



# Competitive Advantage in the Digital Economy Forum 2017

PALAZZO PESARO PAPAFAVA,  
VENICE, ITALY  
1-3 JUNE 2017



# Useful information

## Wireless access

Connect to the 'Warwick Salone; Warwick Giardino; or Warwick Seminar' wireless networks and use the password 'university'.

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Accounts to follow:

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**@IASWarwick**  
**@SurreyCoDE**  
**@Ireneclng**  
**@PhilipMDavies**  
**@Wellhelier**

# Welcome

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“The digital economy is causing unprecedented structural changes in society, business and the economy since the Industrial Revolution. Research and practice within the digital economy has been made a strategic priority in many developed countries, with academics, practitioners and government alike all placing emphasis on this area. It is now accepted that every business will be a digital one, and organisations are putting in place digital transformation plans to make sense of the possible disruptions as well as opportunities. With so many stakeholders within the digital economy, the academic community needs to understand and advise on actions to take that will improve societal well-being, as well as achieve competitive advantage for firms. This year’s 4th Competitive Advantage in the Digital Economy (CADE) Forum focuses on three broad but increasingly important areas of research: Smart Service Systems, Privacy and Trust, and Digital Innovation. CADE’s unique format of bringing together multi-disciplinary thought leaders and researchers to build capacity for cutting edge research through keynotes, plenaries and discussion in an intimate environment helps the group generate valuable insights and identify key areas of research going forward”.

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**Professor Irene Ng**  
Service Systems Group, WMG,  
University of Warwick

# Programme

## Thursday, 1st June

14:00-14:30	Arrival and Registration
14:30-14:45	Opening Remarks
14:45-15:30	Presentation by Professor Irene Ng
15:30-15:45	Break
15:45-16:30	Presentation by Professor Glenn Parry
16:30-17:15	Presentation by Professor Chris Voss
20:00	Dinner at the Muro Venezia

## Friday, 2nd June

09:00-09:15	Arrival
09:15-10:00	Presentation by Professor Stephen Vargo
10:00-10:15	Break
10:15-12:00	Parallel Sessions 1 and 2
12:00-12:15	Break
12:15-13:15	Parallel Sessions 3 and 4
13:30-15:30	Lunch at We Crociferi
15:30-16:15	Presentation by Professor Jon Crowcroft
16:15-16:30	Break
16:30-18:00	Parallel Sessions 5 and 6
20:00	Dinner at Ombra del Leone

## Saturday, 3rd June

09:00-09:15	Arrival
09:15-10:00	Presentation by Professor Mark Davis
10:00-10:30	Break
10:30-11:30	Parallel Sessions 7 and 8
11:30-11:45	Break
11:45-13:15	Panel Session
13:15-13:45	Presentation of Awards and Closing Remarks
14:00-15:30	Lunch at We Crociferi

## Friday, 2nd June

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### Parallel Session 1: 10:15-12:00

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#### **Sweatcoin: Developing novel algorithms to re-define rewards for physical activity**

Mark Elliot (University of Warwick); Anton Derlyatka (Sweatco Ltd); Dmitry Koval (Sweatco Ltd)

#### **Antecedents of value co-creation with users' online healthcare communities**

Nick Hajli (Swansea University); Mina Tajvid (Swansea University)

#### **Private-public paradox in social technology consumption: Moving beyond Technology Acceptance models towards a dynamic Paradox Theory of ongoing technology consumption**

Suket S. Parihar; Anna Watson; Sue Halliday; Ariadne Kapetanaki (University of Hertfordshire)

#### **Smart service design: Efficiency and effectiveness of digital interactions for customer contact**

Steve Pearce (University of Bristol)

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### Parallel Session 2: 10:15-12:00

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#### **That HAT really ties your outfit together: Integrating wearables into an IoT ecosystem to augment device functionality and increase utility**

Helen Oliver (University of Cambridge/The Alan Turing Institute)

#### **Exploring the emerging landscape of design and personal data**

Alessandro Carelli (Loughborough University)

#### **Users' preferences towards online privacy: The case of GDPR**

Michał Paliński (University of Warsaw); Maciej Sobolewski (University of Warsaw)

