

Southampton

# Web Science Institute One Year On... Privacy and Trust in the Era of Big Data Analytics



The Web Science Institute cordially welcomes you to its first anniversary event, at the Digital Catapult Centre. The aim of this event is to report on the WSI's first year of activity, opening with an exhibition showcasing the University of Southampton's interdisciplinary Web Science research. This is followed by an afternoon of panel-led talks and discussions focussing on Privacy and Security, Trust, and Big Data Analytics.

The University of Southampton has played a significant role in the creation, development and understanding of the Web over the last 25 years, including the foundation of the innovative discipline of Web Science.

Institute Directors Professor Dame Wendy Hall, Professor Sir Nigel Shadbolt, Professor Susan Halford and Professor Leslie Carr will lead the discussions and will be joined by leading figures from Web and Internet Science. Hear their views on what may be in store and share your opinion on how the Web can be shaped for years to come.

We are pleased to welcome our distinguished speakers:
Sir David Omand, Commissioner for the Global Commission on
Internet Governance; John Taysom, Web Science Trust; Dr Dan
McQuillan, Goldsmiths, University of London; Dr Caroline Wilson,
Anura Consulting Ltd; Philip Sheldrake, author of 'The Business of
Influence'; Dr Liz Brandt, Director and Consultant; Gavin Starks,
Founding-CEO of The Open Data Institute; Dr Alison Powell,
Assistant Professor, London School of Economics.

# Programme

1300-1400	Web Science Exhibition
1400-1730	Panel Discussions
1400-1445	Session I: Digital Privacy and Security
	Professor Dame Wendy Hall (Chair) Sir David Omand Philip Sheldrake
1445-1530	Session II: Private and Personal in the Age of the Web of Data
	Professor Sir Nigel Shadbolt (Chair) Dr Liz Brandt Gavin Starks John Taysom
1530-1600	Refreshment Break
<b>1530-1600</b> 1600-1645	Refreshment Break Session III: Algorithms and Accountability
	Session III: Algorithms and Accountability  Professor Susan Halford (Chair)  Dr Dan McQuillan  Dr Alison Powell
1600-1645	Session III: Algorithms and Accountability  Professor Susan Halford (Chair)  Dr Dan McQuillan  Dr Alison Powell  Dr Caroline Wilson

# Guest Speakers



Sir David Omand GCB is Visiting Professor in War Studies, King's College London. His career in government service included UK Security and Intelligence Coordinator, Permanent Secretary Home Office, Director GCHQ, and Deputy Under Secretary of State for Policy in the Ministry of Defence. His book *Securing the State* was published in 2010.



Philip Sheldrake is a Chartered Engineer, Architect of the hi:project, Director of techUK, and Managing Partner of Euler Partners, a social business and digital transformation consultancy. He is the author of *The Business of Influence*, Wiley 2011, and *Attenzi* – a social business story, a free ebook in association with Social Media Today.



Liz has over 20 years business experience in the public, private and third sector across multiple disciplines including CRM, digital media, customer service design and strategic marketing with one underpinning drive, to improve service for the individual. Along with her consulting experience she has spent the last 14 years building and running innovative businesses that focus primarily on the digital interaction between business and consumers. From the beginning of her career Liz has worked at the disruptive edge, where business and technology meet.



Gavin Starks is the founding-CEO of The Open Data Institute, a world-first created by Sir Tim Berners-Lee and Professor Sir Nigel Shadbolt to unlock the value in open data. He has a unique background in business, technology, science and media. Leading projects with organisations as diverse as the UK Government, Google, BBC, Shell and Unicef, he has broad and deep knowledge of how data can change the world, and has been building technology-platform businesses for over a decade.



John Taysom is a Visiting Professor, Department of Computer Science, UCL, and Policy Fellow, Centre for Science and Policy, University of Cambridge. John is a Trustee and full Board Member of the Web Science Trust, advising on issues of privacy and helping devise a curriculum in Digital Civics.



