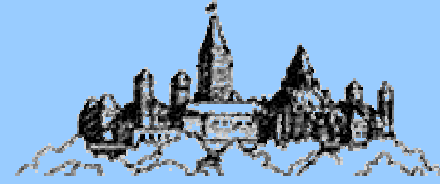




Celebrating 125 Years
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Ottawa Section

IEEE 125th EMBS Seminar Series



Smart home technology for the unobtrusive monitoring of older adults

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As the senior population in Canada ages, the need for costly healthcare monitoring is growing and the expected workloads of many of the hospitals and nursing care facilities across the country are beginning to exceed the personnel available. There is therefore an increasing interest in smart technology which can provide automated monitoring of the health and well-being of a patient. This talk will present recent work in the field of smart home monitoring. It will overview some of the unobtrusive sensing techniques currently in use such as motion sensing, thermal imaging, audio recording, e-nose odour detection, and embedded pressure sensing. It will also introduce some signal processing algorithms and data processing techniques designed to convert the data into useable parameters for clinical interpretation and transmission to point-of-care devices. The talk will conclude with a discussion of some of the greatest challenges along with the most exciting opportunities for the future of smart home monitoring.

Amaya Arcelus received the B.Sc. and M.Sc. degrees in electrical engineering from the University of New Brunswick, Fredericton, NB, Canada, in 2003 and 2006, respectively. She received the Ph.D. degree in electrical and computer engineering from Carleton University, Ottawa, ON, Canada in 2010. She is currently working as a Postdoctoral Fellow in the Department of Systems and Computer Engineering at Carleton University, as a member of the NSERC network Healthcare Support through Information Technology Enhancements (hSITE). Her research interests include digital signal processing and its applications in acoustics and biomedical systems, instrumentation and algorithm design for assistive living, and clinical decision support systems.

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admission is free

18:00 – 19:30 pm

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Carleton University

Light refreshment will be served



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