

# Professor Iain Phillips

B.Sc. (Hons) Ph.D. FBCS CITP CEng FHEA MACM

<http://iainwp.github.io>

Computer Science, Loughborough University

## Employment and Education

- 2023–present • Professor of Computer Science, Loughborough University
- 2006–2023 • Senior Lecturer in Computer Science, Loughborough University.
- 1999–2006 • Lecturer in Computer Science, Loughborough University.
- 1992–1999 • Research Associate, then Fellow in Electronic and Electrical Engineering, Loughborough.
- 1989–1992 • Ph.D. Computer Science, Manchester University,  
Thesis title: *Workload Distribution on Massively Parallel Computers.*
- 1987–1988 • Industrial Placement at IBM Hursley.
- 1985–1989 • B.Sc. Computing and Information Systems, Manchester University.

## Leadership at Loughborough

- 2022–2023 • Interim Head of Computer Science, School of Science.
- 2016–2018 • Acting Head of Computer Science, School of Science.
- 2015–2023 • Director of Academic Staffing, School of Science.
  - *Directly supporting the Dean in recruitment and workload management in the School.*
- 2008–2011 • Head of Computer Science, Faculty of Science.
- 2006–2008 • Teaching Coordinator (Director of Studies) for Computer Science.
  - *Restructuring and streamlining all the teaching in Computer Science at Loughborough*

## Research Grants since 2010

- 2023–2028 • PI on 5-year RAF Rapid Capabilities Office (RCO) fellowship ( $\approx$  \$800k) [*currently in negotiation phase between RAF commercial services and LU contracts team*]
  - 2022–2023 • PI RAF RCO/SiXWorks AIM OPTIMISE 2.0. (\$60k). CIs: Georgina Cosma, Shirin Dora, Tom Jackson, Ian Hodgkinson.
  - 2022 onwards • Leadership on a collaboration with the RAF RCO, leading to University-wide MOU signed by the VC in Dec 2022. The relationship having so far yielded 4 PhD studentships (SBE/Wolfson/Science $\times$ 2) ( $\approx$  \$460k) and the projects above. We expect more PhD studentships and a range of student placement opportunities as well as staff buy-outs on various projects.
  - 2022–2023 • CI CyberASAP. \$40k. *ANTHEM—AI-driven Attack Graph Generation for Threat Modelling.* Kostas Kyriakopoulos PI.
    - CI DSTL DASA. \$300k. *Asset Parameterisation for Risk-based Moving Target Defence.* 50:50 Warwick:Loughborough. Kostas Kyriakopoulos PI.
    - PI Cisco. US\$100k. *IFLab—the Internet Fragmentation Lab.*
  - 2021–2024 • PI RAF RCO. \$115k. (*PhD studentship and expenses*) *Autonomous systems control with general purpose machine learning.*
  - 2020–2023 • PI DSTL. \$82k. (*PhD studentship and expenses*) *Optimal information exchange with a heterogeneous and non-contiguous system.*
  - 2013–2017 • CI British Rowing \$16k *Enhanced biomechanical feedback of on-water rowing.* PI: Dr Ben Halkon.
  - 2011–2012 • Co-PI Cisco US\$50k University Research Grant with Dr Olaf Maennel *Abstracting Networking Routing Policies.*
  - 2011 • PI EPSRC \$25k for two projects funded from an EPSRC feasibility account *Grow your own gadget* and *Sustainable Intelligent Transport Systems.*
  - 2009–2010 • PI BAE SYSTEMS \$37k *Open Data Networks Research Platform.*
- 10 other grants prior to these.

## External Leadership

- 2014-2019
  - I led the NGN/MSN group of UK networking researchers <https://coseners.net> and arranged their annual meetings, including implementing a policy to support diversity. *This is the UK's leading group of researchers on computer networks, with over 250 members.*
- 2016–present
  - Associate Editor IET Networks.
- 2017–present
  - EPSRC Peer Review College Member.
- 2014–2022
  - Member of the Board of the BCS Academy of Computing.
- 2017–2021
  - Athena Swan Assessor.
- 2014–2021
  - Member of the CPHC/BCS distinguished dissertation committee. A prize awarded to the best Computer Science Ph.D. Chair from 2018.
- 2012-2014
  - Chair of the Council of Professors and Heads of Computing <http://www.cphc.ac.uk>.  
*Committee member 2009–2016, vice Chair 2010–2012.*
  - *I contributed to the strategic development of Computer Science as discipline at UK universities, catering for the changing requirements of graduates on the UK labour market and ensuring internationally competitive advantage. I oversaw the relationship between the CPHC and the BCS including Computing at School.*
- 2012–14
  - Member of the CAS Board (Computing at School).
- 2013–15
  - Member of the panel to review the QAA Subject Benchmark Statement for Computing.
  - *Major contributor to a substantial update of the benchmark statement.*
- 2014
  - External review of the School of Computer Science, Edinburgh Napier University.
  - External panel representative for appointment of a Professor and Head of Computer Science, Medway Campus, University of Kent.
- 2005–2008
  - UK member of the management committee of EU COST Action 295 DYNAMO.
- 1999–2023
  - External examiner Ph.D./M.Phil. Buckingham@Essex (×2), Salford, UCL, Cambridge (×2), Manchester, Middlesex (×2), Oxford Brookes, Sussex, Southampton, Glyndwr, Kingston, QMUL (×2), BME (Budapest).

## Research

My research has focused on how the Internet works including routing, measurement and configuration. Recently, I have also started to work on Data Science with both collaboration with Analytical Scientists and a new Cisco funded project to examine patterns in data related to Internet Fragmentation. This is the phenomenon that occurs as Internet stakeholders block access to particular parts of the Internet for political, commercial or technical reasons.

I have also led the development of a relationship between the RAF Rapid Capabilities Office and Loughborough resulting in the signing of an MOU in December 2022. This relationship already funds 4 PhD students (at 100% FEC) and a \$60k short-term project aiming to optimise decision-making in the battlespace. From September 2023 I will be seconded part-time to the RAF as a Fellow of the RAF Rapid Capability Office Air Experimentation division.