11th International Conference on Smart Cities and Green ICT Systems (SMARTGREENS 2022)

Online
27 - 29 April 2022

Editors:

Cornel Klein
Matthias Jarke

ISBN: 978-1-7138-5301-5

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571

Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2022) by SCITEPRESS – Science and Technology Publications, Lda.
All rights reserved.

Printed with permission by Curran Associates, Inc. (2022)

For permission requests, please contact SCITEPRESS – Science and Technology Publications, Lda.
at the address below.

SCITEPRESS – Science and Technology Publications, Lda.
Avenida de S. Francisco Xavier, Lote 7 Cv. C,
2900-616 Setúbal, Portugal

Phone: +351 265 520 185
Fax: +351 265520 186

info@scitepress.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

CONTENTS

INVITED SPEAKERS

KEYNOTE SPEAKERS

The Right to the Smart City
Rob Kitchin 5

Cities, Intelligent Energy Networks and the Decarbonisation of Built Environments: Do These Climate Change Adaptations Keep 1.5 Alive?
Mark Deakin 7

Autonomous Vehicles: Wireless Networking for Cooperative Maneuvering
Alexey Vinel 9

PAPERS

FULL PAPERS

End-user Development for Smart Spaces: A Comparison of Block and Data-flow Programming
Marcel Altendeitering and Sonja Schimmler 15

Modeling of Power Supply Systems Equipped with Double Two Wires and Earth Transmission Lines
Yuri Bulatov, Andrey Kryukov, Le Van Thao, Konstantin Suslov and Tran Duy Hung 23

Energy-Aware Deep Learning for Green Cyber-Physical Systems
Supadchaya Puangpontip and Rattikorn Hewett 32

Indirect Network Impact on the Energy Consumption in Multi-clouds for Follow-the-renewables Approaches
Miguel Felipe Silva Vasconcelos, Daniel Cordeiro and Fanny Dufossé 44

Evaluation of Smart City Models: A Conceptual and Structural View
Leonard Walletzký, Odonchimeg Bayarsaikhan, Mouzhi Ge and Zuzana Schwarzová 56

SHORT PAPERS

SP4LC: A Method for Recognizing Power Consumers in a Smart Plug
Dániel István Németh and Kálmán Tornai 69

Accelerated Variant of Reinforcement Learning Algorithms for Light Control with Non-stationary User Behaviour
Nassim Haddam, Benjamin Cohen Boulakia and Dominique Barth 78

Simulating Weather Events on a Real-world Map using Unity 3D
Hamza Noueihed, Heba Harb and Joe Tekli 86

Apply Deep Learning in Real-time Customer Detection and Classification System for Advertisement Decision Making at Supermarket
Dang Thi Phuc, Dau Sy Hieu, Nguyen Manh Hoang and Tran Thi Minh Khoa 94

Planning and Design Challenges for Smart Infrastructures: The Chiloé Island Case
Stefania Pareti, David Flores, Loreto Rudolph and Martina Pareti 103

Privacy-preserving Information Security for the Energy Grid of Things
Mohammed Alsaid, Nirupama Bulusu, Abdullah Bargouti, N. Sonali Fernando, John M. Acken, Tylor Slay and Robert B. Bass 110

Smart Energy Buildings: PV Integration and Grid Sensitivity for the Case of Vietnam
Wolfram Heckmann, Nguyen Huu Duc, Dayana del Carmen Granford Ruiz, Siddhi Shrikant Kulkarni and Nguyen Ngoc Van 117

Value Proposition for Smart Retrofit Solutions
Aditya Mairal, Michael Muller and Todd Rossi 125

ETAP Simulations of Adaptive Overcurrent Protection Scheme for Distribution Network with Microgrids
Paul Jacob Palayil, Ishan Desai and Divyesh Mangroliya 130

Application of AI-based Image Processing for Occupancy Monitoring in Building Energy Management
Andreas Reichel, Jens Döge, Dirk Mayer and Jan Bräunig 139

BIKE2WORK: A Shift Towards Sustainable Mobility
Antonio Bucchiarone, Annapaola Marconi, Piergiorgio Cipriano and Luca Giovannini 147

DECART: Planning for Decarbonising Transport Sector with Predictive Analytics - An Irish Case Study
Meghana Kshirsagar, Gauri Vaidya, Shravani Rajguru, Pruthviraj Jadhav, Hrushabh Kale, Nishanth Shanmugam, Conor Ryan and Vivek Kshirsagar 157

Smart Cities: The Role of Entrepreneurship for Urban Leftover Spaces
Jasim Azhar and Sidra Ahmed Qureshi 165

AUTHOR INDEX 173