#### **Decentralising trustworthiness of data via virtualisation and visualisation: An ethnographic study**

Imtiaz Khan (Cardiff Metropolitan University); Neil Stephens (Brunel University); Taslima Begum (Cardiff Metropolitan University; PDR); Andrew Walters (PDR); Rachel Errington (Cardiff University)

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### Parallel Session 3: 12:15-13:15

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#### **Understanding the digital roots of the sharing economy**

Ester Martos; Muerial Blaive (Charles University of Prague)

#### **Sharing economy vs traditional firms: A war between standards?**

Kristóf Gyódi (University of Warsaw)

#### **The impact of 3D printing on digital innovation in the sharing economy**

Wen Liu (University of Cambridge)

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#### Parallel Session 4: 12:15-13:15

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##### **Measuring servitization in the digital economy**

Zena Wood (University of Greenwich); Glenn Parry (The University of the West of England); David Walker (University of Exeter); Marco Del Vecchio (University of Warwick)

##### **Regulatory framework for over-the-top services (OTT): Is the European Union afraid of OTT?**

Joanna Mazur (University of Warsaw)

##### **Integrated process and project management in entrepreneurial service organizations**

Arvi Kuura (Pärnu College, University of Tartu)

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#### Parallel Session 5: 16:30-18:00

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##### **Programmable money, digital gold and the future of blockchain: Categorizing the affordances and expectations of a promising technology**

Beth Kewell (University of Surrey); Catherine Mulligan (Imperial College London); Phil Godsiff (University of Surrey); Roger Maull (University of Surrey)

##### **Do smart mobile apps produce smart financial decisions?**

Juan Moreno-Paredes (University of Southampton)

##### **Internet of Things in the metal and mining industry**

Saara Brax; Shan Gao (Aalto University)

##### **An empirical analysis of the number of Unique Browsers of the websites of UK regional newspapers**

Michael Brightman (University of Central Lancashire)

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#### Parallel Session 6: 16:30-18:00

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##### **Privacy: Review and research directions**

Carsten Maple; Susan Wakenshaw (University of Warwick)

##### **SMART systems in Trump times: Fostering precaution and building resilience for vulnerable communities**

MJ Brüggemann (Lancaster School of Management); Alan Ponce (University of Southampton); Elena Simperl (University of Southampton); Leslie Carr (University of Southampton)

##### **Key aspects of business models described by entrepreneurs using open data to innovate products and/or services: An empirical analysis**

Johanna Walker; Alan Ponce; Elena Simperl; Leslie Carr (University of Southampton)

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## Saturday, 3rd June

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### Parallel Session 7: 10:30-11:30

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#### **Harnessing economic values of IoT in Industry 4.0 supply chain:**

##### **A constellation project in PETRAS**

Susan Wakenshaw; Carsten Maple (University of Warwick)

#### **Technology-enabled co-creation in restorative humanitarian aid delivery**

Kyle Alves (The University of the West of England)

#### **Towards a strategic model of disruptions and equilibria in digital service systems**

Albrecht Fritzsche (University of Erlangen-Nuremberg).

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### Parallel Session 8: 10:30-11:30

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#### **The Michelin curse: Expert judgement versus public opinion**

Marco Del Vecchio (University of Warwick)

#### **Service experience participation styles in a young people's virtual world**

Janet Ward (University of Sunderland); Johanna Gummerus (Hanken School of Economics);  
Mitchell Ness (Newcastle University)

#### **Augmented shopping in a socially-situated context: The role of augmentation on purchase decision satisfaction in an online shopping environment**

Jonas Heller (University of New South Wales)

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# Keynote Speakers



## **Chris Voss**

**Emeritus Professor of Management Science and Operations, London Business School and Professor of Operations Management, Warwick Business School**

Primarily an empirical researcher, Chris's research interests lie in service management, experiential services, operational improvement and benchmarking, manufacturing strategy and international issues in operations management. He is widely recognised as a leading scholar in the use of case study research designs. Chris has published in a variety of world-class journals,

including: Journal of Operations Management, Production and Operations Management, the International Journal of Operations and Production Management and the Journal of Service Research. He was the former deputy dean of London Business School. Chris was co-founder of the European Operations Management Association and is actively involved on the board, contributing to summer schools and writing workshops.



