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Research & Innovation Forum 2019

Technology, Innovation, Education, and their Social Impact



Editors Anna Visvizi Research & Innovation Institute (Rii) Warsaw, Poland

Miltiadis D. Lytras Deree College The American College of Greece Athens. Greece

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Visvizi, Anna, Ph.D., Research & Innovation Institute, Poland Lytras, Miltiadis D., Ph.D., Deree College—The American College of Greece, Greece

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Visvizi, Anna, Ph.D., Research & Innovation Institute, Poland Lytras, Miltiadis D., Ph.D., Deree College—The American College of Greece, Greece Sarirete, Akila, Ph.D., Effat University, Saudi Arabia Rohlíková, Lucie, Ph.D., University of West Bohemia, Czechia Serradell Lopez, Enric, Ph.D., Open University of Catalonia, Spain

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Chui, Kwok Tai, Ph.D., City University of Hong Kong, Hong Kong SAR Elia, Gianluca, Ph.D., University of Salento, Italy Gil-Méndez, David, Ph.D., University of Alicante, Spain Jimeno-Morenilla, Antonio, Ph.D., University of Alicante, Spain Jussila, Jari, Ph.D., Häme University of Applied Sciences, Finland Kurilovas, Eugenijus, Ph.D., Vilnius Gediminas Technical University, Lithuania Liu, Ryan Wen, Ph.D., Wuhan University of Technology, China Lladós-Masllorens, Josep, Ph.D., Open University of Catalonia, Spain Masud, Mehedi, Ph.D., Taif University, Saudi Arabia Meseguer-Artola, Antoni, Ph.D., Open University of Catalonia, Spain Mir, Nighat, Ph.D., Effat University, Saudi Arabia Mora, Higinio, Ph.D., University of Alicante, Spain Moreno-Ibarra, Marco, Ph.D., Instituto Politécnico Nacional, Mexico Novo-Corti, Isabel, Ph.D., Universidade da Coruña, Spain Pachocka, Marta, Ph.D., SGH Warsaw School of Economics, Poland Pertegal-Felices, María L., Ph.D., University of Alicante, Spain Popova Zhuhadar, Lily, Ph.D., Western Kentucky University, USA Pospíšilová, Linda, University of Pardubice, Czechia Rodríguez-Ardura, Inma, Ph.D., Open University of Catalonia, Spain Rohlíková, Lucie, Ph.D., University of West Bohemia, Czechia Saad, Inès, Ph.D. Amiens Business School & UPJV University, France Sánchez-Romero, Jose Luis, Ph.D., University of Alicante, Spain Sarirete, Akila, Ph.D., Effat University, Saudi Arabia Sciarrone, Filippo, Ph.D., Roma Tre University, Italy Serradell Lopez, Enric, Ph.D., Open University of Catalonia, Spain Shen, Chien-wen, Ph.D., National Central University, Taiwan Spruit, Marco, Ph.D., Utrecht University, the Netherlands Torres-Ruiz, Miguel, Ph.D., Instituto Politécnico Nacional, Mexico Vilches-Blázquez, Luis Manuel, Ph.D., IPN, Spain Wautelet, Yves, Ph.D., KU Leuven, Belgium Wu, Yenchun Jim, Ph.D., National Taiwan Normal University, Taiwan Zhao, Jie, Ph.D., Anhui University, China Zhao, Mingbo, Ph.D., Donghua University, China



Rome, April 24-26, 2019

Research & Innovation Forum

Advancing research on technology, innovation, education and their social impact www.rii-forum.org

Preface

Advances in sophisticated technology have an ever-growing impact on our societies, including communication, education, policy making, the modes of production, logistics, health care, entertainment, design, architecture, cities, etc. As the pace of technological advances accelerates, it is imperative that the dynamic nexus between technology and society is queried from a variety of perspectives. Only in this way we can identify not only nascent risks and emerging threats, but also the multiple opportunities that emerge. **Research and Innovation Forum (Rii Forum)** is driven precisely by this logic.