 $\label{lem:continuous} Dan\,McQuillan\,is\,Lecturer\,in\,Creative\,\&\,Social\,Computing\,at\,Goldsmiths\,College,\,University\,of\,London.\,He\,has\,a\,PhD\,in\,Experimental\,Particle\,Physics\,and\,worked\,as\,Director\,of\,E-communications\,for\,Amnesty\,International.\,He\,co-founded\,Social\,Innovation\,Camp\,(http://www.sicamp.org/)\,and\,is\,citizen\,science\,lead\,for\,'Science\,for\,Change\,Kosovo'\,(https://www.facebook.com/CitSciKS).\,Recent\,publications\,include\,'Algorithmic\,States\,of\,Exception'\,(http://research.gold.ac.uk/11079/).$ 



Alison Powell is Assistant Professor in Media and Communications at London School of Economics. Her research examines ways that value decisions are negotiated within the design of new ICTs. She is writing a book on technology, citizenship and governance in data cities and IoT-enabled 'sensing cities' and working on several projects related to citizenship, cities, data and ethics. Along with Nick Couldry, she published "Big Data From the Bottom Up" in Big Data and Society, and publications discussing information policy, activism, and open source culture.



Caroline Wilson is Director (Research and Training) for Anura Consulting Ltd, which specialises in interdisciplinary research (such as Computer Science and Law, Accounting and Law), provides reports and offers tailored in-house training. Caroline is also active in the legal, WEB SCIENCE and accounting academic communities, contributing to conferences and workshops, and she is a visiting lecturer at Winchester Business School. She worked in academia for 15 years in the fields of intellectual property and IT law, at Queen Mary University and the University of Southampton.

# Web Science Institute

We don't understand how the Web is changing our society, economy, politics, languages, computers . . . yet.

The Web Science Institute (WSI) brings together world-leading multidisciplinary expertise to tackle the most pressing global challenges facing the World Wide Web and wider society today.

Web Science has an ambitious agenda: to focus the analytical power of researchers from disciplines as diverse as sociology and computer science, economics and psychology, law and mathematics, to understand and explain the Web. It is necessarily interdisciplinary, as much about social and organisational behaviour, as about the underpinning technology.

"One year on from the launch of the Web Science Institute, we celebrate with a showcase of research, and an afternoon of debate and discussion. Our theme – 'Privacy and Trust in the Era of Big Data Analytics' - is one that impacts on everyone in the digital world as personal data becomes a tradeable asset, and carries wide-ranging implications for individuals, business and government."

Professor Dame Wendy Hall

"The Web is not a technical system or a social system but thoroughly sociotechnical. Our path-breaking interdisciplinary educational programmes and links with industry, business and government are underpinned by innovative research that allows us to build the capacities we need to understand and intervene in the Web as it continues to evolve."

Professor Susan Halford

# Directors of the Web Science Institute



Professor Dame Wendy Hall



Professor Sir Nigel Shadbolt



Professor Susan Halford



Professor Leslie Carr



Dr Lisa Harris



Professor Graeme Earl

# Web Science at the University of Southampton

The University of Southampton has played a significant role in the development of the Web over the last 25 years, including the foundation of the innovative discipline of Web Science 10 years ago. As the Web continues to evolve, so too do the opportunities for University of Southampton students to help shape its future.

### **Centre for Doctoral Training**

The Web Science Centre for Doctoral Training at the University of Southampton was established as part of a £250 million investment in the future of UK science and technology by the RCUK Digital Economy Programme. The Centre will train a cohort of 80 PhD students in a thorough understanding of how to innovate and create new forms of value through the Web, and prepares them to become agents of change in the digital economy. Through relationships with its industrial network it provides students with the expertise and leadership capacity to apply Web Science principles and produce a significant impact on the UK economy.

dtc.webscience.ecs.soton.ac.uk

### **Undergraduate Study**

Pioneering the development of Web Science, the University of Southampton aims to provide a thorough understanding of the Web as a social and technical phenomenon. This demands new ways of working, across traditional academic disciplines, to build skills and expertise in the technical underpinnings of the Web as well as the social processes that have shaped its evolution and the impact of the Web on society.

Whether electing a social science or computer science pathway, Web Science undergraduates can expect to be taught by researchers at the forefront of their disciplines and be equipped to become leaders in the emerging digital economy. New pathways in Music and Management are in development and others will be added over time.

www.southampton.ac.uk/webscience



### Massive Open Online Courses

In 2013, the University launched its series of MOOCs with 'Web Science – how the Web is changing the world'. in partnership with FutureLearn. This course examines the origins and evolution of the Web, and considers key questions of security, democracy, networks and economy from both computational and social science perspectives. It has run three times so far and is now being updated for Autumn 2015

www.southampton.ac.uk/moocs



# WSI Research Collaboration Stimulus Fund 2014-15

The Web Science Institute was awarded a grant of £100,000 to establish a Research Collaboration Stimulus Fund for the academic year 2014-15. Funded from the Higher Education Innovation Fund which was allocated to the University of Southampton by HEFCE, the grant is expected to stimulate interactions with business, government, industry and other users of University research.

