Workshop Website

Overview

For 2014, we will hold a joint event of the Fourth Symposium on Foundations of Health Information Engineering and Systems (FHIES) and the Software Engineering in Healthcare (SEHC) Workshop, which has been collocated with ICSE for the last five years. The goal of FHIES/SEHC '14 is to discuss recent research innovations and to closer integrate an inter-disciplinary community to develop a research, educational and industrial agenda for the application of software engineering in the healthcare sector.

The ability to deliver timely, effective and cost effi-cient healthcare services remains one of the world's foremost challenges. The challenge has numerous dimensions including: (a) the need to develop a highly functional yet secure electronic health record system that integrates a multitude of incompatible existing systems; (b) in-home patient support systems and telemedicine to reduce demand on professional health-care facilities; (c) innovative technical devices such as advanced pacemakers that support other healthcare procedures; and (d) the specific constraints for health care imposed in different societies, particularly developing countries. Responding to this challenge will substantially increase the usage of software-intensive systems in all aspects of healthcare services. However the digitization of healthcare results in extensive changes related to the development, use, evolution, and integration of health software, especially with respect to the volume, dependability, safety and security of these software-dependent systems.

Workshop Topics

FHIES/SEHC '14 seeks contributions from both, the solution domain (engineering and scientific methods) and the problem domain (healthcare and health informatics). Solution-domain papers should present their methods in the context of a concrete application in healthcare, while problem-domain papers should be devised to educate the formal methods community about unique challenges and characteristics of the healthcare domain. Submissions should seek to inform and further the development, adaptation, evaluation and adoption of formally based and rigorous engineering methods in health care systems.

Topics of interest include but are not limited to:
- Conformance to regulations and standards and the certification of software-intensive ICT systems in healthcare
- Interoperability between devices and with information systems, integration across institutions and jurisdictions
- Application and integration of foundational methods from different disciplines in engineering and science (incl. automation of clinical guide-lines, ontology development and reasoning, cloud computing, social networking, mobile devices and pervasive computing)
- Health service delivery in different settings, including the developing world.
- Software quality, security, safety issues in health care systems and processes
- Effective integration of medical devices into overall healthcare systems and processes
- Determining the quality of the software in healthcare systems, including embedded medical devices
- Requirements engineering for healthcare processes and systems
- Healthcare process definition, analysis, automation, and improvement
- Architectures for healthcare systems and system integration
- User interface issues in healthcare systems and processes
- Healthcare issues in aging-in-place (Eldercare)
- Privacy of healthcare data
- Privacy-preserving sharing of healthcare data
- Trusted, privacy-preserving analytics of aggregated healthcare data

Submissions

We solicit high quality full submissions in the following categories:
- original research contributions (16 p. max.)
- application experience, case studies and software prototypes (16 p. max.)
- surveys, comparisons, and state-of-the-art reports (16 p. max.)
- position papers on research projects with identified challenges and milestones (8 p.)

We invite short submissions for special sessions:

- student papers on work in progress on an MSc or PhD project (4 pages max.)
- tool demonstrations (2 pages max.)
- proposals to organize birds-of-a-feather sessions (BOF) or panels (2 pages max.)

Submissions should be in English, prepared in the LNCS format (see Springer's website for details), and all page limits are measured in this format. Full submissions (those in the first four categories above) will be judged on the basis of originality, contribution to the field, technical and presentation quality, and relevance to the symposium; student papers will be judged on clarity of description and the promise of interesting results; tool demonstrations, BOF proposals, and extended abstracts will be judged on relevance to the symposium. All papers will be peer-reviewed by at least three program committee members. Papers should be submitted via EasyChair. Submission constitutes a commitment for at least one author to attend the symposium and present the paper, if it is accepted.

Publication

All accepted submissions will be distributed in a technical report at the Symposium.

We plan to publish post proceedings in Springer LNCS. Authors of all accepted full submissions will be invited to revise their papers, in order to resolve any significant issues raised during reviewing. Authors of accepted short submissions will be invited to submit full papers for review, which will be judged on the basis of the criteria mentioned above. If accepted, the papers will be included in the LNCS proceedings as well.

Important Dates

Intention to submit: 24 March 2014
Submission deadline: 4 April 2014
Notification of acceptance: 9 May 2014
Submission of preproceedings version: 15 June 2014
Symposium: 17-18 July 2014
Submission of full versions of short papers:
1 September 2014
Submission for post proceedings review:
15 September 2014
Notification of acceptance (final proceedings):
6 October 2014

Programme Committee

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- Ruth Breu (U Innsbruck, Austria)
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