Research and Innovation Forum (Rii Forum) is an annual conference that brings together researchers, academics, and practitioners to engage in a conceptually sound, inter- and multi-disciplinary, empirically driven debate on key issues influencing the dynamics of social interaction today. The role of advances in sophisticated technology stands at the heart of discussions held during Rii Forum. Held annually, Rii Forum features in-depth cutting-edge research on both the most current and the emerging issues that unfold at the intersection of technology and society. The format of Rii Forum—consistent with traditional and flipped presentations, interactive workshops and featured roundtables—renders it a perfect venue to build bridges between the worlds of academia and policymaking to promote research-driven policy recommendations.

The **Rii Forum 2019** was held in Rome, April 24–26, 2019, and facilitated discussion, exchange of ideas, and networking. The **Rii Forum 2019** was attended by delegates from literally all over the world, including North and South America, Asia, the Arab Peninsula, and Europe. The conference opening speech was delivered by Dr. Akila Sarirete, Assistant Professor at the Computer Science Department and Dean for Graduate Studies and Research at Effat University, Jeddah, Saudi Arabia. Dr. Sarirete delivered a speech titled 'Fostering research, innovation, and education: the case of Effat University.' The kick-off speech during the second day of the conference was delivered by Dr. Saeed Ul Hassan, Director of Scientometrics Lab and Faculty Member at Information Technology University (ITU), Lahore, Pakistan. In his speech, Dr. Hassan addressed the question of 'How your research really matters?—Qualitative Assessment of Scholarly Impact using Citations from

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full-text Scientific Literature.' The conference closing speech was delivered by Dr. Enric Serradell Lopez, Director of Executive Education, Open University of Catalonia, Barcelona, Spain. Dr. Serradell offered a captivating speech on 'Being an academic: re-thinking critical thinking.'

With regard to the research workshop, its goal was to build functional connections among the conference participants. The workshop was coordinated by Dr. Akila Sarirete, Dean of Graduate Studies and Research at Effat University. During the workshop, early career and established researchers had the opportunity to meet administrators, program and projects' administrators and explore the prospect of joint projects. Several research and collaboration schemes were discussed in detail during the workshop.

The cutting-edge quality of scholarly discussion during the **Rii Forum 2019** was possible due to an arduous review, selection, and double-blind peer-review process. Specifically, nearly 200 extended paper proposals from all over the world had been originally submitted to be presented during the conference. These proposals were reviewed by the **Rii Forum Program Committee** that accepted 90 paper proposals and notified respective authors. Eventually, 70 papers were presented during the conference, while 52—following a rigorous double-blind review process—are featured in this volume.

The structure of the volume mirrors the key topics around which **Rii Forum 2019** discussions oscillated, i.e.,

- Technology-enhanced learning,
- Cognitive computing and social networking,
- Smart cities and smart villages,
- Information systems,
- · Medical informatics, and
- Emerging issues at the cross section of technology, politics, society, and economy.

In recognition of the amount of work invested and the resultant quality of research presented during the **Rii Forum 2019**, to highlight outstanding contributions and performance, following lengthy deliberations, **Rii Forum Program Committee** decided on granting of the following awards.

The **Rii Forum award for best Ph.D. student paper** was granted to Mr. Rafael Mollá Sirvent, supervised by Dr. Higinio Mora (University of Alicante, Alicante, Spain).

The **Rii Forum award for social impact** was awarded Petr Hořejší, Jiri Vysata, Lucie Rohlikova, Jiri Polcar, Michal Gregor (University of West Bohemia, Pilsen, Czechia) for their paper titled 'Serious Games in Mechanical Engineering Education.'

The **Rii Forum award for best reviewer** was granted to Dr. Antoni Meseguer-Artola (Open University of Catalonia, Barcelona, Spain).

The **Rii Forum award for best ICT-enhanced presentation** was granted to Professor Placido Pinheiro (University of Fortaleza, Fortaleza, Brazil).

Preface

The **Rii Forum award for outstanding research** was granted to Wei Wang, Yenchun Jim Wu, and Ling He (National Taiwan Normal University, Taipei, Taiwan) for their paper titled 'Impact of Linguistic Feature Related to Fraud on Pledge Results of the Crowdfunding Campaigns.'

