

European Conference on the Impact of Artificial Intelligence and Robotics (ECIAIR 2019)

Oxford, United Kingdom
31 October – 1 November 2019

Editors:

**Paul Griffiths
Mitt Nowshade Kabir**

ISBN: 978-1-5108-9904-9

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 The Authors, (2019). All Rights Reserved. No reproduction, copy or transmission may be made without written permission from the individual authors.

Printed with permission by Curran Associates, Inc. (2020)

Review Process

Papers submitted to this conference have been double-blind peer reviewed before final acceptance to the conference. Initially, abstracts were reviewed for relevance and accessibility and successful authors were invited to submit full papers. Many thanks to the reviewers who helped ensure the quality of all the submissions.

Ethics and Publication Malpractice Policy

ACPIL adheres to a strict ethics and publication malpractice policy for all publications – details of which can be found here:

<http://www.academic-conferences.org/policies/ethics-policy-for-publishing-in-the-conference-proceedings-of-academicconferences-and-publishing-international-limited/>

Conference Proceedings

The Conference Proceedings is a book published with an ISBN and ISSN. The proceedings have been submitted to a number of accreditation, citation and indexing bodies including Thomson ISI Web of Science and Elsevier Scopus.

Author affiliation details in these proceedings have been reproduced as supplied by the authors themselves.

Published by Academic Conferences and Publishing International Ltd.
33 Wood Lane
Sonning Common RG4 9SJ UK

Phone: 441 189 724 148
Fax: 441 189 724 691
info@academic-conferences.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

Paper Title	Author(s)	Page No
Preface		v
Committee		vi
Biographies		viii
Research papers		
Towards a Framework for Effective Instructor-AI Collaboration in Education	Mamun Ala and Danilo Wegner	1
Artificial Intelligence Policy in China: Implications and Challenges	Rafif Al-Sayed and Jianhua Yang	12
Terrorism and DeepFake: from Hybrid Warfare to Post-Truth Warfare in a Hybrid World	Arije Antinori	23
Innovative Approaches in Russian Education: a Model of Adaptive Learning Process Based on Artificial Intelligence	Alexey Bataev, Olga Zaborovskaia and Alexandr Gorovoy	31
JELLYBEANBOT: A Dynamic Low Cost Robotics Shield for Education	Romeo Botes	40
Attitudes of the Net Generation when Learning to Program Robots	Romeo Botes and Imelda Smit	50
Measuring Computer Science Students' Acceptance of Arduino Micro Development Boards as Teaching Tool	Romeo Botes and Malie Zeeman	61
Who Should Be the Boss? Machines or a Human?	Jim Q. Chen	71
AI Ethics: The Thin Line between Computer Simulation and Deception	Larry J. Crockett	80
The Effects of Artificial Intelligence, Robotics, and Industry 4.0 Technologies. Insights from the Healthcare Sector	Francesca Dal Mas, Daniele Piccolo, Lorenzo Cobianchi, Leif Edvinsson, Gareth Presch, Maurizio Massaro, Miran Skrap, Antonjaco Ferrario di Tor Vajana, Stanislao D'Auria, Carlo Bagnoli	88
Case-Based Reasoning (CBR) and Neural Networks for Complex Problems	Souâd Demigha	96
Case-Based Reasoning (CBR) and Robotics	Souâd Demigha	106
Integrating Machine Learning Algorithms in the Engineering of Weaponized Malware	Chuck Easttom	113
On the Relationship of Emergence and Non-Linear Dynamics to Machine Learning and Synthetic Consciousness	Chuck Easttom	122
The Potential Influence of Artificial Intelligence on Plagiarism: A Higher Education Perspective	Errol Francke and Bennett Alexander	131

