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Environmental Informatics

Computational Sustainability: ICT methods
to achieve the
UN Sustainable Development Goals

Adjunct Proceedings of the
33rd EnviroInfo conference

Kassel, September 23–26, 2019

Rüdiger Schaldach · Karl-Heinz Simon
Jens Weismüller · Volker Wohlgemuth
Editors



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Computational Sustainability: ICT methods to achieve the
UN Sustainable Development Goals

Adjunct Proceedings of the 33rd edition of the EnviroInfo – the long standing
and established international and interdisciplinary conference series on leading
environmental information and communication technologies

Kassel, September 23–26, 2019

Center for Environmental Systems Research, University of Kassel

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Preface

This book presents research results of the 33rd edition of the long-standing and established international and interdisciplinary conference series on environmental information and communication technologies (EnviroInfo 2019).

The conference was held on 23–26 September 2019 at the University of Kassel, Germany, under the patronage of the Technical Committee on Environmental Informatics of the Gesellschaft für Informatik e.V. (German Informatics Society – GI) and at the Center for Environmental Systems Research in cooperation with the 49th GI Annual Conference INFORMATIK 2019.

Combining and shaping national and international activities in the field of applied informatics and environmental informatics in making the world a better place for living, the EnviroInfo conference series aims at presenting and discussing the latest state-of-the-art development on information and communication technology (ICT) and environmental related fields.

Due to the interdisciplinary character of environmental informatics, there is a wide range of topics that were already central to previous conferences and will be still in the heart of the EnviroInfo 2019. Examples include Earth Observation and Monitoring, Environmental Modelling and Simulation, Applications of Geographical Information Systems, Environmental Information Systems and Core technologies in Environmental Informatics: Big Data, Machine Learning etc.

In addition, the special focus of the conference lies on six fields where ICT technologies and tool play a crucial role to achieve the sustainability goals of the United Nations in context of the Agenda 2030 and to support societal transformation processes: Smart cities, Sustainable transportation and energy systems, Managing and mitigating climate change and extreme events, Sustainable resource management and circular economy, Health and food security, Open and transdisciplinary science, and Green Software Engineering.

This volume contains the short and work in progress papers of the conference that describe ongoing projects and initiatives which will help to solve these and many other environmental problems in the future.

The editors would like to thank all the contributors to the conference and these conference proceedings. Special thanks also go to the members of the programme and organizing committees. In particular, we would like to thank all those involved at the local organizer. Last, but not least, a warm thank you to our sponsors that supported the conference.

Rüdiger Schaldach,

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