Grant, Awarded to Bull, Burn, Canagarajah, Cuthill, Gilchrist, Ludwig and Roberts, £1,363,000

Glucocorticoid dynamics in health and disease (2018-2023) MRC Awarded to Lightman, Harmer, Robinson, Conway-Campbell, Gilchrist and Rivers, £1,847,579

Recent larger grants

Making decisions in an unstable world (2011-2016).EPSRC, Awarded to Gilchrist, Baddeley, Bogacz, Farrell, Leslie, Ludwig & McNamara; £1,646,000

Sensor Platform for HEalthcare in a Residential Environment [SPHERE] (2013-2017). EPSRC, Awarded to Craddock, Tavare, Flach, Coyle, Campbell, Mirmehid, Munafo, Gilchrist and other; £11,683,000

Biography

I took my first degree in Psychology (BSc) at the University of Durham (1989-1992) and then studied for a PhD at the University of Birmingham (1992-1995). I then worked as a Research Associate at the University of Durham (1995-1998). I joined the Department of Experimental Psychology, University of Bristol as Lecturer in Neuropsychology in 1998, became Reader in 2002 and Professor in 2007. I am also Co-Director of Bristol's Clinical Research and Imaging Centre (CRICBristol). I have been Head of School (2005-2008); Director of Bristol Neuroscience (2009-2011) and a BBSRC Research Fellow (2010-2014).

I am a member of the: Experimental Psychology Society, Applied Vision Association and British Ocular Motor Group. I am a Fellow of the British Psychological Society and an Associate Member of The Centre for Vision and Visual Cognition, University of Durham.

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Teaching

I supervise a number of really bright and talented graduate students.

I teach a year 3 course on The Stable World Illusion. This course asks the question: how is it that we perceive a stable world when our eyes are constantly moving?

Keywords

- Active Vision
- Decision making
- Eye-movements
- Eye-tracker
- Neuropsychology
- Visual cognition
- Visual spatial neglect
- fMRI
- MEG
- Cognition

Expertise

I am interested in human visual perception and cognition. My research combines what we see, how we see and the process of looking.

- human vision
- perception
- eye movements
- visual attention

Memberships

Organisations

[School of Experimental Psychology](#)

Other sites

- [Neuroscience](#)

Psychological Science staff

- [Psychological Science academic staff](#)

Research themes

- [Cognitive science](#)

Research groups

- [Cognitive science > Visual perception group](#)

Recent publications

- McSorley, E, Gilchrist, ID & McCloy, R, 2019, '[The programming of sequences of saccades](#)'. *Experimental Brain Research*, vol 237., pp. 1009-1018
- McSorley, E, Gilchrist, ID & McCloy, R, 2019, '[The role of fixation disengagement in the parallel programming of sequences of saccades](#)'. *Experimental Brain Research*, vol 237., pp. 3033-3045
- Jang, Y, Sullivan, BT, Ludwig, CJH, Gilchrist, ID, Damen, D & Mayol-Cuevas, WW, 2019, '[EPIC-Tent: An Egocentric Video Dataset for Camping Tent Assembly](#)'.

- Clark, R, Blundell, J, Dunn, MJ, Erichsen, JT, Giardini, ME, Gottlob, I, Harris, C, Lee, H, McIlreavy, L, Olson, A, Self, JE, Vinuela-Navarro, V, Waddington, J, Woodhouse, JM, Gilchrist, ID & Williams, C, 2019, '[The potential and value of objective eye tracking in the ophthalmology clinic](#)'. *Eye*.
- McWilliams, C, Lawson, D, Santos-Rodriguez, R, Gilchrist, I, Champneys, A, Gould, T, Thomas, M & Bourdeaux, C, 2019, '[Towards a decision support tool for intensive care discharge: Machine learning algorithm development using electronic healthcare data from MIMIC-III and Bristol, UK](#)'. *BMJ Open*, vol 9.
- Tyrer, A, Gilbert, J, Fagerholm, E, Adams, S, Bankole, A, Gilchrist, I & Moran, R, 2019, '[Phase-Amplitude Coupled DCM and Time-Frequency Analysis of EEG Data from AD Patients](#)'.
- Jarvstad, A & Gilchrist, I, 2019, '[Cognitive control of saccadic selection and inhibition from within the core cortical saccadic network](#)'. *Journal of Neuroscience*, vol 39., pp. 2497-2508
- Höfler, M, Liebergesell, K, Gilchrist, I, Bauch, S, Ischebeck, A & Körner, C, 2019, '[Post-search IOR: Searching for inhibition of return after search](#)'. *Acta Psychologica*, vol 197., pp. 32-38
- Clark, R & Gilchrist, ID, 2018, '[The relationship between reward and probability: Evidence that exploration may be intrinsically rewarding](#)'. *Visual Cognition*, vol 26., pp. 672-694
- Dobson, B, Miles-Wilson, JJ, Gilchrist, I, Leslie, D & Wagener, T, 2018, '[Effects of flood risk visualization format on house purchasing decisions](#)'. *Urban Water Journal*.

[View complete publications list](#) in the University of Bristol publications system