

LNCS 13518

Jessie Y. C. Chen
Gino Fragomeni
Helmut Degen
Stavroula Ntoa (Eds.)

HCI International 2022 – Late Breaking Papers

Interacting with eXtended Reality
and Artificial Intelligence

24th International Conference on Human-Computer Interaction
HCII 2022, Virtual Event, June 26 – July 1, 2022
Proceedings



 Springer

Founding Editors

Gerhard Goos

Karlsruhe Institute of Technology, Karlsruhe, Germany

Juris Hartmanis

Cornell University, Ithaca, NY, USA

Editorial Board Members

Elisa Bertino

Purdue University, West Lafayette, IN, USA

Wen Gao

Peking University, Beijing, China

Bernhard Steffen 

TU Dortmund University, Dortmund, Germany

Moti Yung 

Columbia University, New York, NY, USA

More information about this series at <https://link.springer.com/bookseries/558>

Jessie Y. C. Chen · Gino Fragomeni ·
Helmut Degen · Stavroula Ntoa (Eds.)

HCI International 2022 – Late Breaking Papers

Interacting with eXtended Reality and Artificial Intelligence

24th International Conference on Human-Computer Interaction
HCII 2022, Virtual Event, June 26 – July 1, 2022
Proceedings

Editors

Jessie Y. C. Chen
U.S. Army Research Laboratory
Adelphi, MD, USA

Helmut Degen
Siemens (United States)
Princeton, NJ, USA

Gino Fragomeni
U.S. Army Combat Capabilities
Development Command Soldier Center
Orlando, FL, USA

Stavroula Ntoa
Foundation for Research and Technology –
Hellas (FORTH)
Heraklion, Crete, Greece

ISSN 0302-9743

ISSN 1611-3349 (electronic)

Lecture Notes in Computer Science

ISBN 978-3-031-21706-7

ISBN 978-3-031-21707-4 (eBook)

<https://doi.org/10.1007/978-3-031-21707-4>

© Springer Nature Switzerland AG 2022

Chapter “Transferring AI Explainability to User-Centered Explanations of Complex COVID-19 Information” is licensed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>). For further details see license information in the chapter.

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors, and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, expressed or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Springer imprint is published by the registered company Springer Nature Switzerland AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Foreword

Human-computer interaction (HCI) is acquiring an ever-increasing scientific and industrial importance, as well as having more impact on people's everyday life, as an ever-growing number of human activities are progressively moving from the physical to the digital world. This process, which has been ongoing for some time now, has been dramatically accelerated by the COVID-19 pandemic. The HCI International (HCII) conference series, held yearly, aims to respond to the compelling need to advance the exchange of knowledge and research and development efforts on the human aspects of design and use of computing systems.

The 24th International Conference on Human-Computer Interaction, HCI International 2022 (HCII 2022), was planned to be held at the Gothia Towers Hotel and Swedish Exhibition & Congress Centre, Göteborg, Sweden, during June 26 to July 1, 2022. Due to the COVID-19 pandemic and with everyone's health and safety in mind, HCII 2022 was organized and run as a virtual conference. It incorporated the 21 thematic areas and affiliated conferences listed on the following page.

A total of 5583 individuals from academia, research institutes, industry, and governmental agencies from 88 countries submitted contributions, and 1276 papers and 275 posters were included in the proceedings that were published just before the start of the conference. Additionally, 296 papers and 181 posters are included in the volumes of the proceedings published after the conference, as "Late Breaking Work". The contributions thoroughly cover the entire field of human-computer interaction, addressing major advances in knowledge and effective use of computers in a variety of application areas. These papers provide academics, researchers, engineers, scientists, practitioners, and students with state-of-the-art information on the most recent advances in HCI. The volumes constituting the full set of the HCII 2022 conference proceedings are listed in the following pages.

I would like to thank the Program Board Chairs and the members of the Program Boards of all thematic areas and affiliated conferences for their contribution and support towards the highest scientific quality and overall success of the HCI International 2022 conference; they have helped in so many ways, including session organization, paper reviewing (single-blind review process, with a minimum of two reviews per submission) and, more generally, acting as good-will ambassadors for the HCII conference.

