

## Digital Health Initiatives: New Systems for Health Consumers and Providers

### Short Description of the Proposed Track

Increased digitization of health information has created opportunities for individuals to take control of both their health care and their health records, underscoring the evolving socio-technical change occurring within healthcare [1]. This change, away from a provider-centered model to a patient-centered model, has created a demand and interest in how technologies can be used to allow individuals to manage their own health. New technologies are providing opportunities for individuals to change medical practice using the information about themselves, now available to them. Increased opportunities for personalized medicine will inevitably lead to challenges to the popular consensus that evidence-based medicine is dispensed based on large scale population trials, giving rise instead to a focus on individualized, tailored care based on each subject's own data.

Consumer empowerment through increased information access [2] will lead to greater self-administered treatments with all their ensuing risks. Such a technology created “problem” will see the emergence of technological solutions and changes in both patient and practitioner behaviors.

Practitioners will be empowered by new devices, such as wireless sensors allowing them to track patients in remote areas, and pocket-sized imaging devices that will take medicine out of the constraints of the surgery. These devices will reduce the likelihood of medical errors, given greater access to more complete and accurate patient records. These trends provide opportunities to radically improve processes and change clinical pathways [3] and are consistent with the notion of “doctors with plasticity” [4] that suggests digitization will change the medical profession.

Recent debate in major IS journals has illustrated an interest in the theories which surround the adoption of digital health strategies [5]. Consequently, this track seeks to harness this interest and provide a timely focus on how digitized devices and systems have created the electronic environment that serves as a global gateway for (1) healthcare professionals, (2) patients, and (3) non-healthcare profession caregivers and what broader impacts will result.

Digitization brings changes in service delivery, patterns and modes of adoption, rates and styles of participation, as well as access and availability to both knowledge and services and creates massive socio-technical transformation of vital interest to the IS field.

This established and popular track has mapped the development of digitized health over a number of years and is keen to receive research and research-in-progress papers which capture and explain the newest trends as well as reflect on socio-technical changes over time and the risks and benefits these changes have brought to healthcare systems.

Possible topics of interest to the track (but not limited to) include the following:

- Healthcare through the Virtual Clinic
- Social Media and Health Care
- Patient managed health-care and technology
- Impacts of technology on provider practices
- Technologies for consumer health applications

- Behavior changing digital interventions and persuasive technology
- Personalization and recommender systems
- On-line health communities and health communities of practice
- Risk and patient safety management
- Health technology, work systems and workload.

## Publishing Opportunities in Leading Journals

**Top papers in the track will have an opportunity to fast-track to a special edition of Health Policy and Technology**

<https://www.journals.elsevier.com/health-policy-and-technology>

## Track Co-Chairs

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|   | Short Biography                  | Reeva Lederman is an Associate Professor in the School of Computing and Information Systems at The University of Melbourne and has been a faculty member since 2000. She leads the research area "People and Information" and co-ordinates the Computational Bioinformatics and Health Information Systems Research Group. She is an active member of the international Health Information Systems research community. In 2012 she was awarded the prestigious Stafford Beer Medal for IS Research and in 2014 she won the Melbourne School of Engineering annual teaching award for Teaching Excellence. Dr Lederman has published in top journals such as EJIS and ToCHI and is a senior editor for HPT. Dr Lederman has chaired this track in 2017. |
| 2 | Name - Surname                   | Richard Klein  |
|   | Title                            | Assistant Dean & Associate Professor   |

# ECIS 2018 TRACK 10

“BEYOND DIGITIZATION - FACETS OF SOCIO-TECHNICAL CHANGE”, 23<sup>RD</sup> -28<sup>TH</sup>, JUNE, 2018, IN UNIVERSITY OF PORTSMOUTH, UK, FOR THE 26<sup>TH</sup> EUROPEAN CONFERENCE ON INFORMATION SYSTEMS

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|   | Short Biography | Dr. Richard Klein is an Associate Professor and the Assistant Chair of the Department of Information Systems and Business Analytics as well as the Assistant Dean for Undergraduate Affairs at Florida International University's College of Business in Miami, Florida, U.S.A.. His research examines healthcare information systems and informatics, electronic business initiatives, and inter-organizational information systems. Dr. Klein has published work in top journals, including Decision Sciences, the European Journal of Information Systems, Information and Management, the Journal of Management Information Systems, MIS Quarterly, and the Journal of Operations Management. He also serves as an Associate Editor for the European Journal of Information Systems. Dr Klein has chaired this track for the past 4 years.   |
| 3 | Name - Surname  | Dr. Christian Guttman  |
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|   | URL             | <a href="http://ki.se/en/people/chrgut">ki.se/en/people/chrgut</a>   |
|   | Short Biography | Christian Guttman (Phd/MSc) is an Adj. Assoc. Professor at the University of New South Wales (Australia), a Research Fellow at the Karolinska Institute (Sweden), CEO of HealthiHabits.com and Director at the Nordic AI Institute of Health. His expertise and activities are firmly grounded in the intersection of Artificial Intelligence (AI) and Health. He is an entrepreneurially driven technology leader with over 20 years of experience in industry and research. At BT, IBM, HP, successful startups and scientific projects, he led innovation teams using artificial intelligence, machine learning, data science and analytics, social/mobile/IoT technology with health authorities, hospitals, pharma/medical device industry, patient associations and primary health care. He creates high-impact systems, patents and scientific publications, and is in international steering and program committees of leading conferences in AI and Health Care innovation. He co-authored and co-edited over 50 international peer reviewed publications and has 8 patent disclosures in the field of AI and Health. He completed his PhD in Distributed AI at the Faculty of Medicine, Nursing and Health Sciences and the Faculty at Information Technology at Monash University, Australia. His two Computer Science Master degrees and his Psychology degree are from Swedish and German Universities. HealthiHabits.com is a social network company using AI to connect patients with a chronic condition aiming to sustain "healthy habits" over time. To contact Dr. Guttman, follow him on Twitter @ChrisXtg and contact him on <a href="mailto:guttman.public@gmail.com">guttman.public@gmail.com</a> . Dr Guttman has chaired this track for the past 3 years. |

## References

1. Lluch, M., *Healthcare professionals' organisational barriers to health information technologies—A literature review*. International journal of medical informatics, 2011. **80**(12): p. 849-862.
2. Nguyen, B.V., et al., *Taxonomy of Usage Issues for Consumer-centric Online Health Information Provision*. Communications of the Association for Information Systems [P], 2015. **37**(1): p. 536-566.
3. Li, W., et al., *Integrated clinical pathway management for medical quality improvement—based on a semiotically inspired systems architecture*. European Journal of Information Systems, 2014. **23**(4): p. 400-417.
4. Topol, E., *The creative destruction of medicine: How the digital revolution will create better health care*. 2013: Basic Books.
5. Bernardi, R., P. Constantinides, and J. Nandhakumar, *Challenging dominant frames in policies for IS innovation in healthcare through rhetorical strategies*. Journal of the Association for Information Systems, 2016.

## Track Associate Editors

The following AE's have been contacted and are committed to accepting papers. We will have no difficulty expanding this list closer to the time required.

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