The WSI Research Collaboration Stimulus Fund is intended specifically to pump-prime small research projects that lead to the development of new research grant applications involving significant collaboration with external stakeholders, as well as collaboration between disciplines, and to demonstrate a strong commitment to the development of Web Science. Further information about these projects can be found on the WSI website at <a href="https://www.southampton.ac.uk/wsi/research/research/collaboration\_stimulus\_fund.page">www.southampton.ac.uk/wsi/research/research/research/collaboration\_stimulus\_fund.page</a>

## Measuring Financial Sentiment in Social Media

Principal Investigator: Professor Frank McGroarty, Southampton Management School

Co-Investigator: Dr Sha Liu, Southampton Management School

Co-Investigator: Paul Gaskell, Web Science Doctoral Training Centre Student, Electronics and Computer Science

## The Quantified Self and Clinical Decision-Making

Principal Investigator: Dr Richard Giordano, Health Sciences

Co-Investigator: Dr Max Van Kleek, Electronics and Computer Science

Co-Investigator: Dr Jeff Vass, Social Sciences

Co-Investigator: Dr John Coggon, Law

Co-Investigator: Peter West, Web Science Doctoral Training Centre Student, Electronics and Computer Science

# $\label{lem:participation} \textbf{Participation and Responsible Innovation for Co-Design for Exchange} \ (\textbf{PRICE})$

Principal Investigator: Professor Melanie Nind, SEds

Co-Investigator: Dr Sarah Parsons, SEds

Co-Investigator: Dr Andrew Power, SEds, Geography

Co-Investigator: Dr Clare Hooper, IT Innovation

# CLEAR: Comparing Learning Event and Actual Resuscitation Data. A Web Observatory for resuscitation Data

Principal Investigator: Dr Eloise Monger, Health Sciences

Co-Investigator: Dr Mary Gobbi, Health Sciences

Co-Investigator: Dr Mark Weal, Electronics and Computer Science

## Digital Police Officer: Linguistic Analysis to Identify Cybercriminals

Principal Investigator: Dr Clare Hooper, IT Innovation

Co-Investigator: Dr Craig Webber, Criminology, Social Sciences

## Massive Open Online Annotation Framework

Principal Investigator: Dr Mike Wald, Electronics and Computer Science

Co-Investigator: Professor Graeme Earl, Archaeology

Co-Investigator: Adam Proctor, Winchester School of Art

## Dissemination and 3D Visualisation of Hampshire Aerial Data

Principal Investigator: Jason Sadler, GeoData, Geography and Environment

Co-Investigator: Dr Elena Simperl, Electronics and Computer Science

## Obesity and Health over Social Networks

Principal Investigator: Dr Antonella Ianni, Economics, Social Sciences

Co-Investigator: Dr Markus Brede, Electronics and Computer Science

Co-Investigator: Dr Emmanouil Mentzakis, Economics, Social Sciences

# Web Science Institute Associated Projects

#### Web Science Trust

The Web Science Trust is a charitable body with the aim of supporting the global development of Web Science through a network of world-class laboratories known as WSTNet, hosted by the University of Southampton.

webscience.org

## Web Observatory

The Web Science Trust has proposed a new class of scientific instruments (akin to microscopes or stethoscopes) designed to take measurements from the Web. These will be connected and operate globally, offering access to data sets and open analytics and will support a range of stakeholders from academia, government and business. The University of Southampton is committed to the development of the Web Observatory which will not only support Web Science research but will offer broader insight into the mechanisms of modern society and "social machines" on the Web.

webscience.org/web-observatory

#### **SOCIAM**

SOCIAM – the Theory and Practice of Social Machines – is a major research programme funded by the EPSRC which aims to deliver greater insight into understanding and building the next generation of 'social machines'. These are part-technical and part-human systems that are co-created and develop capabilities ranging from solving routine tasks to handling emergencies. Led by the University of Southampton, SOCIAM also includes the University of Oxford and the University of Edinburgh.

sociam.org

# The Macroscope – an observational lens for the World Wide Web

The Macroscope is a vital tool for studying the World Wide Web and has been developed by SOCIAM. The Macroscope enables us to observe, analyse and better understand the Web and Social Machines. It builds on the Web Observatory project that also forms part of SOCIAM and is coordinated globally by the Web Science Trust.