Finally, the **Rii Forum award for the best paper** was awarded to Adil E. Rajput, Akila Sarirete, Tamer Dessouky (Effat University, Jeddah, Saudi Arabia) for their paper titled 'Using Crowdsourcing to Identify a Proxy of Socio-Economic status.'

This collection of research papers presented during the Rii Forum 2019 features cutting-edge research centered on technology-induced processes and developments that shape sociopolitical and economic processes today. We remain grateful to the Rii Forum Steering Committee and the Rii Forum Program Committee for their commitment, sound judgment, and hard work in the process of organizing the Rii Forum 2019. We are equally appreciative of the work of the panel chairs who ensured that timely progression of presentations and Q&A sessions. We would like to say 'thank you' to all contributing authors for their hard work and their patience in subsequent rounds of revise and resubmit. This would not be possible, of course, without the reviewers who devoted countless hours to evaluate papers submitted to this volume. Finally, we would like to express our gratitude to the entire Springer team and the Editors of Complexity for enthusiastically embracing our idea and for guiding us through the process.

Considering the quality of research presented during the conference and the amount of networking that was triggered during the conference, we would like to take this opportunity to invite you to join the **Rii Forum 2020** which will take place in Athens, Greece, in April 15–17, 2020. Please check the **Rii Forum** Web site (https://rii-forum.org) for updates.

Warsaw, Poland Athens, Greece Sincerely, Anna Visvizi Miltiadis D. Lytras Chairs Rii Forum 2019

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Contributors

Marie-Hélène Abel Sorbonne Universités, Université de technologie de Compiègne CNRS UMR 7253, HEUDIASYC, Compiègne, France

Samara Ahmed College of Medicine, King Abdulaziz University, Jeddah, Saudi Arabia

Manar Al Omairi Effat University, Jeddah, Saudi Arabia

Samar Alabyooki Innovation and Technology Management Department, Arabian Gulf University, Manama, Bahrain

Odeh Al-Jayyousi Innovation and Technology Management Department, Arabian Gulf University, Manama, Bahrain

Mohammed Saeed Alkatheiri College of Computer Science and Engineering, University of Jeddah, Jeddah, Saudi Arabia

Jalal S. Alowibdi Department of Computer Science and Artificial Intelligence, College of Computer Science and Engineering, University of Jeddah, Jeddah, Saudi Arabia

Muhammad Al-Qurishi Elm Company—Research & Innovation, Riyadh, Kingdom of Saudi Arabia

Gisela Ammetller Open University of Catalonia, (Universitat Oberta de Catalunya), Barcelona, Spain

Suha Abdullah Ali Attallah Innovation and Technology Management Department, Arabian Gulf University, Manama, Bahrain

Jorge Azorín-López Department of Computer Technology, Universidad de Alicante, Alicante, Spain

Emanuele Bellini Center of Cyber-Physical System, Khalifa University, Abu Dhabi, UAE

xviii Contributors

Bensaid Benaouda Faculty of Islamic Sciences, Istanbul Sabahattin Zaim University, Istanbul, Turkey

Tayeb Brahimi College of Engineering, Effat University, Jeddah, Kingdom of Saudi Arabia

Diego Buenaño-Fernandez Universidad de Las Américas, Quito, Ecuador

Antonella Carbonaro Department of Computer Science and Engineering, University of Bologna, Bologna, Italy

Paolo Ceravolo Sesar Lab, Università degli Studi di Milano, Milan, Italy

Mario Chacón-Rivas Inclutec, Instituto Tecnológico de Costa Rica, Cartago, Costa Rica

Daniel Chagas LUQS, Universidade de Fortaleza, Fortaleza, Brazil

Francesco Ciclosi Università di Macerata, Macerata, Italy

Ricardo Colomo-Palacios Østfold University College, Halden, Norway

Rafael Comin-Nunes Federal University of Ceara, Fortaleza, CE, Brazil

Luana Ibiapina Cordeiro State University of Ceará, Fortaleza, CE, Brazil

Ernesto Damiani Center of Cyber-Physical System, Khalifa University, Abu Dhabi, UAE

