

PERSONAL INFORMATION

Professor Alan F. Smeaton, Ph.D., MRIA, F.I.C.S. F.I.E.E.

INSIGHT Centre for Data Analytics,

Dublin City University,

Glasnevin, Dublin 9, Ireland

E: alan.smeaton@dcu.ie | W: www.computing.dcu.ie/~asmeaton | T: +353 1 7005262

**CAREER PROFILE: EDUCATION and EMPLOYMENT**

- PhD (Computer Science) University College Dublin (1983-1987).
- M.Sc. (research) University College Dublin (1980-1982).
- B.Sc. (hons) University College Dublin (1976-1980).

- Founding Director, INSIGHT Centre for Data Analytics, Dublin City University (2013-2018)
- Deputy Director, CLARITY Centre for Sensor Web Technologies, Dublin City Univ. (2007-2012)
- Visiting Professor, University College Dublin (2008-2012).
- Head of School of Computing (1999-2002) and (2019-2020), Dean of Faculty (2000-2002).
- Full Professor, Dublin City University (1997-present).¹
- Visiting Researcher, Université Josef Fourier, Grenoble, France (1995).
- Senior Lecturer, Dublin City University (1992-1997).
- Lecturer, Dublin City University (formerly NIHE, Dublin) 1987-1992.
- Head, School of Computing at Dublin City University, 1999-2002, and September 2019-Jan 2020.
- Dean, Faculty of Engineering and Computing, 1999-2002.

PUBLICATION SUMMARY

I have more than 700 refereed publications, and over 16,931 citations to my work on Google SCHOLAR (5,513 since 2015), and an h-index of 66 (h-index = 34 since 2015). My i10-index on SCHOLAR is 273.

My research areas include video analysis, indexing and retrieval, lifelogging, data analytics and machine learning, and basically any technology that supports human memory and information seeking.

I am a regular contributor to Irish and international media with between 10 and 15 media “pieces” each year .. my most recent ones (as an indicative flavour) are

- **01.10.2019** Radio interview on FutureProof radio program on Newstalk radio station (daily listenership 419,000);
- **20.09.2019** Prof Alan Smeaton presented at the opening plenary panel at the Digital Summit, National Convention Centre, Dublin, attendance about 1,000 business professionals;
- **14.11.2019** “Be afraid: The era of easy deepfake videos is upon us”- article in Irish Times national newspaper (circulation 79,255);
- **22.11.2019** “Has Artificial Intelligence Now Become Intelligent?” Chinese Academy of Sciences, Beijing, China;
- **25.11.2019** “Is Machine Learning the Future of AI ? ” Consulate General of Ireland, Shanghai, China;
- **28.11.2019** RTÉ Radio 1 interview on Today with Seán O’Rourke (listenership 315,000), on the topic of “Deepfakes in Politics”;
- **21.01.2020** Interviewed in Dublin by ARTE Franco-German TV station with an audience of 25.7 million viewers a month on the topic of Deepfakes and their detection;
- **27.1.2020** Article in FORA.IE, an Irish online Business newspaper on the technologies used in personal sleep tracking;

¹ At the time I was the youngest Full Professor of Computing in Ireland and remain the 2nd youngest ever appointed.

LEADERSHIP POSITIONS

- Joint (and founding) coordinator of TRECVideo – the largest and longest-running annual worldwide benchmarking evaluation on content-based analysis of multimedia (digital video), (2001-2018).
- Chair of ACM SIGMM (Special Interest Group in Multimedia), the ACM Special Interest Group in Multimedia (2017-)
- **Founding Member**, Editorial Board, *Foundations & Trends in Information Retrieval* (2006-2014).
- **Founding Member**, Editorial Board, *ACM Journal on Computers and Cultural Heritage* (2006-2015).
- **Founding Member**, Editorial Board, *Information Retrieval Journal* (1998-2007).
- Member, Editorial Board, *Information Processing and Management* (2000-).
- Advisory Editor, *Journal on Information Retrieval and Knowledge Management* (2012-).
- Member, Editorial Board, *International Journal on Digital Libraries* (2002-2011).
- Associate Editor, *ACM Transactions on Information Systems* (1996-2004).
- Member of the high level selection committee for the NWO National Roadmap for Large-Scale Research Infrastructure Programme in the Netherlands (budget €95M)
- Member of the Assessment Panel for the New Zealand MBIE Strategic Science Investment Fund (value \$49M)
- **Member of the Scientific Committee of COST** (*European Cooperation in Science and Technology*), an EU funding program with a budget of €300m in Horizon 2020 and more than 340 running Actions or networking projects, bringing together over 45,000 researchers, engineers and scholars, from academia and from industry, throughout Europe, (2015-2018).
- Submission Lead for Insight Centre for Data Analytics, the largest single non-capital research award ever given by a government in Ireland (€88M over 6 years) (2013)
- Member of the **International Advisory Committee** (IAC) of the COMunications INformation Science Laboratoires (COMINLabs), a large research centre in Bretagne, France, (2012-).
- Member of the **International Review Committee** for Institut Eurecom, Sophia Antipolis, France.
- Member of the **International Review Committee** for the School of Computer Science, National University of Singapore, 2013.
- Member of the **founding steering group** of TREC, the annual Text Retrieval Evaluation Conference carried out at the US National Institute for Standards and Technology, US, 1991-1996.
- ARNETMINER² lists me as the 17th-ranked active inventor for the topic *IR/Probabilistic Indexing* and as the 11th-ranked active inventor for *Large Scale Video Retrieval*

