Preface

Potentially dangerous environmental changes are happening in the atmosphere, oceans, animal habitats and places where hazardous materials are used, or have been discarded without adequate environmental protections. These increasing problems that also affect human health demand for interdisciplinary approaches where engineers, natural scientists, economists and computer scientists work together. Information technology has become significant to all scientific groups and fields involved in environmental engineering: Model based systems which enable the study of environmental changes have been developed and are being extended to manage those environments. New paradigms for designing objects to enable easy disassembly and recovery of components contribute to reuse. Web-based information systems enhance public awareness to environmental changes and allow participation in decision making. Developments in exploiting alternative energy sources are reducing dependence on non-renewable resources. Numerical economy-environment models contribute to cost-benefit analysis of environmental policy, and environmental monitoring and accounting systems facilitate market-based environmental regulation. Further advance is only possible if scientific teams have adequate experience, methods and tools for investigation of the changes in the environment. Success requires a high level of organization related to technical as well as scientific and human aspects of information handling. This book publishes the results of the ITEE 2007 conference where information about the topics above has been presented and discussed among environmental engineers, computer scientists and economists.

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Jorge Marx Gómez
Michael Sonnenschein
Martin Müller
Heinz Welsch
Claus Rautenstrauch
Editors

Prof. Dr. Jorge Marx Gómez
Carl von Ossietzky Universität Oldenburg
Fakultät für Informatik, Wirtschafts- und Rechtswissenschaften
Department für Informatik
Ammerländer Heerstr. 114-118
26129 Oldenburg
Germany
jorge.marx.gomez@uni-oldenburg.de

Prof. Dr. Michael Sonnenschein
Carl von Ossietzky Universität Oldenburg
Fakultät für Informatik, Wirtschafts- und Rechtswissenschaften
Department für Informatik
Ammerländer Heerstr. 114-118
26129 Oldenburg
Germany
michael.sonnenschein@informatik.uni-oldenburg.de

PD Dr. Martin Müller
Carl von Ossietzky Universität Oldenburg
Fakultät für Informatik, Wirtschafts- und Rechtswissenschaften
Institut für Betriebswirtschaftslehre und Wirtschaftspädagogik
Ammerländer Heerstr. 114-118
26129 Oldenburg
Germany
martin.mueller@uni-oldenburg.de
Prof. Dr. Heinz Welsch

Carl von Ossietzky Universität Oldenburg
Fakultät für Informatik, Wirtschafts- und Rechtswissenschaften
Institut für Volkswirtschaftslehre und Statistik
Ammerländer Heerstr. 114-118
26129 Oldenburg
Germany

welsch@uni-oldenburg.de

Prof. Dr. Claus Rautenstrauch

Otto-von-Guericke-Universität Magdeburg
Institut für Technische und Betriebliche Informationssysteme
Universitätsplatz 2
39106 Magdeburg
Germany

claus.rautenstrauch@iti.cs.uni-magdeburg.de
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Universitäts-Gesellschaft Oldenburg e.V. (UGO)
Postfach 49 01
26039 Oldenburg
Germany

EWE STIFTUNG
Stiftung des bürgerlichen Rechts
Tirpitzstraße 39
26122 Oldenburg
Germany

OFFIS e.V.
Escherweg 2
26121 Oldenburg
Germany

ifu Hamburg GmbH
Große Bergstraße 219
22767 Hamburg
Germany

Stadt Oldenburg
Wirtschaftsförderung
26105 Oldenburg
Germany

Carl von Ossietzky Universität Oldenburg
Fakultät für Informatik, Wirtschafts- und Rechtswissenschaften
Ammerländer Heerstr. 114-118
26129 Oldenburg
Germany
ICSC Interdisciplinary Research
(Head Office)
P.O. Box 279
Millet, Alberta T0C 1Z0
Canada
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