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## Employment

### Professor of Computer Science

Full Professor  
School of Computing  
Vice-Chancellor's Office  
1 Aug 2017 → present

### Full Professor

Faculty Of Computing, Eng. & Built Env.  
Vice-Chancellor's Office  
1 Aug 2017 → present

### Chair, Cedar Foundation

Cedar Foundation  
Belfast, Northern Ireland  
1 Jan 2017 → present

### Ofcom Advisory Committee on Older and Disabled People

UK Office of Communications (Ofcom)  
1 Jul 2008 → 30 Jun 2011

## Research outputs

### Meaningful Big Data Integration For a Global COVID-19 Strategy

Pita Costa, J., Grobelnik, M., Fuart, F., Stopar, L., Epelde, G., Fischaber, S., Poliwoda, P., Rankin, D., Wallace, J. G., Black, M., Bond, RR., Mulvenna, M., Weston, D., Carlin, P., Bilbao, R., Nikolic, G., Shi, X., De Moor, B., Pikkarainen, M., Pääkkönen, J. & 3 others, Staines, A., Connolly, R. & Davis, P., 30 Nov 2020, In : IEEE Computational Intelligence Magazine. 15, 4, p. 51-61 11 p., 9225216.

### An Analysis of Caller Behaviour to a Crisis Helpline during the COVID-19 Pandemic

Turkington, R., Mulvenna, M., Bond, RR., Potts, C., Ennis, E., O'Neill, S., Moore, C., Hamra, L., Morrissey, J., Isaksen, M. & Scowcroft, E., 17 Nov 2020.

### Chatbots to Support Bibliotherapy in Promoting Resilience & Wellbeing in Children

Morning, J., McAllister, P., Kerr, J., McTear, M., Mulvenna, M., Kirby, K. & Bond, RR., 17 Nov 2020.

### Behavior of Callers to a Crisis Helpline Before and During the COVID-19 Pandemic: Quantitative Data Analysis

Turkington, R., Mulvenna, M., Bond, RR., Ennis, E., Potts, C., Moore, C., Hamra, L., Morrissey, J., Isaksen, M., Scowcroft, E. & O'Neill, S., 6 Nov 2020, In : JMIR Mental Health. 7, 11, p. 2-25 15 p., e22984.

### An analysis of the impact of suicide prevention messages and memorials on motorway bridges

O'Neill, S., Potts, C., Bond, RR., Mulvenna, M., Ennis, E., McFeeters, D., Boyda, D., Morrissey, J., Scowcroft, E., Isaksen, M. & Turkington, R., 26 Oct 2020, (Accepted/In press) In : Suicide and Life-Threatening Behaviour.

### **A Content and Knowledge Management System Supporting Emotion Detection from Speech**

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### **Co-creating requirements and assessing end-user acceptability of a voice-based chatbot to support mental health: A thematic analysis of a living lab workshop**

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### **Quality of Data Measurements in the Big Data Era: Lessons Learned from MIDAS Project**

Epelde, G., Beristain, A., Álvarez, R., Arrúe, M., Ezkerra, I., Belar, O., Bilbao, R., Nikolic, G., Shi, X., De Moor, B. & Mulvenna, M., 20 Oct 2020, In : *IEEE Instrumentation and Measurement Magazine*. 23, 7, p. 18-24 7 p., 9234761.

### **Measuring the COVID-19 pandemic's societal impact using near real-time crisis helpline telephony data**

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### **An analysis of caller behaviour to a Crisis Helpline before and during the COVID-19 pandemic**

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### **Building and Using an Apps Library for People Living with Dementia and their Carers: Understanding behaviour of people living with dementia using apps**

Mulvenna, M., Bond, R.R. & Potts, C., 2 Oct 2020.

### **Chatbots to Support Mental Health & Wellbeing: Early Findings from ChatPal Use During COVID-19 Lockdown**

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### **A Low Cost Indoor Positioning System Using Bluetooth Low Energy**

Bai, L., Ciravegna, F., Bond, R. & Mulvenna, M., 27 Jul 2020, In : *IEEE Access*. 8, p. 136858 - 136871 14 p., 9149894.

