

Table of Contents

KEYNOTES.....	1
HOW INTEGRATING MODELS AND SENSORS CAN BRIDGE THE GAPS TOWARDS A HOLISTIC ASSESSMENT OF ENVIRONMENTAL AND PUBLIC HEALTH.....	3
<i>Stefan Reis</i>	
CLOSING THE GAP: CONNECTING ENVIRONMENTAL INFORMATICS TO THE PEOPLE WHO REALLY NEED IT	7
<i>Steven P. Frysinger</i>	
SATELLITE REMOTE SENSING BASED TOOLS AND APPLICATIONS FOR ENVIRONMENTAL ASSESSMENT	13
COPERNICUS DATA LOOKING FOR APPLICATIONS - OPPORTUNITIES FOR ENVIRONMENTAL INFORMATICS	15
<i>Patrik Hitzelberger, Paulo Carvalho</i>	
SENTHIS – SENTINELS OF THURINGIAN INFORMATION SYSTEMS.....	21
<i>Sandra Naue, Peter Krause</i>	
SUSTAINABLE MOBILITY	27
INTEGRATION OF INCLUSIVENESS INTO SUSTAINABLE MOBILITY PLANNING FOR SMALL MUNICIPALITIES	29
<i>Petra Busswald, Franz Niederl, Bente Knoll, Roswitha Hoffmann, Ralf Dopheide</i>	
WHAT DRIVES PROFITABILITY OF ELECTRIC VEHICLES IN MIXED FLEETS? – AN EMPIRICAL ANALYSIS BASED ON DATA LOGGER INFORMATION	35
<i>Daniela Mau, Jonas Tostmann, David M. Woisetschläger, Nadine Pieper</i>	
TOWARDS A SUSTAINABLE SOFTWARE ARCHITECTURE FOR THE NEMO MOBILITY PLATFORM	41
<i>Jan Jelschen, Christoph Küpker, Andreas Winter, Alexander Sandau, Benjamin Wagner vom Berg, Jorge Marx Gómez</i>	
PRODUCT ACCEPTANCE BY SERVICE USAGE – THE IMPACT OF E-CARSHARING ON THE PERCEPTION OF ELECTRIC VEHICLES.....	49
<i>Christoph Weiß, David M. Woisetschläger</i>	
ENVIRONMENTAL MANAGEMENT INFORMATION SYSTEMS (EMIS).....	53
TOWARD GREEN DECISION MAKING THROUGH DECISION EVALUATION SYSTEM.....	55
<i>Abdelkerim Rezgui, Jorge Marx Gómez</i>	
HISTORY	65

THE EMISSION BALANCE OF HUGO RITTER VON PERGER	67
<i>Susanne G. Draxler and Gerald J. Benz</i>	
SEMANTIC NETWORK SERVICE – RELAUNCH AFTER 15 YEARS	73
<i>Joachim Fock, Thomas Bandholtz, Marc Jansing</i>	
MORE THAN TWO DECADES OF GENERIC APPROACH FOR DATABASE APPLICATIONS IN THE ENVIRONMENTAL FIELD	79
<i>Ulrich Hussels, Alexios Camarinopoulos, Sephanos Camarinopoulos, Georgios Pamboukis, Theodora Karali</i>	

8. BUIS-TAGE: 18. TAGUNG DER FACHGRUPPE BETRIEBLICHE UMWELTINFORMATIONSSYSTEME DER GESELLSCHAFT FÜR INFORMATIK E.V. 85

MOPS – AKTUELLE ENTWICKLUNGSTENDENZEN BEI DER MOBILEN SOFTWARETECHNISCHEN UNTERSTÜTZUNG EINES PROZESSORIENTIERTEN STOFFSTROMMANAGEMENTS IN KMU.....	87
<i>Maximilian Schneider, Volker Wohlgemuth</i>	
POTENTIALE UND HERAUSFORDERUNGEN EINES INTERAKTIVEN KENNZAHLENDITORS FÜR EINE STAKEHOLDERORIENTIERTE NACHHALTIGKEITSBERICHTERSTATTUNG	93
<i>Andreas Solsbach, Barbara Rapp, Jorge Marx Gómez</i>	
PROTOTYPISCHE UMSETZUNG EINER WEBANWENDUNG ZUR BEURTEILUNG VON STOFF- UND ENERGIESTRÖMEN AM STANDORT BERLIN-SCHÖNEWEIDE	99
<i>Jeffrey Große, Andrej Matusevicius, Volker Wohlgemuth</i>	
EVALUATION EINES METHODENBAUKASTENS ZUR RISIKOINTEGRIERTEN VERBESSERUNG VON PROZESSEN DES OFFSHORE WINDPARK-BETRIEBS.....	107
<i>Saskia Greiner, Jorge Marx Gómez, Henning Albers</i>	