## **Glenn Parry**

**Professor of Strategy and Operations Management, The University of the West of England**

Glenn's is interested in understanding what makes 'good' business, and works with organisations to help them with business models, value capture, servitization, and supply chains. Glenn is currently focussed upon the Digital Economy, and is a Co-I on the HALL/CONTRIVE project. He was a Co-I on the HAT project, and worked on a British Academy project examining Blockchain for Good. He was PI on an RCUK grant to explore Cryptocurrencies

and distributed ledger, and Co-I on "The Uber Disruption", a project examining which variables can be used to describe digital technology disruption. Glenn has also worked in the creative industries [music, books, TV], exploring the impact of the move from physical to digital. He publishes in leading international journals and co-edited the books Build to Order: The Road to the 5<sup>th</sup>day Car, Complex Engineering Service Systems and Service Design and Delivery.





**Irene Ng**  
**Professor of Marketing and Service Systems, WMG,**  
**University of Warwick**

A business (IO) economist through her doctoral training, Irene's research lies in the trans-disciplinary understanding of value and new business models. She has received global recognition for her work including several ESRC fellowship appointments, and is currently an ESRC/InnovateUK Innovation Caucus Thought Leader. Irene is currently PI of the EPSRC-funded HAT Living Labs (HALL)/CONTRIVE project. She was PI of the £ 1.2m RCUK-funded HAT project, and a Co-I on the £1.5m RCUK NEMODE Network+ project. Irene has published numerous articles in the domain of management, marketing, engineering, economics, education and sociology and is the author of the highly-acclaimed *Value and Worth: Creating New Markets in the Digital Economy*, published by Cambridge University Press. An entrepreneur and academic, Irene is passionate about the link between practice and research, and advises digital business startups.



**Jon Crowcroft**  
**Marconi Professor of Communications Systems, Computer**  
**Laboratory, University of Cambridge**

Jon's research interests include communications, multimedia and social systems, especially Internet-related. He is a Fellow of the Royal Society, Fellow of the ACM, a Fellow of the British Computer Society, Fellow of the Royal Academy of Engineering, and a Fellow of the IEEE. He was a member of the IAB 96-02, and went to the first 50 IETF meetings; was general chair for the ACM SIGCOMM 95-99; is recipient of Sigcomm Award in 2009. Jon is PI for the EU Social Networks project, the EPSRC-funded Horizon Digital Economy project, the EPSRC-funded project on federated sensor nets project FRESNEL, and a five-year project towards a Carbon Neutral Internet with Leeds. He is currently a Co-I on the EPSRC-funded HALL/CONTRIVE project. Prior to joining the Computer Lab, Jon was Professor of Networked Systems at UCL. He has supervised over 45 PhD students and over 150 Masters students.



**Mark Davis**

**Professor of Operations Management, Bentley College, Massachusetts**

Mark worked as a manufacturing engineer for the General Electric Company and is a graduate of its Manufacturing Management Program. He was also a programs manager for the U.S. Army Natick Research Laboratories, where he focused on the design of military foodservice systems. Mark's primary research interest is in service operations management. He has published articles in journals such as The Journal of Operations Management, Decision

Sciences and The Journal of Services Marketing. Mark is currently Vice-President at Large for the Decision Sciences Institute. He also served as Program Chair for the 2003 Annual Meeting, Secretary and as a member of its Board of Directors, and is a Past President of the Northeast Decision Sciences Institute. In 2000, he was named a Fellow in the Decision Sciences Institute. In 1998, Mark received Bentley College's Scholar of the Year Award.