### **Reliability of Supervised Machine Learning Using Synthetic Data in Health Care: Model to Preserve Privacy for Data Sharing**

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### **Ecological Momentary Assessment Within a Digital Health Intervention for Reminiscence in Persons With Dementia and Caregivers: User Engagement Study**

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### **Towards Chatbots to Support Bibliotherapy Preparation and Delivery**

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### **Data analytics of call log data to identify caller behaviour patterns from a mental health and wellbeing helpline**

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### **Chatbots for mental health and suicide prevention: Is this even ethical?**

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### **Exploring temporal behaviour of app users completing ecological momentary assessments using mental health scales and mood logs**

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### **Mental Health in the workplace: Using chatbots for self-assessment**

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
### **Towards a chatbot assisted mental health and wellbeing ecosystem**

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### **Towards Conversational Coaching Agents to Support Bibliotherapy Sessions**

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### **Editorial: Highlights from the European Conference on Cognitive Ergonomics (ECCE-2019)**

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### **A Framework for the Development of a Dynamic Adaptive Intelligent User Interface to Enhance the User Experience**

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### **Behaviour Analytics of Users Completing Ecological Momentary Assessments in the Form of Mental Health Scales and Mood Logs on a Smartphone App**

Bond, RR., Moorhead, A., Mulvenna, M., O'Neill, S., Potts, C. & Murphy, N., 10 Sep 2019, *ECCE 2019 - Proceedings of the 31st European Conference on Cognitive Ergonomics: "Design for Cognition"*. Mulvenna, M. & Bond, R. (eds.). New York, NY, USA: Association for Computing Machinery, p. 203-206 4 p. (ICPS).

## **ECCE 2019 - Proceedings of the 31st European Conference on Cognitive Ergonomics: "Design for Cognition"**

Mulvenna, M. & Bond, RR., 10 Sep 2019, New York, NY, USA: Association for Computing Machinery. 231 p.

### **User Archetype Discovery By Cluster Analysis of Caller Log Data: Tenure Evolution is Stable as Time Period Reduces**

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### **Human Centered Artificial Intelligence: Weaving UX into Algorithmic Decision Making**

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### **Evaluating User Engagement with a Reminiscence App Using Cross Comparative Analysis of User Event Logs and Qualitative Data**

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### **Popular topics in HCI: Special Issue of Selected Extended Papers from the 32nd International BCS Human Computer Interaction Conference**

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### **Usability Evaluation of a Co-created Big Data Analytics Platform for Health Policy-Making**

Cleland, B., Wallace, J. G., Bond, RR., Muurais, S., Pajula, J., Epelde, G., Arrúec, M., Álvarez, R., Black, M., Mulvenna, M., Rankin, D. & Carlin, P., 28 Jun 2019, *Human Interface and the Management of Information. Visual Information and Knowledge Management - Thematic Area, HIMI 2019, Held as Part of the 21st HCI International Conference, HCII 2019, Proceedings: Visual Information and Knowledge Management. HCII 2019*. Yamamoto, S. & Mori, H. (eds.). Vol. 11569. p. 194-207 14 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 11569 LNCS).

### **Ethical Issues in Technology for Dementia**

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### **Facilitating People living with a dementia and Their Families to engage in personalised reminiscence supported by an iPad app – a quasi-experimental study**

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### **Assessing the Usability of a Chatbot for Mental Health Care**

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### **Digital empathy secures Frankenstein's monster**

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### **How Usable Are Usability Tests? Examining the Suitability of Standard Usability Testing Methods for the Assessment of Apps for People Living with Dementia**

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#### **Using Digital Interventions to empower people to take control of their mental wellbeing**

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#### **Meaningful Integration of Data, Analytics and Services of Computer-Based Medical Systems: The MIDAS Touch**

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#### **Democratisation of Usable Machine Learning in Computer Vision**

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#### **Economic Costs and Health-Related Quality of Life Associated with Individual Specific Reminiscence: Results from the InspiredD Feasibility Study**

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#### **Toxicity Prediction Using Pre-trained Autoencoder**

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#### **Teaching Ethical Design in the Era of Autonomous and Intelligent Systems**

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#### **Reading Rooms: A Chatbot Guided Bibliotherapy Service**

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#### **Multivariate Testing Confirms the Effect of Age and Gender Congruence on Click-Through Rates from Online Social Network Digital Advertisements**

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#### **Using Mobile Technology to Provide Personalized Reminiscence for People Living With Dementia and Their Carers: Appraisal of Outcomes From a Quasi-Experimental Study**

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#### **Frequency domain analysis of telephone helpline call data**

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#### **Insights into Antidepressant Prescribing Using Open Health Data**

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#### **Facilitating Social Connectedness for People with Autism and Intellectual Disability Using an Interactive App**

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**Aesthetically-enhanced visual analytics platform to explore patient metadata**

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**A Self-Management App for Maternal Mental Health**

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**Back to the Future: Lessons from Knowledge Engineering Methodologies for Chatbot Design and Development**

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**Best practices for designing chatbots in mental healthcare – A case study on iHelp**

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**Colour Coded Emotion Classification in Mental Health Social Media**

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**Meaningful Integration of Data Analytics and Services in MIDAS Project: Engaging Users in the Co-Design of a Health Analytics Platform**

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**Digital technology in healthcare and elderly care**

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**The MIDAS Platform: Facilitating the Utilisation of Healthcare Big Data in Northern Ireland and Beyond**