Paper Title	Author(s)	Page No
The Impact of AI on Employment and Organisation in the Industrial Working Environment of the Future	Swetlana Franken and Malte Wattenberg	141
Artificial Intelligence in Education: a Promise, a Threat or a Hype?	Niklas Humble and Peter Mozelius	149
Teacher-Supported AI or AI-Supported Teachers?	Niklas Humble and Peter Mozelius	157
Laws about Laws: Lethality, Autonomy and Sovereignty in a 21st Century Perspective	Ion A. Iftimie, Elias G. Carayannis and Michele C. A. Iftimie	165
A Bibliometric Analysis Deconstructing Research on how Digitalization Transforms Knowledge Worker Autonomy	Henry Isegran, Mats Kuvane and Karl Joachim Breunig	172
Artificial Intelligence-based Digital Transformation Strategy in Higher Education Institutions	Mitt Nowshade Kabir	182
Whether and How Artificial Intelligence Will Change Education and the School System	Mariusz Kakolewicz	191
Artificial Intelligence, Knowledge Management and Human Vulnerability	John Kingston	198
RethinkAI™: Designing the Impact of AI in the Future of Work	Vali Laloti	205
An Approach for Enterprise Architects to Analyse Opportunities and Constraints for Applying Artificial Intelligence in Military Transformations	Juha Mattila and Simon Parkinson	215
Training Data and Rationality	Konstantinos Mersinas, Theresa Sobb, Char Sample, Jonathan Z. Bakdash and David Ormrod	225
Choice, Agency, and Dignity in the age of Artificial Intelligence	Yuko Murakami	233
Malicious Use of Artificial Intelligence: Challenging International Psychological Security	Evgeny Pashentsev	238
Harnessing Interdisciplinarity to Promote the Ethical Design of AI Systems	Menisha Patel, Helena Webb, Marina Jirotko, Alan Davoust, Ross Gales, Michael Rovatsos and Ansgar Koene	246
Is Artificial Intelligence Disruptive?	Olga Polunina	255
Possible Use of AI Technologies in Counterterrorism Responses by Iraqi Security Establishment	Vitali Ramanouski	261
Robotics and Artificial Intelligence (R+AI) Solutions: Displacing or Augmenting Professional Capabilities?	Olga Rivera-Hernaez, David Lopez-Lopez and José-Miguel Zaldo-Santamaria	266
AI in Smart Cities Development: A Perspective of Strategic Risk Management	Eduardo Rodriguez and John S. Edwards	277

Paper Title	Author(s)	Page No
AI, RPA, ML and Other Emerging Technologies: Anticipating Adoption in the HRM Field	Juha Saukkonen, Pia Kreis, Nora Obermayer, Óscar Rodríguez Ruiz and Maija Haaranen	287
Racist Soapdishes and Rebellious (?) Children: Towards Human/AI Cooperation	Keith Scott	297
Artificial Intelligence for Analysis of Collaborative Consumer Networks Management	Elena Serova	304
Blockchain Technology Innovation Use-Cases in the Agriculture Sector: A Systematic Review	Tebogo Sethibe	312
Digital Transformation and the EU Labour Markets	Marta Christina Suciu, Elena Pelinescu, Mirela Cristea and Grațiela Georgiana Noja	321
e-Learning, Artificial Intelligence and Block chain	Paulo Vieira, Paul Crocker and Simão Melo de Sousa	331
Law Enforcement Use of Artificial Intelligence for Domestic Security: Challenges and Risks	Murdoch Watney	341
A Responsive Engagement Approach to Promote the Development of 'Fairer' Algorithms	Helena Webb, Alan Davoust, Michael Rovatsos, Menisha Patel, Ansgar Koene and Marina Jirotko	349
AI, Business, Short and Long Term Developments: An Anticipatory Ethical Analysis	Richard L. Wilson	359
Requirements for Making the MQ-9 fully Autonomous: An Anticipatory Ethical Analysis	Richard L. Wilson	369
Proposition to use System Dynamics for Assessing the Impact of new Technologies on Employment	José Miguel Zaldo, Olga Rivera-Hernaez and Juan Martín-García	378
A Stochastic Dynamics Model for Shaping Stock Indexes Using Self-Organization Processes, Memory and Oscillations	Dmitry Zhukov, Tatiana Khvatova and Leonid Istratov	390
Phd Research Papers		403
Smart Traffic Incident Reporting System in e-Government	Mardin A. Anwer, Shareef A. Shareef and Abbas M. Ali	405
Personalized Virtual Employee Assistant using IOT Recommender System and Cognitive Computing	Mona Bokharaei Nia and Mohammadali Afshar Kazemi	413
Teachers' Activity when Adapting Digital Learning Objects: The Context of Foreign Language Learning in Higher Education	Vilma Sukackė and Brigita Janiūnaitė	423
Toward Understanding the Impact of Artificial Intelligence on Education: An Empirical Research in Japan	Yukimi Takahashi and Poonsri Vate-U-Lan	433
Masters Paper		441
Will Robots have the Capacity to Replace Mankind? Empirical Analysis from Portugal	Mafalda Rombão and Eduardo Tomé	443

Paper Title	Author(s)	Page No
Non Academic Paper		453
The AI Conveyor Belt	Nilesh Gopali and Hasik Shetty	455
Work In Progress Papers		463
The Quest for Explainable AI and the Role of Trust	Anne Gerdes	465
Using Lo-Fi Prototyping to Envision Conversational Agents in Public Settings	Arnold Jan Quanjer, Antti Jylhä and Jos P. van Leeuwen	469
Ethics in Artificial Intelligence: A Myth that may Never be a Reality	Vishal Rana and Clarence Tan	474
The Impact of Artificial Intelligence on University Cyber Security Programs	Char Sample, Cragin Shelton, Ian McAndrew and Connie Justice	477
Late Submission		481
Conditions and Bases of Incorporation of Artificial Intelligence into Czech School Environment	Josef Malach and Tomas Javorcik	483