This conference would not have been possible without the continuous and unwavering support and advice of Gavriel Salvendy, Founder, General Chair Emeritus, and Scientific Advisor. For his outstanding efforts, I would like to express my appreciation to Abbas Moallem, Communications Chair and Editor of HCI International News.

HCI International 2022 Thematic Areas and Affiliated Conferences

Thematic Areas

- HCI: Human-Computer Interaction
- HIMI: Human Interface and the Management of Information

Affiliated Conferences

- EPCE: 19th International Conference on Engineering Psychology and Cognitive Ergonomics
- AC: 16th International Conference on Augmented Cognition
- UAHCI: 16th International Conference on Universal Access in Human-Computer Interaction
- CCD: 14th International Conference on Cross-Cultural Design
- SCSM: 14th International Conference on Social Computing and Social Media
- VAMR: 14th International Conference on Virtual, Augmented and Mixed Reality
- DHM: 13th International Conference on Digital Human Modeling and Applications in Health, Safety, Ergonomics and Risk Management
- DUXU: 11th International Conference on Design, User Experience and Usability
- C&C: 10th International Conference on Culture and Computing
- DAPI: 10th International Conference on Distributed, Ambient and Pervasive Interactions
- HCIBGO: 9th International Conference on HCI in Business, Government and Organizations
- LCT: 9th International Conference on Learning and Collaboration Technologies
- ITAP: 8th International Conference on Human Aspects of IT for the Aged Population
- AIS: 4th International Conference on Adaptive Instructional Systems
- HCI-CPT: 4th International Conference on HCI for Cybersecurity, Privacy and Trust
- HCI-Games: 4th International Conference on HCI in Games
- MobiTAS: 4th International Conference on HCI in Mobility, Transport and Automotive Systems
- AI-HCI: 3rd International Conference on Artificial Intelligence in HCI
- MOBILE: 3rd International Conference on Design, Operation and Evaluation of Mobile Communications

Conference Proceedings – Full List of Volumes

1. LNCS 13302, Human-Computer Interaction: Theoretical Approaches and Design Methods (Part I), edited by Masaaki Kurosu
2. LNCS 13303, Human-Computer Interaction: Technological Innovation (Part II), edited by Masaaki Kurosu
3. LNCS 13304, Human-Computer Interaction: User Experience and Behavior (Part III), edited by Masaaki Kurosu
4. LNCS 13305, Human Interface and the Management of Information: Visual and Information Design (Part I), edited by Sakae Yamamoto and Hirohiko Mori
5. LNCS 13306, Human Interface and the Management of Information: Applications in Complex Technological Environments (Part II), edited by Sakae Yamamoto and Hirohiko Mori
6. LNAI 13307, Engineering Psychology and Cognitive Ergonomics, edited by Don Harris and Wen-Chin Li
7. LNCS 13308, Universal Access in Human-Computer Interaction: Novel Design Approaches and Technologies (Part I), edited by Margherita Antona and Constantine Stephanidis
8. LNCS 13309, Universal Access in Human-Computer Interaction: User and Context Diversity (Part II), edited by Margherita Antona and Constantine Stephanidis
9. LNAI 13310, Augmented Cognition, edited by Dylan D. Schmorrow and Cali M. Fidopiastis
10. LNCS 13311, Cross-Cultural Design: Interaction Design Across Cultures (Part I), edited by Pei-Luen Patrick Rau
11. LNCS 13312, Cross-Cultural Design: Applications in Learning, Arts, Cultural Heritage, Creative Industries, and Virtual Reality (Part II), edited by Pei-Luen Patrick Rau
12. LNCS 13313, Cross-Cultural Design: Applications in Business, Communication, Health, Well-being, and Inclusiveness (Part III), edited by Pei-Luen Patrick Rau
13. LNCS 13314, Cross-Cultural Design: Product and Service Design, Mobility and Automotive Design, Cities, Urban Areas, and Intelligent Environments Design (Part IV), edited by Pei-Luen Patrick Rau
14. LNCS 13315, Social Computing and Social Media: Design, User Experience and Impact (Part I), edited by Gabriele Meiselwitz
15. LNCS 13316, Social Computing and Social Media: Applications in Education and Commerce (Part II), edited by Gabriele Meiselwitz
16. LNCS13317, Virtual, Augmented and Mixed Reality: Design and Development (Part I), edited by Jessie Y. C. Chen and Gino Fragomeni
17. LNCS 13318, Virtual, Augmented and Mixed Reality: Applications in Education, Aviation and Industry (Part II), edited by Jessie Y. C. Chen and Gino Fragomeni