AWARDS AND APPOINTMENTS

- Awarded the Royal Irish **Academy's Gold Medal** for 2015 in the area of Engineering Science. Only two Academy medals are awarded each year to “*two outstanding academics ... recognised as a truly national expression of celebration for scholarly achievement ... testament to a lifetime of passionate commitment to the highest standards in scholarship ... a well-deserved recognition of academic excellence.*”
- Admitted to Membership of the **Royal Irish Academy**, Ireland's highest academic distinction, May 2013, for “*world-class contribution to science*”. I now chair the Academy's *Engineering and Computer Sciences* Committee (2014-2018) and am a member of the Academy's *Academic Board*.
- Elected as **Fellow of the IEEE**, for “*outstanding contribution to multimedia information indexing and retrieval*”, January 2017.

² ARNETMINER is an automated system which mines deep knowledge from scientific networks and publications. It has (automatically) identified 200 different domains (topics) based on an author-conference publication-topic model

- Awarded the 2016 **Niwa-Takayanagi Prize** (jointly) by the Institute of Image Information and Television Engineers in Japan for outstanding achievements in the field of video information media and in promoting basic research in this field.
- Member of the **Irish Research Council** (2012-2015, 2015-2018), an appointment by the Irish Government.
- Member of the Higher Education Authority Committee on Research & Graduate Education (2013-).
- Member of the Irish Research Council for Science, Engineering and Technology, (2011-2012), appointed by Ireland's Minister for Research and Innovation.
- Winner of the **University President's Research Award** (2002) for "*outstanding contribution to research in science and engineering*".
- Winner of **DCU Educational Trust Leadership Circle Award** (2009) for "*world-leading work in the area of digital video processing*".
- Winner of **Tony Kent Strix Award** (2011) from the UK e-Information Society for "*sustained contributions to the field of ... indexing and retrieval of image, audio and video data*".
- Several best paper awards including STAIRS'2002, IMVIP'1999, VIE'2006 (best student paper) and SENSORCOMM'2013
- Nominated by **Irish Software Association** for "*Outstanding Academic Achievement Award*", 2015, for my work on applying educational analytics to improving first year student retention in University

SCIENTIFIC REFEREEING AND PROGRAM COMMITTEE ACTIVITIES

Since 1989 I have refereed almost 100 papers for 39 different journals, most of them on numerous occasions, and in a range of disciplines. I have also served on over 200 separate program committees for international conferences or international workshops, in roles including Program Committee Chair, Area Chair, Best Papers chair, Workshops Chair, Best PhD thesis, Tutorials chair, etc. These events include marquee conferences such as ACM MULTIMEDIA, ACM SIGIR, ECIR, ICME, WSDM and WWW.

I am presently on a run-rate of accepting only between 12 and 15 such program committee invitations per year.

I have assisted the European Commission since 1990 in dozens of roles, as an evaluator of project proposals and a reviewer of ongoing projects. I have also reviewed research project proposals for **22 research funding agencies**, including research councils in Australia, Austria, Belgium, France, Hong Kong, Ireland, the Netherlands, New Zealand, Portugal, Romania, Singapore, Switzerland, EPSRC (UK), Royal Society of Edinburgh, European Research Council, Niels Stensen Stichting (the Netherlands), Dutch Technology Foundation (STW) (the Netherlands), IWT-Vlaanderen, Nuffield Foundation, National Science Foundation (US), Ontario Research Fund (Canada), and the AHRB (UK).

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

- As of the end of 2016, I have supervised 50 research M.Sc. and PhD students to graduation, the majority at PhD level. These now work in companies like Google, Yahoo!, Microsoft Research, AOL, IBM, Facebook, etc., in academia (Singapore, Malaysia, Ireland), and in start-up businesses in Ireland and abroad.
- I presently supervise 4 PhD students and have 3 postdoctoral researchers working directly for me, and until 2017 I oversaw the work of a team of over 80 researchers at the Insight Centre for Data Analytics in DCU.
- I have examined over 30 PhD or *Habilitation a Diriger des Recherches* (HDR) theses external to my own University, including Universities in Helsinki (Aalto), Southampton (x2), Putra (Malaysia) (x2), Leiden, Amsterdam (UvA x2), Limerick, Khalifa Univ. of Science and Technology (UAE) (x2), RMIT Univ., Trinity College Dublin (x2), Glasgow, Oulu (x2), Luleå, Surrey, Univ. College Dublin (x2), Univ. Josef Fourier (Grenoble) (x2), Australian National, Ulster (x2), Twente (x2), and U.C. London.