**Stephen L Vargo**

**Shidler Distinguished Professor and Professor of Marketing at the University of Hawaii at Manoa**

Steve's primary areas of research are marketing theory and thought. He is seen as the founding father of service-dominant logic alongside Robert Lusch; their 2004 article in the Journal of Marketing, "Evolving to a New Dominant Logic for Marketing," is the most-cited marketing article published in the last 10 years. Steve has published in leading 4\* journals including the Journal of Marketing, the Journal of Academy of Marketing Science, the Journal

of Service Research and the Journal of Retailing. He also has two books: The Service Dominant Logic of Marketing: Dialog, Debate, and Directions, which he co-edited, and Service-Dominant Logic: Premise, Perspectives and Possibilities co-authored with Robert Lusch. For his work, Steve has received many awards, including the Article of the Year Award by the Australia and New Zealand Marketing Academy. In 2016, he was named as one of Thomson-Reuters' World's Most Influential Scientific Minds for the 3rd consecutive year.

# Scientific Committee



## **Albrecht Fritzsche**

Albrecht holds a doctoral degree in philosophy from TU Darmstadt and another in industrial management from Hohenheim University, Stuttgart. Albrecht can look back at 15 years of experience in the manufacturing industry as a systems designer and strategy consultant. Albrecht is currently affiliated with the Institute of Information Systems at Friedrich-Alexander University Erlangen-Nürnberg, where he teaches innovation strategy and various other topics concerning the organisational and technical conditions of socio-economic change. He is also involved in various industrial research projects concerning digital innovation,

including the Service Manufactory JOSEPHS® project of the Fraunhofer Institute for Integrated Circuits.



## **Roger Maull**

**Professor of Management Systems, University of Surrey Business School and founder member, Surrey's Centre for the Digital Economy (CoDE)**

Roger's current research is in the impact of digital technologies on future economic activity, including IoT, personal data, wearables and digital currencies. He has published widely in leading journals including the Journal of Operations Management and International Journal of Operations & Production Management. He is currently a Co-I on the HALL/CONTRIVE project, and was PI on the £1.5m NEMODE project which is an RCUK DE funded

Network+, and PI on the CREDIT Cryptocurrency Effects in Digital Transformations project. Roger has a track record of working with industry, including commercial projects with Microsoft, Vodafone and DSTL. Prior to joining Surrey, he spent 16 years at the University of Exeter in various roles including Head of Department of Management and Director of the Centre for Innovation and Service Research (ISR).

# Organising Committee



**Phil Davies**

**PhD Candidate, Service Systems Group, WMG, University of Warwick**

Prior to joining Warwick, Phil was an industrial designer for a number of small and medium enterprises, most recently a 3D printing and 3D scanning company working with clients such as Jaguar Land Rover, SSE, Aston Martin and Pinewood Studios. Since joining WMG as a doctoral student, he has developed a keen interest in 3D printing, the Internet of Things and the digital economy. Phil is the recipient of an EPSRC iCase award with BAE Systems Land (UK). The focus of his research is around 3D printing and modularity,

investigating two main areas: the impact of designing for use and the impact reconfiguration for context has on product architecture; and how 3D printing can be used to provide an incomplete product platform for customers to tailor platforms to context. This is the second year that Phil is organising the CADE Forum; he has attended all previous events.



**Max Green**

Originally trained as a chemical engineer, Max joined WMG in 2011 to pursue an MSc in Process Business Management. During this time he developed a keen interest in the future of energy markets and following a break to complete his Yachtmasters, re-joined WMG as a PhD candidate under the Warwick Chancellor's Scholarship. Having worked with Intelligent Energy on business model optimisation (for the application of hydrogen fuel cells to the Indian telecoms industry) and more recently with InnovateUK to develop a business model innovation tool, Max's research now focuses on the transformative impact of digitalisation

on business models. Complementary to his studies, Max has organised various events including an ESRC-sponsored seminar on servitization - recently publishing on the same topic in the International Journal of Production Economics - as well as the 2016 Service System Forum in Venice.

## Service Systems Group, WMG

The transdisciplinary research conducted by the Service Systems research group at WMG lies in the understanding and design of complex service systems, which come in many forms. Its work has ranged from multi-party outcome-based contracts for Rolls-Royce engines to the Ministry of Defence, complex service and logistics contracts to deliver a bank of flying hours for the Tornado or Typhoon jets, to designing multi-sided platforms and markets like the HAT for personal data, and knowledge-based collaborative networks of partners such as hospitals and universities.

