# 7th International Conference on Complexity, Future Information Systems and Risk (COMPLEXIS 2022)

Online 23 - 24 April 2022

## **Editors:**

Min Xie Reinhold Behringer Victor Chang

ISBN: 978-1-7138-5290-2

### 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  $\ \bigcirc \ (2022)$  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	CDE A	KEDS
KEYNOTE	SPEA	KERS

Event Detection and Classification in Big IoT Networks from Scarce and Imprecise Labels Zoran Obradovic	5
Neoteric Frontiers in Cloud and Edge Computing Rajkumar Buyya	7
Machine Learning for Decision Support in Complex Environments  Jie Lu	ç
PAPERS	
FULL PAPERS	
Automated Narratives: On the Influence of Bots in Narratives during the 2020 Vienna Terror Attack Lisa Grobelscheg, Ema Kušen and Mark Strembeck	15
Non-linear Black-Scholes Option Pricing Model based on Quantum Dynamics  Marcin Wróblewski and Andrzej Myślinski	26
Dynamics of Personal Responses to Terror Attacks: A Temporal Network Analysis Perspective Ema Kušen and Mark Strembeck	36
SHORT PAPERS	
Systematic Review on Cybersecurity Risks and Behaviours: Methodological Approaches Eliza Oliveira and Vania Baldi	49
Consultation to Effectiveness and Logical Meaning Susumu Yamasaki and Mariko Sasakura	57
The Hybrid Model of Broken Agile Transformation in Big Telco Corporations Dragan Stankovski, Tsvyatko Dobrinov Bikov and Dimitar Ivanov Radev	65
CLIP Augmentation for Image Search  Ingus Janis Pretkalnins, Arturs Sprogis and Guntis Barzdins	71
A Computational Pipeline for Modeling and Predicting Wildfire Behavior Nuno Fachada	79
Extracting Mass Transportation Networks from General Transit Feed Specification Datasets Gergely Kocsis and Imre Varga	85
Moving Other Way: Exploring Word Mover Distance Extensions  Ilya S. Smirnov and Ivan P. Yamshchikov	92
Attention! Transformer with Sentiment on Cryptocurrencies Price Prediction  Huali Zhao, Martin Crane and Marija Bezbradica	98

Sustainability and Goal Fitness Index for the Analysis of Sustainable Development Goals:	Α	
Methodological Proposal		105
Sanny González, Gabriel Pereira and Arturo González		
Machine Learning Techniques for Breast Cancer Detection  Karl Hall, Victor Chang and Paul Mitchell		116
AUTHOR INDEX		123