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EnviroInfo 2020

Environmental Informatics
New perspectives in Environmental Information
Systems: Transport, Sensors, Recycling

Adjunct Proceedings of the 34th
EnviroInfo conference

Nicosia, Cyprus, September 23-24, 2020

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Andreas Kamilaris · Volker Wohlgemuth · Kostas Karatzas
Ioannis Athanasiadis

Editors

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Preface

This book presents short papers and work in progress papers of the 34th edition of the long-standing and established international and interdisciplinary conference series on environmental information and communication technologies (EnviroInfo 2020).

The conference was held from 23 –24 September 2020 virtually. It was organized by the Research Centre on Interactive Media, Smart Systems and Emerging Technologies (RISE), Nicosia, Cyprus under the patronage of the Technical Committee on Environmental Informatics of the Gesellschaft für Informatik e.V. (German Informatics Society – GI). RISE is a research centre of excellence in Cyprus, aiming to empower knowledge and technology transfer in the region of South-East Mediterranean. It is a joint venture between the three public universities of Cyprus (University of Cyprus, Cyprus University of Technology and Open University of Cyprus), the Municipality of Nicosia, and two renowned international partners, the Max Planck Institute for Informatics, Germany, and, the University College London, United Kingdom.

Combining and shaping national and international activities in the field of applied informatics and environmental informatics, 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. A special focus of the conference was on digital twins and, in particular, the emerging research concept of digital twins for sustainability, where natural systems are twinned with digital replicas, to improve our understanding of complex socio-environmental systems through advanced intelligence. Sustainable digital twins of smart environments are also a flagship project of RISE.

This paper collection covers a broad range of scientific aspects including advances in core environmental informatics-related technologies, such as earth observation, environmental monitoring and modelling, big data and machine learning, robotics, smart agriculture and food solutions, renewable energy-based solutions, optimization of infrastructures, sustainable industrial/production processes, and citizen science, as well as applications of ICT solutions intended to support societal transformation processes toward the more sustainable management of resource use, transportation and energy supplies.

We would like to thank all contributors for their submissions. Special thanks also go to the members of the programme and organizing committees, for reviewing all submissions. In particular, we like to thank our local organizers at RISE who responded fast and generated a digital twin of the physical conference and hosted it online. We also deeply appreciate the help and support of the Environmental Informatics community that backed up our efforts to cope with

the COVID-19 pandemic and to have a stimulating and productive online event. Last, but not least, a warm thank you to our sponsors that supported the conference.

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Nicosia, December 2020

Table of Contents

PART I: TRANSPORT, MOBILITY AND LOGISTICS.....	11
IMPROVING DELAY FORECASTS IN PUBLIC TRANSPORT USING MACHINE LEARNING TECHNIQUES	13
DECENTRALIZED IDENTITY MANAGEMENT FOR DLT-BASED COOPERATION SUPPORT.....	22
MARKET-RELATED OPPORTUNITIES AND CHALLENGES FOR A DIGITAL PLATFORM MODEL AIMING AT SUSTAINABLE EXECUTION OF LAST-MILE LOGISTICS - A USE CASE OF B2C DELIVERIES IN GERMANY AND VIETNAM	33
VISUALIZATION OF GREENHOUSE GAS EMISSIONS FOR THE MEANS OF TRANSPORT AIRPLANE, CAR, TRAIN AND COACH BY USE OF ACCESSIBILITY GRAPHS.	44
HOW TO CONSOLIDATE SUSTAINABLE MOBILITY PLATFORMS IN RURAL AREAS?	52
BLOCKCHAIN-BASED ELECTRONIC RECORD BOOKS FOR TRANSPARENCY TO PREVENT MARINE POLLUTION...	62
PART II: ENVIRONMENTAL INFORMATION SYSTEMS.....	73
TOWARDS DECISION TREE BASED ASSISTANCE FUNCTIONS OF A CLOUD PLATFORM FOR ENVIRONMENTAL COMPLIANCE MANAGEMENT	75
INVESTIGATION OF TRAFFIC AND AIR POLLUTION IN THESSALONIKI, GREECE, UNDER ORDINARY AND COVID-19 PANDEMIC CONDITIONS	84
MACHINE LEARNING METHODS FOR APPROXIMATING THE TEMPERATURE OF EXTERIOR WALLS USING THERMAL IMAGES AND COLOUR IMAGES OF BUILDING FACADES.....	93
INDUCTION OF A FUZZY DECISION TREE FOR OPTIMIZING AIR QUALITY DATA MODELING	103
PIGFARM: DEVELOPING DECISION SUPPORT FOR THE PORK PRODUCTION INDUSTRY.....	109
AUTOMATED INVASIVE ALIEN SPECIES RECOGNITION: LESSONS LEARNED FROM APPLYING THE INATURALIST 2017 COMPUTER VISION MODEL ON CITIZEN-SCIENCE DATA	118
PART III: SENSORS AND INTERNET OF THINGS	127
PM _{2.5} LOW-COST SENSOR PERFORMANCE IN AMBIENT CONDITIONS.....	129
INTERCOMPARISON BETWEEN IOT AIR QUALITY MONITORING DEVICES FOR PM ₁₀ CONCENTRATION ESTIMATIONS	139
ECOSENSE AND ITS PRELIMINARY FINDINGS: COLLECTION AND ANALYSIS OF BICYCLE SENSOR DATA	145
TOWARDS A ROBUST ENSEMBLE MODELLING APPROACH TO IMPROVE LOW-COST AIR QUALITY SENSORS PERFORMANCE	154
ONLINE ENERGY FORECASTS FOR THE INTERNET OF THINGS	165
ANALYSIS AND MODELING OF LOW-COST AIR QUALITY SENSOR DATA TOWARDS THEIR COMPUTATIONAL IMPROVEMENT	175
PART IV: RECYCLING AND PLASTICS.....	183
MECHANICAL RECYCLING CONSIDERATIONS FOR RESPONSIBLE PLASTIC INNOVATION	185

ENGINEERING FOR A CIRCULAR ECONOMY: KEY FACTORS FOR THE DESIGN OF BIODEGRADABLE PLASTICS AND PLASTIC-DEGRADING ENZYMES.....	194
DATABASE DEVELOPMENT AND SPECIAL CONSIDERATIONS FOR STORING POLYMER FATE INFORMATION ..	209
DEVELOPING A PRELIMINARY DATA STRUCTURE TO ASSESS PLASTICS IN FRESHWATER ENVIRONMENTS	216
A DATABASE ON THE HEALTH RISKS OF PLASTICS	223
AUTHORS DIRECTORY	231