18. LNCS 13319, Digital Human Modeling and Applications in Health, Safety, Ergonomics and Risk Management: Anthropometry, Human Behavior, and Communication (Part I), edited by Vincent G. Duffy
19. LNCS 13320, Digital Human Modeling and Applications in Health, Safety, Ergonomics and Risk Management: Health, Operations Management, and Design (Part II), edited by Vincent G. Duffy
20. LNCS 13321, Design, User Experience, and Usability: UX Research, Design, and Assessment (Part I), edited by Marcelo M. Soares, Elizabeth Rosenzweig and Aaron Marcus
21. LNCS 13322, Design, User Experience, and Usability: Design for Emotion, Well-being and Health, Learning, and Culture (Part II), edited by Marcelo M. Soares, Elizabeth Rosenzweig and Aaron Marcus
22. LNCS 13323, Design, User Experience, and Usability: Design Thinking and Practice in Contemporary and Emerging Technologies (Part III), edited by Marcelo M. Soares, Elizabeth Rosenzweig and Aaron Marcus
23. LNCS 13324, Culture and Computing, edited by Matthias Rauterberg
24. LNCS 13325, Distributed, Ambient and Pervasive Interactions: Smart Environments, Ecosystems, and Cities (Part I), edited by Norbert A. Streitz and Shin'ichi Konomi
25. LNCS 13326, Distributed, Ambient and Pervasive Interactions: Smart Living, Learning, Well-being and Health, Art and Creativity (Part II), edited by Norbert A. Streitz and Shin'ichi Konomi
26. LNCS 13327, HCI in Business, Government and Organizations, edited by Fiona Fui-Hoon Nah and Keng Siau
27. LNCS 13328, Learning and Collaboration Technologies: Designing the Learner and Teacher Experience (Part I), edited by Panayiotis Zaphiris and Andri Ioannou
28. LNCS 13329, Learning and Collaboration Technologies: Novel Technological Environments (Part II), edited by Panayiotis Zaphiris and Andri Ioannou
29. LNCS 13330, Human Aspects of IT for the Aged Population: Design, Interaction and Technology Acceptance (Part I), edited by Qin Gao and Jia Zhou
30. LNCS 13331, Human Aspects of IT for the Aged Population: Technology in Everyday Living (Part II), edited by Qin Gao and Jia Zhou
31. LNCS 13332, Adaptive Instructional Systems, edited by Robert A. Sottolare and Jessica Schwarz
32. LNCS 13333, HCI for Cybersecurity, Privacy and Trust, edited by Abbas Moallem
33. LNCS 13334, HCI in Games, edited by Xiaowen Fang
34. LNCS 13335, HCI in Mobility, Transport and Automotive Systems, edited by Heidi Krömker
35. LNAI 13336, Artificial Intelligence in HCI, edited by Helmut Degen and Stavroula Ntoa
36. LNCS 13337, Design, Operation and Evaluation of Mobile Communications, edited by Gavriel Salvendy and June Wei
37. CCIS 1580, HCI International 2022 Posters - Part I, edited by Constantine Stephanidis, Margherita Antona and Stavroula Ntoa
38. CCIS 1581, HCI International 2022 Posters - Part II, edited by Constantine Stephanidis, Margherita Antona and Stavroula Ntoa

