

Special Issue: Software Engineering for Connected Health (SECH)

Extended Deadline: Full papers must be submitted by **31st December 2016**

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Introduction

Societal and demographic changes, coupled with economic challenges, have driven the need for transformation with respect to how we deliver health and social care in our community. Due to growing populations and medical advances, it is inevitable that healthcare demands will outgrow healthcare professionals' capabilities to deliver safe quality care in a timely manner. A large component of healthcare transformative efforts focus on the need to support care delivery across various providers and settings. This need has given rise to the emergence of Connected Health – a new, yet complex socio-technical model for healthcare management. As a response to these growing needs, there has been significant growth in the development of new technologies to drive connectivity across the healthcare sector.

Connected Health has already contributed towards changes in healthcare practice and these changes highlight the growing reliance and trust we now place on healthcare systems and software embedded in technologies. Therefore, software engineering will continue to play a crucial role in healthcare transformation efforts thus requiring emphasis to be placed on *Software Engineering for Connected Health*. However, healthcare transformation efforts such as Connected Health are still in their infancy, and therefore we still need to learn about how to design and evaluate software to support endeavours such as Connected Health.

In this *Special Issue* of the *Journal of Software Evolution and Process*, we aim to extend the Connected Health field within Software Engineering by identifying the limitations of the existing theories and to develop new or revised theories of *Software Engineering for Connected Health*. Thus, we seek high quality, state-of-the-art research and practice papers dealing with the conception, development, testing, management, quality, maintenance, and evolution of healthcare software, systems and services, as well as the continuous improvement of processes and capabilities surrounding them within a Connected Health context. Papers can explore different software engineering models, methods, processes ranging from software quality, processes, design, interoperability, safety, security, workflow integration, compliance and regulatory, innovation and transformation, and software analytics. We are also interested in research on recent advances in software engineering to drive healthcare transformation through innovation and integration of software solutions. These may range from mobile solutions, implantable devices, electronic records, robotic-driven processes which demonstrate how software plays a critical role in the evolution of our modern healthcare service.

Submission Types

We are looking for a wide range of contributions and invite broad participation from people who are actively involved in research and development of *Software Engineering for Connected Health* and research areas of interest include but are not limited to:

- Healthcare software and systems design and evolution
- Connected Health software platforms and architectures
- Connected Health process improvement

- Globally distributed healthcare software projects
- Design and evaluation of software to support healthcare transformation efforts
- Connected Health software requirements
- Assessing healthcare organisation readiness, capability and maturity for Connected Health software solutions
- Challenges and opportunities for Software-as-a-Medical Device
- Evolution of software processes in medical devices
- Assessing software quality in Connected Health innovation and medical devices
- Software processes improvement across Connected Health software, systems and services
- Emerging healthcare models required for Connected Health software, systems, and service innovation
- Regulatory and standards requirements within Connected Health
- Monitoring and managing performance impact of software process changes
- Managing healthcare software systems and services
- Implementing new healthcare services and wearable devices

Submission and Important Dates

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(**Special Issue: SECH**)

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Initial feedback on submissions will be provided by **22nd February 2017**.