ENVIRONMENTAL INFORMATICS – ENVISION CONCEPTS, PRESENT APPROACHES AND DISCUSS IMPLEMENTATIONS (PHD WORKSHOP) 113

ADAPTIVE DAY-AHEAD PLANNING FOR PCU-SUPPORTED ELECTRIC VEHICLES.....	115
<i>Dominik Schöner</i>	

DISASTER MANAGEMENT FOR RESILIENCE AND PUBLIC SAFETY..... 121

DEVELOPING SCENARIOS FOR THE COORDINATION OF CIVILIAN HELPERS	123
<i>Agnetha Schuchardt, Roman Peperhove</i>	
ENSURE – INCREASING RESILIENCE THROUGH THE INVOLVEMENT OF VOLUNTARY HELPERS.....	131

Michael Jendreck, Ulrich Meissen, Michel Rösler, Eridy Lukau, Frank Fuchs-Kittowski

EMERGENCE AS A CHARACTERISTIC OF RESILIENT COOPERATION TECHNOLOGIES 141

Christian Reuter

CHALLENGES IN INVESTING INTO ALERTING SYSTEMS UNDER BUDGETARY AND GEOGRAPHICAL CONSTRAINTS 145

Michael Klaffi

RECEPTION OF TERROR IN GERMANY – SECURITY, PRIVACY AND SOCIAL MEDIA 151

Christian Reuter, Robin Gellert, Gordian Geilen

CONVERSTATIONS I..... 157

DIGITAL PLATFORM FOR ELECTRICITY AND MOBILITY: UNIFYING THE TWO DOMAINS.. 159

Olga Levina

DESIGN PATTERNS IN MATERIAL AND ENERGY FLOW NETWORK MODELS 165

Christian Hasenstab

LAND CAPABILITY CLASSIFICATION - ASSESSMENT OF CARRYING CAPACITY AND UTILIZATION INTENSITY 171

Ahmed Harb Rabia

VALUATION OF STORAGE UNDER ZONAL PRICING MARKET STRUCTURE – CASE STUDY: ITALY..... 177

Bogdan Oprescu, Sylvain Quoilin

GIS-BASED ANALYSIS OF MOBILITY DATA OF COURIERS IN BERLIN CONCERNING VEHICLE TYPE AND DISTRICT..... 187

Christoph Bork, Lars-Benjamin Neupert, Jochen Wittmann

INFORMATION AND GAMING WEB-APPLICATION SUPPORTING ENERGY EFFICIENT RENOVATION PROCESS IN AN ENERGETICALLY OUTDATED SOCIAL RESIDENTIAL AREA .. 191

Grit Behrens, Sven Alexander Ertelt, Florian Steckel, Fabian Witthaus, Frank Hamelmann, Thorsten Försterling

EVALUATION OF MESSENGER DESIGN: RELATION OF DESIGN-QUALITY AND SUCCESS . 197

Peter Kretschmer, Hristo Koychev, Hans-Knud Arndt

SPE-SOA: TOWARDS RESOURCE CONSUMPTION-AWARE MIGRATION TO CLOUD BASED APPLICATIONS 205

Ola Wasef Mustafa, Jorge Marx Gómez

VIEWPOINTS FOR SENSOR BASED ENVIRONMENTAL INFORMATION SYSTEMS 211

Ruthbetha Kateule, Andreas Winter

SUSTAINABLE HUMAN DEVELOPMENT: A CONCEPTUAL MODEL FOR TRANSDISCIPLINARY ANALYSIS	219
--	-----

Stanislas Bigirimana

AN INTEROPERABLE GEOSPATIAL SMART CITY AND REGION PLATFORM BASED ON iGUESS®.....	225
--	-----

Christian Braun, Ulrich Leopold

CONVERSTATIONS II	231
--------------------------------	------------

MOBILE CROWDSOURCING OF WATER LEVEL DATA.....	233
---	-----

Frank Fuchs-Kittowski, Sarah Bartusch, Bernd Pfützner, Fabian Fischer

OFFSHORE WIND FARM MAINTENANCE DECISION SUPPORT	241
---	-----

Fariba Mostajeran, Philip Joschko, Johannes Göbel, Bernd Page, Silke Eckardt, Torsten Renz

