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Virtual Reality and Augmented Reality

15th EuroVR International Conference, EuroVR 2018
London, UK, October 22–23, 2018
Proceedings

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Preface

We are pleased to present in this LNCS volume the proceedings of the Scientific and Technical papers of EuroVR 2018, the 15th annual EuroVR conference, which took place at the Savoy Place in London (UK) during October 22–23, 2018.

Previous EuroVR conferences were held in Bremen; Germany (2014), Lecco, Italy (2015), Athens, Greece (2016), and Laval, France (2017). This series was initiated in 2004 by the INTUITION Network of Excellence in Virtual and Augmented Reality, supported by the European Commission until 2008, and included in the Joint Virtual Reality Conferences (JVRC) from 2009 to 2013. The focus of the EuroVR conferences is to present, each year, novel virtual reality (VR) to mixed reality (MR) technologies, including software systems, display technologies, interaction devices, and applications, to foster engagement between industry, academia, and the public sector, and to promote the development and deployment of VR/AR technologies in new, emerging, and existing fields.

This annual event of the EuroVR association (<https://www.eurovr-association.org/>) provides a unique platform for exchange between researchers, technology providers, and end users around commercial or research applications. Along with the scientific and technical sessions representing the research papers of this LNCS volume, two keynote speakers were invited to EuroVR 2018, namely: Prof. Robert W. Lindeman (HIT Lab New Zealand at the University of Canterbury), and Brian Waterfield (National Automotive Innovation Centre at the University of Warwick). Moreover industry-oriented sessions were also organized to report on a number of applications of VR/AR technologies in multiple fields (automotive, medical, etc.), while poster and demo sessions allowed discussions to be held around several works in progress.

Since 2017, EuroVR has been collaborating with Springer to publish the papers of the scientific and technical track of our annual conference. To increase the excellence of this applied research conference, which is basically oriented toward new uses of VR and AR technologies, we have formed a set of committees including an International Program Committee (IPC).

This IPC selected 15 papers for the scientific/technical track of EuroVR 2018, which are gathered in this LNCS volume. Nine full papers and six short papers were selected from 39 submissions, resulting in an acceptance rate of 38%. Each paper was reviewed by three members of the IPC with the help of some external expert reviewers. From the review reports, the final decision was taken by the IPC chairs. The selected papers are organized in this volume according to five topical parts: Vision-Based Motion Tracking, 3D Acquisition and 3D Reconstruction, Haptics and 3D Audio, Perception and Cognition, and Interactive Techniques and Use-Case Studies.

Additionally, several submissions to the scientific/technical track were redirected to the industrial, poster, or demo tracks of the conference, based on the recommendation of the reviewers. The abstracts of these other tracks are not included in this LNCS volume.

We would like to thank the members of the IPC and the external reviewers for their insightful reviews, which ensured the high quality of the papers selected for the scientific/technical track. Furthermore, we would like to thank the industrial co-chairs, the poster/demo co-chairs, and the local organizers of EuroVR 2018.

We are especially grateful to Anna Kramer (Assistant Editor, Computer Science Editorial, Springer) and Volha Shaparava (Springer OCS Support) for their support and advice during the preparation of this LNCS volume.

September 2018

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