

14th International Joint Conference on Knowledge Discovery, Knowledge Engineering and Knowledge Management (IC3K 2022)

Volume 3: KMIS

Valletta, Malta
24 – 26 October 2022

Editors:

**Jorge Bernardino
Elio Masciari**

**Colette Rolland
Joaquim Filipe**

ISBN: 978-1-7138-6401-1

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. (2023)

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

- Relations, Events, and Explanation
Giancarlo Guizzardi 5
- Self-Reflective Hybrid Intelligence: Combining Human with Artificial Intelligence and Logic
Catholijn Jonker 7
- Probabilistic Graphical Models: On Reasoning, Learning, and Revision (Extended Abstract)
Rudolf Kruse 9

INVITED LECTURES

- International Expert Mapping
Bart Verheijen 13

PAPERS

FULL PAPERS

- Stream Data Access Control Model: The Need for Data Semantics
Theppatorn Rhujittawiwat, Ahmed Saadi and Csilla Farkas 19
- Characteristics in Digital Organizational Culture: A Literature Review
Seyma Kocak and Jan Pawlowski 31
- Maturity Model for Assessment of Personalization of Higher Education
Mariia Rizun and Małgorzata Pańkowska 43
- Decision Support for Production Control based on Machine Learning by Simulation-generated Data
Konstantin Muehlbauer, Lukas Rissmann and Sebastian Meissner 54
- Putting FAIR Principles in the Context of Research Information: FAIRness for CRIS and CRIS for FAIRness
Otmane Azeroual, Joachim Schöpfel, Janne Pölönen and Anastasija Nikiforova 63
- Drones for Civil Defense: A Case Study in the City of Niterói
Carlos Alberto Malcher Bastos, Diego Passos, Wallace Medeiros Barbosa, Yuri Sisino Dos Santos Felipe, Thais Belloti Loureiro, Gilvane Dos Santos Dias and Fernanda G. O. Passos 72
- Exploring the Test Driven Development of a Fraud Detection Application using the Google Cloud Platform
Daniel Staegemann, Matthias Volk, Maneendra Perera and Klaus Turowski 83
- Innovation in Boutique Hotels in Valletta, Malta: A Multi-level Investigation
Kristina Buhagiar 95

SHORT PAPERS

| | |
|---|-----|
| A Process Model for Test Driven Development in the Big Data Domain <i>Daniel Staegemann, Matthias Volk, Naoum Jamous and Klaus Turowski</i> | 109 |
| Stakeholder's Perceptions of Value and Risks in Data Governance for the Secondary Use of Health Data <i>Hannu Nieminen, Rima Sermontyte-Baniule and Nina Helander</i> | 119 |
| State of Knowledge-based Management in Project Networks: Case in Finnish Infrastructure Construction Sector <i>Viivi Siuko, Jussi Myllärniemi and Pasi Hellsten</i> | 126 |
| Decision Making with Clustered Majority Judgment <i>Emanuele D'ajello, Davide Formica, Elio Masciari, Gaia Mattia, Arianna Anniciello, Cristina Moscariello, Stefano Quintarelli and Davide Zaccarella</i> | 134 |
| Providing Clarity on Big Data: Discussing Its Definition and the Most Relevant Data Characteristics <i>Matthias Volk, Daniel Staegemann and Klaus Turowski</i> | 141 |
| Consequences of COVID-19 Lockdown on Lebanese Adolescents' Experience of eLearning: A Call to Action <i>Nadine Daibess, Nabil Georges Badr, Joumana Yeretizian and Michele Asmar</i> | 149 |
| Identifying and Assessing Knowledge Gaps in ISO 9001 Certified SMEs using a Knowledge Audit Framework <i>Arno Rottensteiner and Christian Ploder</i> | 158 |
| Knowledge Management and Benchmarking for Health Care System Development Activities <i>Annamaija Paunu, Hannele Väyrynen and Nina Helander</i> | 163 |
| A Semantic Approach for Generating Graphical Representation from Aircraft Maintenance Text <i>Thi-Bich-Ngoc Hoang, Ba-Huy Tran and Marzieh Mozafari</i> | 169 |
| ADmed: An Adaptive Technical Process for the Agile Development of Medical Devices <i>Maren Martens, Anna Schidek, Markus Schmidtner and Holger Timinger</i> | 177 |
| Cross-university Platforms as an Enabler for Knowledge Management and Transfer <i>Claudia Doering, Finn Reiche and Holger Timinger</i> | 185 |
| Sharing Knowledge in the Social Media Era: Strengths and Weaknesses for Knowledge Workers <i>Kamla Ali Al-Busaidi and Ibtisam Al-Wahaibi</i> | 192 |
| Virtual Reality (VR) Technology Integration in the Training Environment Leads to Behaviour Change <i>Amy Rosellini</i> | 200 |
| A Novel Explainable and Health-aware Food Recommender System <i>Merhrdad Rostami, Vahid Farahi, Kamal Berahmand, Saman Forouzandeh, Sajad Ahmadian and Mourad Oussalah</i> | 208 |
| From Server-based to Web-based Translation Memory Systems: Benchmarking, Testing and Implementation in STAR7 <i>Enrico Giai, Nicola Poeta and David Turnbull</i> | 216 |
| Building a Data Literate Business Workforce <i>Marketa Smolnikova</i> | 221 |

| | |
|---|-----|
| Intelligent Decision Support System for Precision Medicine: Time Series Multi-variable Approach for Data Processing <i>Nasim Sadat Mosavi and Manuel Filipe Santos</i> | 231 |
| Empirical Evaluation of BPMN Extension Language <i>Azeem Lodhi, Gunter Saake and Klaus Turowski</i> | 239 |
| AUTHOR INDEX | 249 |