RESEARCH FUNDING HISTORY

I have been personally responsible for securing over €13.57M in funding for **my own** research, i.e. my part of larger grant awards, from Irish funding agencies (Science Foundation Ireland, Enterprise Ireland, Marine Institute, Environmental Protection Agency, the Irish Research Council), directly from industry (Samsung (Korea), QinetiQ (UK), Microsoft Research (UK), Google (US), Fujitsu (Japan), FXPAL (US),

Synchronoss Technologies, Aviva Insurance, SAP, DAVRA, Xperi, others), from European Union sources including FP5, FP6, FP7, H2020, EU Regions of Knowledge, Marie Curie, from the UK Medical Research Council, the Health Research Board of New Zealand and the European Space Agency.

My current (2020) research funding comes from the US National Institute of Health, the Australian Research Council, the National Institute of Standards and Technology (US), the EU Marie Curie program, the Enterprise Ireland Disruptive Technology Innovation Fund and from Science Foundation Ireland.

Since January 2005 all of my publications are placed on my institution's open access repository and in that time there have been **169,124 full text downloads** of those publications. This is in addition to the **31,700 downloads** of my papers from the ACM DL

My work has been licensed to companies outside Dublin City University 5 times (Connected Care Solutions, Digifeye, Beta Electronics, Aliope, and InnerStrength) with license options on 2 more (SpongeIT, Zignals).

I am regularly invited to **give keynote presentations at international events** including advanced schools and conferences. I accept about 2 of these each year as the list below for the last 5-6 years shows:

1. **July 2020** keynote talk at the [IEEE International Conference and Multimedia Expo \(ICME\)](#), London.
2. **September 2019** "The User in Multimedia" at the CBMI ([Content Based Multimedia Information](#)) Conference, Dublin.
3. **October 2017** "Insights from Data Analytics into our Personal Health". 2nd MMHealth Workshop 2017 Where Multimedia and Health Meet @ ACM Multimedia 2017, October 23-27, 2017, Mountain View, Calif.
4. **December 2014** "Getting Inside the Head of a Searcher: How We Can Use EEG" at *the Asia Information Retrieval Society Conference*, Kuching, Malaysia.
5. **September 2014** "How much can we mine from a mouseclick ? Data Analytics on VLE Access Data" at *the UK and Ireland Higher Education Institutional Research (HEIR) network*, Oxford, UK.
6. **April 2014** "Remote monitoring of our environment: A data fusion problem" at *the International Workshop on Environmental Multimedia Retrieval*, Glasgow, UK.

Conference Organisation and Services to the Profession

I was a founding member of the steering group of TREC in 1991. TREC was, and remains, the single most significant factor in improving the quality of information retrieval (search) across multiple applications, including web search. In 2001 I was founding co-ordinator of TRECVideo, the International Benchmarking Evaluation Campaign on IR from video. TRECVideo is run by myself and others at the US National Institute of Standards and Technology, Gaithersburg, Md. each year since 2001, funded by the US government and over the last 14 years has involved contributions from many hundreds of researchers from 120 teams worldwide.

Additional research events I (co-)organised in recent years include the following (In my role as chair of ACM SIGMM I exclude myself from conference organization and reviewing of SIGMM-sponsored and SIGMM in-cooperation events since 2017):

- **General co-chair**, 23rd ACM Multimedia Conference, Brisbane, Australia, 2015.
- **Co-organiser**, Research Data Alliance, Third Plenary Meeting, Dublin, 2014.
- **Program co-chair**, ACM International Conference on Multimedia Retrieval (ICMR), Hong Kong, 2012.
- **Program co-chair**, Conf. Multilingual and Multimodal Info. Access Evaluation (CLEF), Padua, 2010.
- **Program co-chair**, 15th Intl. MultiMedia Modeling Conf. (MMM), Sophia Antipolis, France, 2009.
- **General chair and host**, 5th European Summer School in Information Retrieval (ESSIR), Dublin, 2005.
- **Program co-chair**, IEEE International Conference on Multimedia and Expo (ICME), Amsterdam, 2005.

- **General Chair**, Conference on Image and Video Retrieval (CIVR), Dublin, 2004.

I have supervised more than 50 research students to completion, almost all of them at PhD level, and my impact on the **careers of my PhD graduates from the last 10 years** can be seen from where they are now

- Data Scientist, IBM Labs, Dublin
- Researcher, AON research, Dublin
- Postdoctoral researcher, Tsinghua University, Beijing, China
- Postdoctoral researcher with me in DCU
- Analytics research, news agency, Dublin
- Irish national coordinator for marine technology
- Researcher, Samsung Electronics, Korea
- Associate Professor, Malaysia
- Research Scientist, Facebook, Dublin
- Postdoctoral Fellow, Oxford University
- Systems management, Vodafone, Dublin
- Data Scientist, IBM Labs, Dublin
- Team Lead, Google Search, Dublin
- Assistant Prof., Dublin City University
- Associate Professor, Singapore
- Principal Development Manager, Bing Image Search, Microsoft, Seattle
- Senior Business Analyst, Google, Dublin
- Research Scientist, Yahoo!, Barcelona
- Research Engineer, Qualcomm, Dublin