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Innovations for Community Services

18th International Conference, I4CS 2018
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Proceedings

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Foreword

The International Conference on Innovations for Community Services (I4CS) had its 18th edition 2018. It had emerged as the Workshop on Innovative Internet Community Systems (I2CS) in 2001, founded by Herwig Unger and Thomas Böhme, and continued its success story under its revised name I4CS in 2014. We are proud to have reached again the original number of scientific presentations, combined with a great social conference program.

The selection of conference locations reflects the conference concept: Our members of the Technical Program Committee (TPC) can offer suitable locations. In 2018, the Steering Committee had the honor of handing the organization responsibility over to Michal Hodoň and, therefore, of determining a Slovakian venue for the first time in the history of the conference. The University of Žilina was a remarkable place for offering a perfect climate to make the motto "Relaxation Teams Communities" happen.

I2CS published its first proceedings in Springer series Lecture Notes in Computer Science series (LNCS) until 2005, followed by the Gesellschaft für Informatik (GI), and Verein Deutscher Ingenieure (VDI). I4CS commenced with the Institute of Electrical and Electronics Engineers (IEEE) before switching back to Springer's *Communications in Computer and Information Science* (CCIS) in 2016. With 1,473 chapter downloads from SpingerLink for CCIS Vol. 717, publishing the I4CS proceedings of 2017, we envisaged an increasing result. I4CS has maintained its reputation as a high-class C-conference at the CORE conference portal http://portal.core.edu.au/conf-ranks/?search=I4CS&by=all.

The proceedings of I4CS 2018 comprise five parts that cover the selection of 14 full and three short papers out of 38 submissions. Interdisciplinary thinking is a key success factor for any community. Hence, the proceedings of I4CS 2018 span a range of topics, bundled into three areas: "Technology," "Applications," and "Socialization."

Technology: Distributed Architectures and Frameworks

- Data architectures and models for community services
- Innovation management and management of community systems
- Community self-organization in ad-hoc environments
- Search, information retrieval, and distributed ontologies
- Common data models and big data analytics

Applications: Communities on the Move

- Social networks and open collaboration
- User-generated content for business and social life
- Recommender solutions and context awareness
- Augmented reality and location-based activities
- Intelligent transportation systems and logistic services

Socialization: Ambient Work and Living

- eHealth challenges and ambient-assisted living
- Intelligent transport systems and connected vehicles
- Smart energy and home control
- Digitalization and cyber-physical systems
- Security, identity, and privacy protection

Many thanks to the 19 members of the TPC representing 12 countries for their valuable reviews, especially the chair, Christian Erfurth and, secondly, to the publication chair, Günter Fahrnberger, who fostered a fruitful cooperation with Springer.

The 19th I4CS will be organized by the Ostfalia University of Applied Sciences and will take place in Wolfsburg/Germany in June 2019. Please check the permanent conference URL http://www.i4cs-conference.org/ for more details. Applications of prospective TPC members and potential conference hosts are welcome at request@i4cs-conference.org.

April 2018   Gerald Eichler

Preface

Žilina is the natural center of northwestern Slovakia, which ranks among the largest and most important cities in Slovakia. It is located in the valley of the Váh River, surrounded by the beautiful mountain ranges of Malá Fatra, Strážovské vrchy, Súovské vrchy, Javorníky, and Kysucká vrchovina. The National Park of Malá Fatra comprises famous gorges, rock peaks, and an attractive ridge tour. The main subject of protection is the territory with varied geological history and dissected relief forms, rare and precious biocenoses, flora and fauna, and the exceptional value of the forest and mountain compounds with precious dwarf pinewoods, and rapacious animals, such as the wolf, lynx, or bear.

Žilina is a center of significant political, cultural, sport, and public health-care institutions. Its economic potential can be proven by the fact that Žilina has the second highest number of traders per thousand inhabitants. As for the number of joint stock companies and limited companies, Žilina holds third position in Slovakia. Nowadays, the city of Žilina represents a dynamic development accelerated by KIA Motors Slovakia investments. However, the city is not only a center of car production, but together with the Upper Váh River Region (Horné Považie) it is an interesting tourist destination. The city of Žilina is a center of theaters, museums, galleries, parks, and sports facilities. Its historical center is crossed by one of the longest and the most beautiful pedestrian zones in Slovakia.

The University of Žilina was founded in 1953 by separating from the Czech Technical University in Prague, followed by its renaming to the University of Transport and Communications. Later in 1996, after broadening its fields of interest and other organizational changes, it was renamed as the University of Žilina. In its over 60 years of successful existence, it has become the alma mater for more than 70,000 graduates, highly skilled professionals mostly specializing in transport and technical fields as well as in management, marketing, or humanities. The quality and readiness of the graduates for the needs of practice is proved by long-term high interest in hiring them by employers that cooperate with the university in the recruitment process.

A stopover in the Malá Fatra Mountains offers unforgettable experiences enhanced through the selected venue of the Village Resort Hanuliak as a unique wellness resort located in the beautiful environment of the Malá Fatra National Park. The picturesque village of Belá is located only 20 km away from the city of Žilina.

We hope that all attendees enjoy the fruitful, friendly, and relaxed atmosphere during the conference. We trust they will gather professional experiences and be happy to come back in the future.

April 2018   Michal Hodoň

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