



First IEEE Digital Health as a Service Symposium
In conjunction with 2019 IEEE World Congress on Services
Milan, Italy, July 12-13, 2019

Please join us in the first **IEEE Digital Health as a Service Symposium (DHAASS)** which has been organized within the 2019 IEEE Congress on Services that will take place from July 8-13, in Milan, Italy (<https://conferences.computer.org/services/2019/>). DHAASS, which will be held on July 12-13, 2019, aims to bring together leading researchers and community leaders in the area of digital health to share their research and visions of the future of health. Equally importantly, the invited speakers are selected bearing in mind their track record and potential for being agents of change who will help define digital health as a new and emerging discipline. A special townhall session will be planned to discuss a number of digital health initiatives with active participation by leaders and members from the IEEE Computer Society, the Information Processing Society of Japan and The China Computer Federation, and some other potential collaborators.

About DHAASS

Looking at the health and integrated care system through a services' spectacles reveals significant opportunities for engaging digital health to affect an ecosystem shift in which a new health economy is unleashed by engaging multiple and new roles including communities in their own integrated healthcare services delivery. Broadly speaking, related discovery, composition and provision of healthcare services will need to be based on cutting-edge computer technologies and digital media/data so that quality factors including timing, granularity, scale, cost-effectiveness and precision are integral parts of the value chain in such an ecosystem. Digital Health services can include, among many other innovative methods, preventive and predictive capabilities of machine learning based data analytics, actionable recommendations based on *in-situ* monitoring and assessment of an individual's real-time physical and cognitive performance, trade-off analysis between cloud-based versus edge-based sensory data streaming and data analytics. Developing effective techniques for maintaining security and privacy pertaining to malicious manipulation of end-users data to distort ML algorithm performance, and hijacking of biomedical/wearable devices by hackers are examples of most critical, emerging challenges to our collective wisdom.

DHAASS will embrace a broad spectrum of issues and concerns, including, but not limited to, the following topics related to digital health as services:

- Microservices models and architectures of health and integrated care services.
- Breakdown analysis of healthcare, eldercare, and specialized care pathways (e.g., diabetes, COPD, dementia) to identify and define microservices. Redefining well-

established delivery pathways to utilize identified microservices while maintaining provider acceptability.

- Informatic, cybernetic and mediatic digital health platforms supportive of implementing microservices architecture indirectly over digital health technologies
- Community crowd-sourcing of health and care microservices. Microservices crowd-sourcing platforms. Worker training and selection, reputation management, and micropayments.
- Standardizing provider-side microservices
- Qualifying and activating demand-side microservice requests. Eligibility, fairness, properness, among other qualifications including irrational service user models (e.g., a dementia patient requesting the microservice repeatedly and forgetfully).
- Health economics of microservices-oriented care delivery systems. How much scalability will be achieved by adopting digital health as services? How much savings in unit and total cost will patient and community engagement realize?

DHAASS General Chairs

Carl K. Chang
Professor and Director, Smart Home Lab
Iowa State University
chang@iastate.edu

Sumi Helal
Professor and Chair in Digital Health
Lancaster University
s.helal@lancaster.ac.uk

Inaugural Advisory Committee

Zhiyong Feng, School of Computer Software, Tianjin University, China

Tien Hsu, College of Health Sciences and Technology, National Central University, Taiwan

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Ramesh Jain, Institute for Future Health, University of California, Irvine, USA

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Kaoru Sakatani, College of Engineering/School of Medicine, Nihon University, Japan

Hiroki Takakura, National Institute of Informatics, Japan

Daqing Zhang, National High Confidence Software Technology Lab, Peking University, China