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**A strengths based approach in a study of facilitated reminiscence**

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**Views of Caregivers on the Ethics of Assistive Technology used for Home Surveillance of People Living with Dementia**

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## **Activities**

**2021**

### **International Conference on Information and Communication Technologies for Ageing Well and e-Health**

Maurice Mulvenna (Chair)  
24 Apr 2021 → 26 Apr 2021

**2020**

### **International Psychogeriatric Association (IPA) International Annual Congress**

Maurice Mulvenna (Organiser), Assumpta Ryan (Organiser), Raymond Bond (Organiser), Courtney Potts (Organiser), Soo Hun (Organiser) & Frances Duffy (Organiser)  
2 Oct 2020 → 3 Oct 2020

### **Digital Phenotyping and Machine Learning in the Next Generation of Digital Health Technologies: Utilising Event Logging, Ecological Momentary Assessment & Machine Learning**

Maurice Mulvenna (Keynote speaker)  
4 May 2020

### **Artificial Intelligence & Energy**

Maurice Mulvenna (Invited speaker)

22 Jan 2020

## 2019

### **31st European Conference on Cognitive Ergonomics**

Maurice Mulvenna (Chair) & Raymond Bond (Chair)

10 Sep 2019 → 13 Sep 2019

### **Digital wellbeing technologies: Using behavioural data**

Maurice Mulvenna (Invited speaker)

9 Apr 2019

## 2018

### **Utilising event logging, ecological momentary assessment & machine learning: Implications for studies of people living with dementia and their carers**

Maurice Mulvenna (Keynote speaker)

12 Sep 2018

### **32nd British Human Computer Interaction Conference**

Raymond Bond (Chair), Maurice Mulvenna (Chair), Michaela Black (Chair) & Jonathan Wallace (Chair)

2 Jul 2018 → 6 Jul 2018

### **Digital Health Interaction Data: From Smart Homes to Smart Everywhere**

Maurice Mulvenna (Invited speaker)

28 Jun 2018

## 2014

### **IEEE International Conference on Bioinformatics and Biomedicine BIBM 2014**

Maurice Mulvenna (Chair) & Richard Davies (Chair)

2 Nov 2014 → 5 Nov 2014

## 2013

### **Fifth International Conference on Innovation through Knowledge Transfer**

Maurice Mulvenna (Chair) & Janet Coulter (Chair)

11 Apr 2013 → 12 Apr 2013

## 2011

### **Pervasive Computing Technologies for Healthcare (PervasiveHealth), 2011 5th International Conference on**

Suzanne Martin (Chair), Maurice Mulvenna (Chair) & Huiru (Jane) Zheng (Chair)

23 May 2011

### **CHI Conference on Human Factors in Computing Systems**

Dan Cosley (Chair), Maurice Mulvenna (Chair), Victoria Schwanda (Chair), S. Tejaswi Peesapati (Chair) & Terence Wright (Chair)

6 May 2011 → 12 May 2011

## 2009

### **23rd BCS conference on Human Computer Interaction**

Maurice Mulvenna (Chair), Huiru (Jane) Zheng (Chair) & Terence Wright (Chair)  
1 Oct 2009 → 5 Oct 2009

## **Prizes**

### **Best paper award: International Conference on Emerging Network Intelligence**

Peter Deussen (Recipient), MATTHIAS BAUMGARTEN (Recipient), Mulvenna, Maurice (Recipient), Antonio Manzalini (Recipient) & Corrado Moiso (Recipient), 11 Oct 2009

### **Best paper award: International Conference on Web Information Systems Engineering**

A. G. Buchner (Recipient), MATTHIAS BAUMGARTEN (Recipient), Mulvenna, Maurice (Recipient), Rüdiger Böhm (Recipient) & Sarabjot Singh Anand (Recipient), 19 Jun 2000

### **Best paper award: International Database Conference on Heterogeneous and Internet Databases**

Alex G Buchner (Recipient), Mulvenna, Maurice (Recipient), Sarabjot Singh Anand (Recipient) & John G Hughes (Recipient), 6 May 1999

### **Distinguished Enterprise Fellowship,**

Mulvenna, Maurice (Recipient), 1 Sep 2009

### **Inaugural Award for Industry-Academic Collaboration**

Gillian Cameron (Recipient), Mulvenna, Maurice (Recipient), Bond, Raymond (Recipient) & O'Neill, Siobhan (Recipient), 10 Apr 2019

### **IST Grand Prize**

Mulvenna, Maurice (Recipient), 25 Oct 2001

### **Winner, Research Excellence Award**

O'Neill, Siobhan (Recipient), Mulvenna, Maurice (Recipient), Bond, Raymond (Recipient), Ennis, Edel (Recipient), Turkington, Robin (Recipient) & Alexander Grigorash (Recipient), 27 Aug 2020