39. CCIS 1582, HCI International 2022 Posters - Part III, edited by Constantine Stephanidis, Margherita Antona and Stavroula Ntoa
40. CCIS 1583, HCI International 2022 Posters - Part IV, edited by Constantine Stephanidis, Margherita Antona and Stavroula Ntoa
41. LNCS 13516, HCI International 2022 - Late Breaking Papers: Design, User Experience and Interaction, edited by Masaaki Kurosu, Sakae Yamamoto, Hirohiko Mori, Marcelo M. Soares, Elizabeth Rosenzweig, Aaron Marcus, Pei-Luen Patrick Rau, Don Harris and Wen-Chin Li
42. LNCS 13517, HCI International 2022 - Late Breaking Papers: Interaction in New Media, Learning and Games, edited by Gabriele Meiselwitz, Abbas Moallem, Panayiotis Zaphiris, Andri Ioannou, Robert A. Sottilare, Jessica Schwarz and Xiaowen Fang
43. LNCS 13518, HCI International 2022 - Late Breaking Papers: Interacting with eXtended Reality and Artificial Intelligence, edited by Jessie Y. C. Chen, Gino Fragomeni, Helmut Degen and Stavroula Ntoa
44. LNCS 13519, HCI International 2022 - Late Breaking Papers: Multimodality in Advanced Interaction Environments, edited by Masaaki Kurosu, Sakae Yamamoto, Hirohiko Mori, Dylan D. Schmorow, Cali M. Fidopiastis, Norbert A. Streitz and Shin'ichi Konomi
45. LNCS 13520, HCI International 2022 - Late Breaking Papers: HCI for Today's Community and Economy, edited by Matthias Rauterberg, Fiona Fui-Hoon Nah, Keng Siau, Heidi Krömker, June Wei and Gavriel Salvendy
46. LNCS 13521, HCI International 2022 - Late Breaking Papers: HCI for Health, Well-being, Universal Access and Active Aging, edited by Vincent G. Duffy, Qin Gao, Jia Zhou, Margherita Antona and Constantine Stephanidis
47. LNCS 13522, HCI International 2022 - Late Breaking Papers: Ergonomics and Product Design, edited by Vincent G. Duffy and Pei-Luen Patrick Rau
48. CCIS 1654, HCI International 2022 - Late Breaking Posters (Part I), edited by Constantine Stephanidis, Margherita Antona, Stavroula Ntoa and Gavriel Salvendy
49. CCIS 1655, HCI International 2022 - Late Breaking Posters (Part II), edited by Constantine Stephanidis, Margherita Antona, Stavroula Ntoa and Gavriel Salvendy

<http://2022.hci.international/proceedings>



24th International Conference on Human-Computer Interaction (HCI 2022)

The full list with the Program Board Chairs and the members of the Program Boards of all thematic areas and affiliated conferences is available online at:

<http://www.hci.international/board-members-2022.php>



HCI International 2023

The 25th International Conference on Human-Computer Interaction, HCI International 2023, will be held jointly with the affiliated conferences at the AC Bella Sky Hotel and Bella Center, Copenhagen, Denmark, 23–28 July 2023. It will cover a broad spectrum of themes related to human-computer interaction, including theoretical issues, methods, tools, processes, and case studies in HCI design, as well as novel interaction techniques, interfaces, and applications. The proceedings will be published by Springer. More information will be available on the conference website: <http://2023.hci.international/>.

General Chair
Constantine Stephanidis
University of Crete and ICS-FORTH
Heraklion, Crete, Greece
Email: general_chair@hci2023.org