TRADEOFFS BETWEEN QOS AND ENERGY CONSUMPTION IN SDN NETWORKS AND THE DESIGN OF EQCONTROLLER.....	249
--	-----

Ammar AlSous, Jorge Marx Gómez

DECISION SUPPORT WITH WEATHER STATISTICS AND SIMULATION SOFTWARE FOR OFFSHORE WIND FARMS	255
--	-----

Dirk Bendlin, Jorge Marx Gómez, Gerrit Wolken-Möhlmann

EFFECT OF ZINC ON PIGMENTS CONTENT IN THREE NAVY BEAN (PHASEOLUS VULGARIS L.) VARIETIES GROWN IN SAND CULTURE.....	263
--	-----

Ahmed Harb Rabia

GROUNDWATER MONITORING AT THE AIRPORT BERLIN-TEGEL (TXL).....	269
---	-----

Maximilian Dolling, Martin Engelmann, Jochen Wittmann

ERGONOMIC SOFTWARE DEVELOPMENT CONSIDERING SUSTAINABLE PHILOSOPHY	275
---	-----

Roksolana Pleshkanovska, Hans-Knud Arndt

A NEW APPROACH FOR SUSTAINABILITY OF SUSTAINABLE REPORTS	281
--	-----

Stefanie Lehmann, Peter Krummhaar, Hans-Knud Arndt

HEALTH-FOOD SHOPS AND VEGAN RESTAURANTS IN BERLIN IN CORRELATION WITH SELECTED SOCIAL FACTORS	287
---	-----

Katrin Bielert, Caroline Ganzel, Maria Ressel, Maria Sarah Wersche, Jochen Wittmann

WILL IT FIT? – A PRACTICE-ORIENTED APPROACH TO REDUCE CO2 EMISSIONS IN PARCEL SERVICE.....	293
--	-----

Stefan Wunderlich, Gerrit Berghaus, René Kessler, Alexander Sandau

LIFE CYCLE ASSESSMENT AND ICT.....	299
METHODOLOGICAL IMPLICATIONS OF TRACKING UNCERTAINTY FROM AN AGENT BASED MODEL TO A LIFE CYCLE IMPACT ASSESSMENT	301
<i>Paul Baustert, Tomás Navarrete Gutiérrez, Antonino Marvuglia</i>	
DESIGN, SUSTAINABILITY & ICT	307
TOWARDS AN OPEN PLATFORM FOR ESTABLISHING SUSTAINABLE ICT PRODUCTS	309
<i>Jad Asswad, Georg Hake, Jorge Marx Gómez</i>	
ENERGY AWARE SOFTWARE – ENGINEERING AND DEVELOPMENT	315
BENCHMARKING THE ENERGY CONSUMPTION OF SOFTWARE SYSTEMS	317
<i>Christian Bunse</i>	
OLIVIAMD – A SUPPORTIVE ONLINE PLATFORM FOR THE VISUALIZATION AND ANALYZATION OF MEASUREMENT DATA	323
<i>Dominik Trumm, Andreas Filler, Eva Kern, Stefan Naumann</i>	
THE NARROW WAY: CONSTRUCTIVE MEASURES AT OPERATING-SYSTEM LEVEL FOR LOW ENERGY USE.....	329
<i>Timo Hönig, Benedict Herzog, and Wolfgang Schröder-Preikschat</i>	
TEEC: IMPROVING POWER CONSUMPTION ESTIMATION OF SOFTWARE	335
<i>Hayri Acar, Gülfem I. Alptekin, Jean-Patrick Gelas, Parisa Ghodous</i>	
ENERGY AND WATER SYSTEMS.....	343
A BENCHMARKING METHODOLOGY TO IDENTIFY FAIR CONTRIBUTIONS OF DIFFERENT REGIONS TO THE ENERGY TRANSITION	345
<i>Günter Wind, Ernst Schriebl, Horst Lunzer, Petra Busswald, Franz Niederl</i>	
ENERGY SYSTEM MODELLING – BARRIERS, CHALLENGES AND GOOD PRACTICE IN OPEN SOURCE APPROACHE	353
USING MODELLING APPROACHES TO IMPROVE RENEWABLE ENERGY PRODUCTION IN THE REGIONAL SECTOR	355
<i>Mohamad Hamed, Jorge Marx Gómez</i>	
THE CORE CONCEPT OF THE OPEN ENERGY MODELLING FRAMEWORK (OEMOF).....	361
<i>Clemens Wingebach, Simon Hilpert, Stephan Günther</i>	
HESYSOFT – AN OPTIMIZATION TOOL SUPPORTING DISTRICT HEATING SYSTEM FLEXIBILISATION.....	367
<i>Simon Hilpert</i>	

EVALUATION OF REGIONAL CO ₂ REDUCTION STRATEGIES IN THE HEATING SECTOR USING OPEN MODELS AND OPEN DATA – EXAMPLE: BERLIN	373
--	-----