Led by Professor Irene Ng, the Service Systems group cover a wide range of specialisms, including decision theory, ontology engineering, consumer culture theories, modularity & architectural innovation, information systems, economics, supply chain, monetization of digital services, consumer experience and loyalty. Its research has been funded by the UK government through the Research Councils UK. The group also works closely with industry and the public sector, with partners ranging from manufacturing organisations in the defence and aerospace sectors transitioning into outcome-based service environments, to public sector organisations.

The Service Systems group, building on its expertise in the digital economy, has now organised the CADE Forum for the fourth year in a row.

**Website:** [warwick.ac.uk/go/sswmg](http://warwick.ac.uk/go/sswmg)

**Contact:** [sswmg@warwick.ac.uk](mailto:sswmg@warwick.ac.uk)

## Centre of the Digital Economy, Surrey

The University of Surrey's Centre for the Digital Economy (CoDE) investigates the emerging patterns of the digital economy through a process of Collaborative Discovery that blends research, education, problem-solving and brokering. CoDE engages in this process with enterprises large and small, and researchers and students in its Business Insights Lab.

CoDE explores topics such as digital platforms, emerging business models, distributed ledger technologies, and agile innovation by combining cutting-edge business experimentation with classic methods of research. CoDE believe that Collaborative Discovery will help us navigate - together - a world that is uncertain, unpredictable and unrecognisable to traditional business models. In terms of research and development, CoDE is exploring the broad economic, organisational and behavioural changes brought about by the advance and spread of digital technology.

As CoDE aligns with the University of Surrey at the Surrey Business School, it is uniquely equipped to tap cutting-edge research across disciplines, and to help navigate a business world that is uncertain, unpredictable and unrecognisable to traditional business models.

**Website:** [surreycode.com](http://surreycode.com)

**Contact:** [surreyCoDE@surrey.ac.uk](mailto:surreyCoDE@surrey.ac.uk)

## Institute of Advanced Studies, Warwick

Established in 2007, the Warwick Institute of Advanced Study (IAS) is dedicated to enriching Warwick University's research environment by supporting its academics, hosting a number of international visitors and enhancing the experience of postgraduate students and early career scholars. Over the past nine years, the IAS has become an important part of the university, representing all faculties and departments, supporting collaboration across disciplines and representing Warwick both nationally and internationally.

IAS has supported innovative research at Warwick and interdisciplinary collaborations across all its faculties. In the past few years, the IAS has expanded its postdoctoral community and widened engagement with a number of Warwick's strategically important projects.

**Website:** [warwick.ac.uk/fac/cross\\_fac/ias](http://warwick.ac.uk/fac/cross_fac/ias)

**Contact:** [ias@warwick.ac.uk](mailto:ias@warwick.ac.uk)

## Hub-of-all-Things (HAT)

The HAT is a revolutionary new way of transferring data between individuals, private exchanges, market exchanges and organisations. It comprises an ecosystem that maintains a global network of users, developers, organisations and government bodies that subscribe to a world where individuals can exercise their rights and control over their personal data and be responsible for their digital futures. The use, collaboration and sharing of data in a privacy-preserving way enables value for ourselves and for the good of society.

The HAT is a personal data platform that can privately store anyone's personal information in a wholly-owned container that is accessible only to them, giving them the freedom to exchange as much or as little of it as they like with Internet-based apps and services. Created through a £1.2m research project spanning three years and involving six UK universities, the HAT helps different Internet services (including IoT devices with applications) to manage personal data securely by allowing their individual customers to become their own data controller, managing with whom they share their data with control and privacy.

The HAT is growing as a designed ecosystem, encouraging the transaction of as much information as possible through the trust-preserving infrastructure that the technology provides. The HAT is open to enquiries from those looking to develop their research on the HAT, or join its accelerator programmes to develop their technology or applications on the HAT.

**Website:** [hubofallthings.com](http://hubofallthings.com)

**Contact:** [jonathan.holtby@hatdex.org](mailto:jonathan.holtby@hatdex.org) (HAT Community Manager)





## Getting in touch:

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