Wilson Correa de Abreu School of Nursing of Porto, Porto, Portugal

Tamer F. Desouky College of Engineering, Effat University, Jeddah, Kingdom of Saudi Arabia

João Batista Furlan Duarte Graduate Program in Applied Informatics, University of Fortaleza (UNIFOR), Fortaleza, CE, Brazil

Aldrin Espín-León Faculty of Sociology and Social Work, Central University of Ecuador, Quito, Ecuador

Drilon Ferati Department of Information and Computing Sciences, Utrecht University, Utrecht, The Netherlands

Antonio Ferrández University of Alicante, San Vicente del Raspeig, Alicante, Spain

Raquel Ferreras-Garcia Universitat Oberta de Catalunya, Barcelona, Spain

Marum Simão Filho Graduate Program in Applied Informatics, University of Fortaleza, Fortaleza, CE, Brazil

Egidio Gomes Filho University of Fortaleza, Fortaleza, CE, Brazil

Elizabeth Furtado LUQS, Universidade de Fortaleza, Fortaleza, Brazil

Contributors xix

Ignacio Salamanca Garay Facultad de Educación, Centro de Investigación en Educación y Desarrollo (CIEDE), Universidad Católica de la Santísima Concepción, Concepción, Chile

David Gil University of Alicante, San Vicente del Raspeig, Alicante, Spain

Virgilio Gilart-Iglesias Department of Computer Technology and Computation, University of Alicante, Alicante, Spain

Michal Gregor Department of Industrial Engineering and Management, University of West Bohemia, Plzen, Czech Republic

Mara Grimaldi University of Salerno, Fisciano, ITA, Italy

Ling He College of Business Administration, Huaqiao University, Quanzhou, China

Jehad Hejres Effat University, Jeddah, Saudi Arabia

Ana Beatriz Hernández-Lara Universitat Rovira i Virgili, Reus, Spain

Jung-tsung Ho Department of Business Administration, National Central University, Jhongli District, Taoyuan City, Taiwan, Republic of China

Petr Hořejší Department of Industrial Engineering and Management, University of West Bohemia, Plzen, Czech Republic

Marco Moreno Ibarra Instituto Politécnico Nacional, Centro de Investigación en Computación, Nueva Industrial Vallejo, Gustavo a. Madero, Mexico

Muhammad U. Ilyas School of Electrical Engineering and Computer Science (SEECS), National University of Sciences and Technology (NUST), Islamabad, Pakistan;

Department of Computer and Network Engineering, College of Computer Science and Engineering, University of Jeddah, Jeddah, Saudi Arabia

Antonio Jimeno-Morenilla Department of Computer Technology, Universidad de Alicante, Alicante, Spain;

University of Alicante, San Vicente del Raspeig, Spain

Jari Jussila Häme University of Applied Sciences, Hämeenlinna, Finland

Erick Kauffmann University of Alicante, San Vicente del Raspeig, Alicante, Spain;

University of Costa Rica, San José, Costa Rica

Sajid Khalifa Design Department, Effat University, Jeddah, Saudi Arabia

Muhammad Murtaza Khan Department of Computer Science and Artificial Intelligence, College of Computer Science and Engineering, University of Jeddah, Jeddah, Saudi Arabia;

School of Electrical Engineering and Computer Science (SEECS), National University of Sciences and Technology (NUST), Islamabad, Pakistan

xx Contributors

Manuel Kolp UCLouvain, Louvian-la-Neuve, Belgium

Siying Li Sorbonne Universités, Université de technologie de Compiègne CNRS UMR 7253, HEUDIASYC, Compiègne, France

Karla Krupskaia Ferreira Lima University of Fortaleza, Fortaleza, Brazil

Josep Lladós-Masllorens Open University of Catalonia (Universitat Oberta de Catalunya), Barcelona, Spain

Faraón Llorens-Largo Cátedra Santander-UA de Transformación Digital, University of Alicante, San Vicente del Raspeig, Spain