<http://2023.hci.international/>



Contents

User Experience in eXtended Reality

| | |
|--|-----|
| Youkai: A Cross-Platform Framework for Testing VR/AR Apps | 3 |
| <i>Thiago Figueira and Adriano Gil</i> | |
| Storyboards in VR Narratives Planning: How to Create and Evaluate Them | 13 |
| <i>Carlos Figueiredo, Francisco Rebelo, Paulo Noriega, and Elisangela Vilar</i> | |
| A Study on the Analysis of Visual User Experience in HMD-Based Virtual Environments | 33 |
| <i>Min-Gu Heo, Daehyoun Ki, and Changhoon Park</i> | |
| Systematic Review on Photogrammetry, Streaming, Virtual and Augmented Reality for Virtual Tourism | 46 |
| <i>Diego Alonso Iquira Becerra, Marisol Cristel Galarza Flores, Alexander Rey Cayro Mamani, Sergio Rolan Rondon Polanco, and Cesar Alberto Collazos Ordoñez</i> | |
| Proposal for a User-Centered Virtual Reality System for Promoting Tourism in Peru | 62 |
| <i>Diego Alonso Iquira Becerra, Olha Sharhorodska, Celia Audrey Tacca Barrantes, Jose Luis Monroy Vilcahuaman, Bryan Junior Sumire Coasaca, and Cesar Alberto Collazos Ordoñez</i> | |
| Integrating Sensor Fusion with Pose Estimation for Simulating Human Interactions in Virtual Reality | 74 |
| <i>Pranavi Jalapati, Satya Naraparaju, Powen Yao, and Michael Zyda</i> | |
| Development of a Surgical Image Object Display System Using AR Device and Evaluation of Its Depth Perception | 88 |
| <i>Hiroyuki Konishi, Takuto Yajima, Kentaro Kotani, and Takafumi Asao</i> | |
| The Practical Research of Mixed Reality for Photographic Darkroom Education | 98 |
| <i>Li Wei and Li Xiang</i> | |
| Enabling Human Interaction in Virtual Reality: An Explorative Overview of Opportunities and Limitations of Current VR Technology | 114 |
| <i>Christian Meske, Tobias Hermanns, Markus Jelonek, and Ayseguel Doganguen</i> | |

| | |
|--|-----|
| Effects of Skin-to-Skin Interaction Through Avatars on Users in a VR Environment: Assessment by Autonomic Nervous System Activity Index | 132 |
| <i>Yuki Nakano, Junko Ichino, Masahiro Ide, Shiori Fujisawa, Ukou En, Kiichi Naitou, and Hirotoashi Asano</i> | |
| The Possibility of Inducing the Proteus Effect for Social VR Users | 143 |
| <i>Akimi Oyanagi, Takuji Narumi, Jean-Luc Lugin, Kazuma Aoyama, Kenichiro Ito, Tomohiro Amemiya, and Michitaka Hirose</i> | |
| Virtual Reality to Support Healthcare Workers in Managing Stress and Anxiety During the COVID-19 Pandemic: An Online Survey | 159 |
| <i>Federica Pallavicini, Eleonora Orena, Federica Achille, Stefano Stefanini, Chiara Caragnano, Costanza Vuolato, Alessandro Pepe, Paolo Ranieri, Simona di Santo, Luca Greci, Sara Fascendini, Alberto Defanti, Massimo Clerici, and Fabrizia Mantovani</i> | |
| Effects of Virtual Space in Soccer Tactical Instruction | 175 |
| <i>Asahi Sato, Yohei Murakami, and Mondheera Pituxcoosuvam</i> | |
| A Real Space Extension Approach Using a Turntable for Natural Walking in Virtual Reality | 188 |
| <i>Ryosuke Urata, Yukiko Watabe, and Takehiko Yamaguchi</i> | |
| Extending Smartphone-Based Hand Gesture Recognition for Augmented Reality Applications with Two-Finger-Pinch and Thumb-Orientation Gestures | 197 |
| <i>Eric Cesar E. Vidal Jr. and Maria Mercedes T. Rodrigo</i> | |
| Metaverse and Human-Computer Interaction: A Technology Framework for 3D Virtual Worlds | 213 |
| <i>Yuying Wang, Keng L. Siau, and Le Wang</i> | |
| Interactive Relationships in the Future of Virtual Reality | 222 |
| <i>Xun Xia and Younghwan Pan</i> | |
| Artificial Intelligence in Human-Computer Interaction | |
| Interpretable and High-Performance Hate and Offensive Speech Detection | 233 |
| <i>Marzieh Babaeianjelodar, Gurram Poorna Prudhvi, Stephen Lorenz, Keyu Chen, Sumona Mondal, Soumyabrata Dey, and Navin Kumar</i> | |
| Improving Labeling Through Social Science Insights: Results and Research Agenda | 245 |
| <i>Jacob Beck, Stephanie Eckman, Rob Chew, and Frauke Kreuter</i> | |

How to Explain It to Energy Engineers?: A Qualitative User Study About Trustworthiness, Understandability, and Actionability 262
Helmut Degen, Christof Budnik, Gregory Conte, Andrew Lintereur, and Seth Weber

