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Mounir Mokhtari · Bessam Abdulrazak
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Smart Homes and Health Telematics

Designing a Better Future:
Urban Assisted Living

16th International Conference, ICOST 2018
Singapore, Singapore, July 10–12, 2018
Proceedings

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*In memory of our beloved friend and colleague Zeugnam Zenn Bien, Professor KAIST,
South Korea*

*“I send all my sympathies for his family and feel sad about this great loss for the
scientific community”*

*Prof. Hélène Pigot, Sherbrooke University, Canada, Chair ICOST 2005
and ICOST 2011*

*“Really shocked to hear this sad news and this is truly a big loss to our community! I
still remember his always smiling face and encouraging words at several meetings with
him in South Korea, France, Canada, and the USA”*

Prof. Daqing Zhang, Telecom SudParis, France. Chair ICOST 2014

*“This is huge loss to our community. My memories of Zenn are still very vivid when he
visited Ames with some of us in 2008”*

Prof. Carl Chang, IOWA State University, USA, Chair ICOST 2008 and ICOST 2016

*“Zenn Bien always supported us and acted as a true mentor. He was always
benevolent to us”*

*Prof. Sylvain Giroux, University of Sherbrooke, Canada, Chair ICOST 2005
and ICOST 2011*

*“This is truly very sad news and a great loss to the research community. Beyond
obituaries, I think a good way to remember Zenn is by celebrating and highlighting
his achievements”*

*Chaired Prof. Sumi Helal, Lancaster University, UK, Chair ICOST 2008
and ICOST 2014*

“Sad news for the scientific community. My thoughts are with his family”
Prof. Bessam Abdulrazak, University of Sherbrooke, Canada, Chair ICOST 2011

“It is very sad news and indeed a significant loss for the community”
Prof. Chris Nugent, Ulster University, UK, Chair ICOST’2006

*“I am deeply sorry to learn of Professor Bien’s passing. I knew Professor Bien more
than 20 years. Professor Bien and I taught the same course at Hosei University in
Tokyo. Professor Bien was a wonderful person not only as an academic but also as a
human being. His passing will be a great loss for us. Please accept our sincere
condolences. In deepest sympathy”*

Prof. Hisato Kobayashi, Hosei University in Tokyo, Japan

*“This is really sad news for me and for our community. I met Zenn in 1999 and I had a
strong affection for him since then. This is a big loss for the world. May he rest
in peace”*

*Prof. Mounir Mokhtari, Institut Mines-Telecom, France/CNRS IPAL Singapore,
Founder of ICOST conference in 2003*

Preface

This year we organized the 16th ICOST conference, an event which has succeeded in bringing together a community from different continents over more than a decade and half and raised awareness about frail and dependent people's quality of life in our societies.

After 15 very successful conferences held annually in three continents (Europe, Asia, and North America), ICOST was hosted in France (2003), Singapore (2004), Canada (2005), Northern Ireland (2006), Japan (2007), USA (2008), France (2009), Korea (2010), Canada (2011), Italy (2012), Singapore (2013), USA (2014), Switzerland (2015), China (2016), and France (2017), the 16th International Conference on Smart homes, Assistive Technologies and Health Telematics (ICOST 2018) was held in Singapore, during July 10–12, 2018. This year the conference was collocated with the World Cities Summit event in Singapore and was considered an official event of the France Singapore Year of Innovation.

ICOST provides a premier venue for the presentation and discussion of research in the design, development, deployment and evaluation of smart urban environments, assistive technologies, chronic disease management, coaching and health telematics systems. ICOST brings together stakeholders from clinical, academic, and industrial backgrounds with end users and family caregivers to explore how to utilize technologies to foster independent living and offer an enhanced quality of life. ICOST 2018 invited participants to present and discuss their experience in the design, development, deployment, and evaluation of assistive and telehealth systems, as well as ethical and policy issues. The conference featured a dynamic program incorporating a range of technical, clinical, and industrial keynote talks, oral and poster presentations, along with demonstrations and technical exhibits.

The theme of the conference this year was “Designing a Better Future: Urban Assisted Living” focusing on the quality of life of dependent people not only in their homes, but also in outdoor living environments to improve mobility and social interaction in the city. Extending the living space with suitable ICT support in terms of smart transportation, mobility, interaction, and socialization is the scientific challenge and promising innovation that the ICOST community decided to tackle. ICTs are not limited only to end users with special needs, but also to caregivers and relatives in charge of taking care of dependent and elderly people. To be more effective and impactful, technologies in different areas, such as IoT (the Internet of Things), big data analytics, smart mobility etc. should target all the stakeholders.

ICOST 2018 was proud to extend its hospitality to an international community consisting of researchers from major universities and research centers, people from industry, and users from 24 different countries. We would like to thank the authors for submitting their current research work and the Program Committee members for their commitment to reviewing submitted papers. The ICOST proceedings have now reached over 150,000 downloads, and are in the top 25% of downloads of Springer LNCS.

We were very pleased to host world-renowned keynote speakers from multiple backgrounds coming from Australia and the USA and we were extremely honored by the confidence of the sponsors in this conference.

This year a special session was held in memory of one of the pillars of ICOST, Prof. Zeugnam Zenn Bien. This session was an opportunity to share our community thoughts and feelings as a means of remembrance and healing. Words cannot express the feelings of our community.

May 2018

Mounir Mokhtari
Bessam Abdulrazak
Hamdi Aloulou

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