Uwe Krien, Berit Müller

UMWELTINFORMATIONSSYSTEME – STRATEGISCHE INSTRUMENTE DES NACHHALTIGEN UMWELT- UND KLIMASCHUTZES..... 381

OPEN DATA - VISION ODER REALITÄT DIE SICHT DER UMSETZUNG IN EINER BUNDESBEHÖRDE	383
--	-----

Gerlinde Knetsch

AUF DEM WEG ZUM LINKED DATA AM BEISPIEL DES GSBL (INFORMATIONSSYSTEM CHEMIKALIEN DES BUNDES UND DER LÄNDER).....	389
---	-----

Gunnar Minx

MONITORING IM KOMMUNALEN KLIMASCHUTZ	393
--	-----

Franz Niederl, Petra Busswald, Stefan Schäfer, Jan Schwarz, Dag Schulze

GREEN IT – NACHHALTIGKEIT VON SMARTPHONE BIS RECHENZENTRUM	397
--	-----

Erik Heyden

MODERNE GIS-INFRASTRUKTUR UND SERVICES FÜR DIE UMWELT.....	401
--	-----

Stefan Weinberger, Mark Vetter

WATERBODY AND NUTRIENT INFORMATION SYSTEM SCHLESWIG-HOLSTEIN.....	407
---	-----

Friedhelm Hosenfeld, Michael Trepel, Johannes Tiffert

AKTUELLE WEITERENTWICKLUNGEN VON CADENZA MOBILE FÜR DAS MOBILE ARBEITEN MIT GEODATEN IN DER ÖFFENTLICHEN VERWALTUNG	413
--	-----

Jens Lübke, Boris Terzic, Andreas Abecker, Claus Hofmann, Wassilios Kazakos

ENVIRONMENTAL HEALTH INFORMATICS..... 419

INFLUENCE OF INTERNATIONAL TRADE ON REGIONAL HUMAN DEVELOPMENT AND RELATIONSHIP WITH ENVIRONMENTAL AND HEALTH IMPACTS.....	421
---	-----

Thomas Gibon, Antonino Marvuglia, Enrico Benetto

GIS-BASED ANALYSIS OF THE AIR AND NOISE POLLUTION OF BERLINS ALLOTMENT GARDENS	429
---	-----

Vladimir Degtiar, Karsten Fuhrmann, Jochen Wittmann

GERMANY SURROUNDED BY IONIZING RADIATION SOURCES FROM AGING NUCLEAR POWER PLANTS - UPDATE OF FRENCH DATA 2012 - 2014	437
---	-----

Hagen Scherb, Kristina Voigt

ABOUT RENTAL PRICES AND AIR QUALITY, A CORRELATION	443
--	-----

Florian Hübner, Lisa-Kristin Richter, Jochen Wittmann

ICT ROLE IN FOOD SECURITY AND FOOD SAFETY	449
<i>Walter Armbruster, Margaret MacDonell</i>	
ENVIRONMENTAL INFORMATICS AND ECONOMICAL ASPECTS	457
DYNAMIC MODELING FRAMEWORK FOR ANTHROPOGENIC STOCKS AND FLOWS TO ENHANCE THE CIRCULAR ECONOMY.....	459
<i>Felix Müller, Ingo Meinshausen & Andreas Möller</i>	
THE CO2 EMISSION PERMITS MARKET SIMULATION USING CONTINUOUS DOUBLE AUCTION	467
<i>Jaroslav Stanczak, Pawel Bartoszczuk</i>	
SYSTEMS THINKING FOR SUSTAINABLE DEVELOPMENT: RETHINKING BUSINESS PERFORMANCE	475
<i>Stanislas Bigirimana</i>	
ECOINNOVATION MODELING: POLISH APPROACH	481
<i>Pawel Bartoszczuk</i>	
THE POLITICAL AND ECONOMIC POWER OF OPEN ENVIRONMENTAL INFORMATION	489
<i>Werner Pillmann, Rudolf Legat</i>	
ON THE IMPORTANCE OF SYSTEMS METHODS AND SYSTEMS ANALYSIS IN ENVIRONMENTAL RESEARCH	497
THE VALUE OF SCIENTIFIC INFORMATION ON CLIMATE SENSITIVITY UNCERTAINTY	499
<i>Shunsuke Mori and Hideo Shiogama</i>	
SALINIZATION MODELING AS AN IMPACT OF IRRIGATION SYSTEM MODERNIZATION: FROM SURFACE TO DRIP IRRIGATION	507
<i>Ahmed Harb Rabia</i>	
AUTHOR INDEX	513