Gabriel Zachmann · Mariano Alcañiz Raya ·
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Virtual Reality and Mixed Reality

**19th EuroXR International Conference, EuroXR 2022
Stuttgart, Germany, September 14–16, 2022
Proceedings**

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Preface

We are pleased to present in this LNCS volume the scientific proceedings of the 19th EuroXR International Conference (EuroXR 2022), organized by the Virtual Dimension Center (VDC), Fellbach, Germany, and held during September 14–16, 2022.

Prior EuroXR conferences (under the name of EuroVR until 2020) were held in Bremen, Germany (2014); Lecco, Italy (2015); Athens, Greece (2016); Laval, France (2017); London, UK (2018); Tallinn, Estonia (2019); Valencia, Spain (2020, virtual); Milano, Italy (2021, virtual). This series of conferences was initiated in 2004 by the INTUITION Network of Excellence in Virtual and Augmented Reality, supported by the European Commission until 2008. From 2009 through 2013, EuroVR was embedded in the Joint Virtual Reality Conferences (JVRC).

The focus and aim of the EuroXR conferences is to present, each year, novel results and insights in virtual reality (VR), augmented reality (AR), and mixed reality (MR), commonly referred to under the umbrella of extended reality (XR), including software systems, immersive rendering technologies, 3D user interfaces, and applications. EuroXR also aims to foster engagement between European industries, academia, and the public sector, to promote the development and deployment of XR techniques in new and emerging, but also existing, fields. To this end, all EuroXR conferences include not only a scientific track but also an application-oriented track, with its own proceedings.

Since 2017, the EuroXR Association has collaborated with Springer to publish the proceedings of the scientific track of its annual conference. In order to maintain the scientific standards to be expected from such a conference, we established a number of committees overseeing the process of creating a scientific program: the scientific program chairs, leading an International Program Committee (IPC) made up of international experts in the field, and the EuroXR academic task force.

For the 2022 issue, a total of 37 papers had been submitted, out of which 13 papers were accepted (six long, five medium, and two short papers). This amounts to an acceptance rate of 35%. The selection process was based on a double-blind peer-review process; each paper was reviewed by three members of the IPC, some with the help of external expert reviewers. Based on those review reports and the scores, the scientific program chairs took the final decision and wrote a meta-review for each and every paper.

This year, the scientific program of EuroXR and, hence, this LNCS volume, is organized into five sections: XR Interaction, XR and Neurodevelopmental Disorders, Algorithms for XR, Modeling Scenes for XR, and Scientific Posters. The latter section contains short papers accompanying the poster presentations, which present work in progress or other scientific contributions, such as ideas for unimplemented and/or unusual systems. These short paper contributions were, nonetheless, reviewed by three members of the IPC.

In addition to the regular scientific papers track, EuroXR invited three keynote speakers: Anthony Steed (University College London, UK), Giuseppe Riva (University of Milan, Italy), and Bruce Thomas (University of South Australia, Australia). In

additon, there were keynote speakers in the application track along with the paper presentations. Furthermore, the conference hosted demo sessions and lab tours.

We would like to thank all the IPC members and external reviewers for their insightful reviews, which helped ensure the high quality of papers selected for the scientific track. Furthermore, we would like to thank the application chairs, demos and exhibition chairs, and the local organizers of EuroXR 2022.

We are also grateful to the team at Springer for their support and advice during the preparation of this LNCS volume.

July 2022
Gabriel Zachmann
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Contents

Modeling Scenes for XR

Scientific Posters