## **Open Data Institute**

The University of Southampton is an honorary founding partner of the Open Data Institute, a world-leading organisation that pioneers new social and commercial value from open data.

theodi.org

#### ILIaD

ILIaD - The Institute for Learning, Innovation and Development provides expertise, support and professional development to help the University of Southampton realise its strategic ambition of revolutionising its educational offering by 2020

#### SoFWIReD

SoFWIReD is a partnership with the FraunhoferInstitute in Germany in which we are developing a comprehensive platform for processing and analysing the Web of data, to support companies and governments and enable the transition towards collective intelligence by global industry.

www.sofwired.org

# Interdisciplinary Research at the University of Southampton

The University of Southampton has established a number of interdisciplinary research groups and institutes to develop cross-faculty, interdisciplinary initiatives – such as Web Science. These address key national and international priority research themes towards understanding and alleviating some of society's global challenges. Each theme draws together researchers from across the University, combining our research in engineering, social sciences, biological and physical sciences, medicine and health technologies as well as law, management and art.

To find out more or to become a member or partner of a particular group please contact: interdisciplinary@soton.ac.uk

Interdisciplinary Research Groups at the University of Southampton:

- Ageing an	d Lifelono	Health
- Agenig and	a Luciong	ricaitii

- Automonous Systems

- Clean Carbon

- Complexity in Real-World Contexts

- Computationally Intensive Imaging

- Energy

Network for anti-microbial resistance and infection prevention

- Population Health

- Sustainability Science at Southampton

- Work Futures

#### **Institutes:**

- Institute for Life Sciences
- Southampton Marine and Maritime Institute
- Web Science Institute
- Zepler Institute

www.southampton.ac.uk/interdisciplinary

# Web Science Institute: From research to innovation

## The WSI is very grateful to all our collaborators and supporters:

Ad Venture

**BBC** 

Bertelsmann Stiftung

Big White Wall

**Bristows** 

British Library

ВТ

**Business Collaborators** 

**Business South** Cabinet Office

Cap Gemini

Channel 4

Computer Weekly Digital Catapult

Consult Hyperion

Ctrl-Shift

D&G Media

Defence Science and

Technology Laboratory

Deloitte

Deutsche Bank

Edelman Elsevier

**EPSRC** 

ERCIM European Research Consortium for Informatics

and Mathematics

Ethos

**Euler Partners** 

Facebook

Flying Binary

Fraunhofer

Fraunhofer UK

German Embassy, London

German Ministry

of Research

Google

Group Partners

Hampshire County Council

Haymarket Media

Headstream

Herbert Smith Freehills

Highlands and

Islands Enterprise

Home Office IBM Ireland

**IBM UK** 

Internet Society

**JANET** 

JP Morgan

KnowNow

Lawton Communications

Group

Mendeley

METIS Educational

**Partnerships** 

Microsoft Research

National Archives

National Crime Agency

NHS Direct

**Nominet** 

Not on the High Street

NTU Singapore

Ocado

Office for National Statistics

Office of Public Sector

Information

Open Data Institute

Ordnance Survey

Peer 1 Hosting

Razorfish

Roke Manor Research

salesforce.com

Samsung

Simplyhealth

South East Regional

Organised Crime Unit

Switch Concepts

Thomas Eggar

Thomson Reuters

UKTI

Unit 4

University of Oxford

Visceral Business

Yahoo!

100% Open

### Digital Catapult Centre wifi code

network Digital Catapult (no password required)

#### Web Science Institute at German Embassy

As part of the German Embassy Talks series, the Web Science Institute took part in an afternoon of presentations, lectures and a panel discussion on the topic "Exploring the Emerging Digital Frontiers: From Mind to Market".

The event was organised in cooperation with the Southampton Fraunhofer Web Science, Internet, Research & Development ("SoFWIReD") project. SoFWIReD is a collaborative venture between the University of Southampton and the German Fraunhofer-Gesellschaft.

Partners of SoFWIReD had the opportunity to present their projects in a small exhibition to guests from science and business. These included demonstrations of "social machines", building visualisation software BIM, photonics, and others. Professor Dame Wendy Hall, Executive Director of the Web Science Institute and SoFWIReD co-founder, then opened the series of short lectures of leading web scientists from both the UK and Germany.

www.southampton.ac.uk/wsi

www.twitter.com/sotonwsi #webscience

www.youtube.com/user/webscienceinstitute

www.blog.soton.ac.uk/wsi