I'm Only Human: The Effects of Trust Dampening by Anthropomorphic Agents 285
Theodore Jensen and Mohammad Maifi Hasan Khan

Explanation by Automated Reasoning Using the Isabelle Infrastructure Framework 307
Florian Kammüller

Understanding the Nature and Constituent Elements of Artificial Intelligence-Based Applications: A Scoping Review Research in Progress 319
Marion Korosec-Serfaty, Bogdan Negoita, Ana Ortiz de Guinea, Gregory Vial, Jared Boasen, Juan Fernández-Shaw, and Pierre-Majorique Léger

What Are the Factors That Drive AI Acceptance: A Meta-Analysis Approach 329
Aslı Gül Kurt, Alexander John Karran, Ruxandra Monica Luca, and Sylvain Sénécal

How Can No/Low Code Platforms Help End-Users Develop ML Applications? - A Systematic Review 338
LuYun Li and ZhanWei Wu

ConfLabeling: Assisting Image Labeling with User and System Confidence 357
Yi Lu, Chia-Ming Chang, and Takeo Igarashi

Conversations Towards Practiced AI – HCI Heuristics 377
Kem-Laurin Lubin

AI-Based Coaching: Impact of a Chatbot’s Disclosure Behavior on the Working Alliance and Acceptance 391
Vanessa Mai, Alexander Bauer, Christian Deggelmann, Caterina Neef, and Anja Richert

A Unified Framework to Collect and Document AI-Infused Project Exemplars 407
Jennifer Moosbrugger and Stavroula Ntoa

Hey ASR System! Why Aren't You More Inclusive?: Automatic Speech Recognition Systems' Bias and Proposed Bias Mitigation Techniques. A Literature Review 421
Mikel K. Nguetajio and Gloria Washington

Transferring AI Explainability to User-Centered Explanations of Complex COVID-19 Information 441
Jasminko Novak, Tina Maljur, and Kalina Drenska

Responsible Artificial Intelligence in Knowledge Work: User Experience Design Problems and Implications 461
Burak Öz, Ruojun Wang, Chantel Chandler, Alexander John Karran, Constantinos Coursaris, and Pierre-Majorique Léger

Human-Centered Artificial Intelligence: Beyond a Two-Dimensional Framework 471
Matthew Pacailler, Sarah Yahoodik, Tetsuya Sato, Jeremiah G. Ammons, and Jeremiah Still

Human-Centred AI in the Age of Industry 5.0: A Systematic Review Protocol 483
Mario Passalacqua, Robert Pellerin, Philippe Doyon-Poulin, Laurene Del-Aguila, Jared Boasen, and Pierre-Majorique Léger

Applying the Design Sprint to Interactive Machine Learning Experience Design: A Case Study from Aveni 493
Chloe Poulter, Choon Wang, and Iria DelRio Gayo

A Comparative Study of BERT-Based Attention Flows Versus Human Attentions on Fill-in-Blank Task 506
Ming Qian and Ka Wai Lee

Book Recommender System Using CNN Capturing Feature of Synopses and Reviews 518
Takuya Tamada and Ryosuke Saga

Discover Manaus: The Challenges of Developing a System with Artificial Intelligence Aimed at the End User, a Case Study 531
Sergio Cleger Tamayo and Marcos Silbermann

Exploring the Role of Trust During Human-AI Collaboration in Managerial Decision-Making Processes 541
Serdar Tuncer and Alejandro Ramirez

Legal and Regulatory Issues on Artificial Intelligence, Machine Learning,
Data Science, and Big Data 558
*Wai Yee Wan, Michael Tsimplis, Keng L. Siau, Wei T. Yue,
Fiona Fui-Hoon Nah, and Gabriel M. Yu*

Responsible Human-Centered Artificial Intelligence for the Cognitive
Enhancement of Knowledge Workers 568
Troy R. Weekes and Thomas C. Eskridge

The Best of Both Worlds: Mixed Systems with ML and Humans
in the Loop to Combat Fake Information 583
Bianca Helena Ximenes and Geber Ramalho

Ransomware Attack Detection on the Internet of Things Using Machine
Learning Algorithm 598
Temechu Girma Zewdie, Anteneh Girma, and Paul Cotae

Author Index 615