Francesca Loia University of Rome "La Sapienza", Rome, ITA, Italy

Sergio Luján-Mora Universidad de Alicante, Alicante, Spain

Hung-wen Ma Department of Business Administration, National Central University, Jhongli District, Taoyuan City, Taiwan, Republic of China

Prashanth Madhala Häme University of Applied Sciences, Hämeenlinna, Finland

Gennaro Maione University of Salerno, Fisciano, ITA, Italy

Rustom Mamlook Innovation and Technology Management Department, Arabian Gulf University, Manama, Bahrain

Ana Martínez Department of Computer Technology, University of Alicante, San Vicente del Raspeig, Alicante, Spain

Hassan I. Mathkour Computer Science Department, King Saud University, Riyadh, Kingdom of Saudi Arabia

Stijn Meijers Department of Information and Computing Sciences, Utrecht University, Utrecht, The Netherlands

Antoni Meseguer-Artola Open University of Catalonia, (Universitat Oberta de Catalunya), Barcelona, Spain

Nighat Mir Effat University, Jeddah, Saudi Arabia

Rafael Molina-Carmona Unidad Científica de Innovación Empresarial "Ars Innovatio", University of Alicante, San Vicente del Raspeig, Spain

Higinio Mora Department of Computer Technology and Computation, University of Alicante, Alicante, Spain;

Department of Computer Technology, University of Alicante, San Vicente del Raspeig, Alicante, Spain

Mohamed A. Mostafa Computer Science Department, King Saud University, Riyadh, Kingdom of Saudi Arabia

Bill Muirhead Ontario Tech University, Oshawa, ON, Canada

Contributors xxi

Luis Naranjo-Zeledón University of Alicante, Alicante, Spain; Inclutec, Instituto Tecnológico de Costa Rica, Cartago, Costa Rica

Elsa Negre Paris-Dauphine University, PSL Research University, CNRS UMR 7243, LAMSADE, Paris, France

Isabel Novo-Corti Universidade da Coruña, A Coruña, Spain; Faculty of Economy & Business, A Coruna, Spain

Luciano Comin Nunes Graduate Program in Applied Informatics, University of Fortaleza, Fortaleza, CE, Brazil

Atte Partanen Häme University of Applied Sciences, Hämeenlinna, Finland

Jesús Peral University of Alicante, Alicante, Spain; University of Alicante, San Vicente del Raspeig, Alicante, Spain

Maria Lúcia Duarte Pereira State University of Ceará, Fortaleza, CE, Brazil

Magdalena Saldaña Pérez Instituto Politécnico Nacional, Centro de Investigación en Computación, Nueva Industrial Vallejo, Gustavo a. Madero, Mexico

Raquel Pérez-delHoyo Department of Building Sciences and Urbanism, University of Alicante, Alicante, Spain

María L. Pertegal-Felices Developmental and Educational Psychology Department, University of Alicante, Alicante, Spain

Xose Picatoste Department of Economics, University of A Coruna, Coruna, Spain

Placido Pinheiro Graduate Program in Applied Informatics, University of Fortaleza (UNIFOR), Fortaleza, CE, Brazil

Mirian Caliope Dantas Pinheiro Graduate Program in Applied Informatics, University of Fortaleza, Fortaleza, CE, Brazil

Pedro Gabriel Caliope Dantas Pinheiro University of Fortaleza, Fortaleza, CE, Brazil

Placido Pinheiro Graduate Program in Applied Informatics, University of Fortaleza, Fortaleza, CE, Brazil

Jiří Polcar Department of Industrial Engineering and Management, University of West Bohemia, Plzen, Czech Republic

Monica Pompeu Graduate Program in Applied Informatics, University of Fortaleza, Fortaleza, CE, Brazil

Herleson Paiva Pontes Graduate Program in Applied Informatics, University of Fortaleza (UNIFOR), Fortaleza, CE, Brazil;

Federal Institute of Education, Science and Technology of Ceara (IFCE), Jaguaribe, CE, Brazil

xxii Contributors

Francisco A. Pujol Department of Computer Technology, University of Alicante, San Vicente del Raspeig, Alicante, Spain

Francisco Pujol-Lopez University of Alicante, San Vicente del Raspeig, Spain

Jukka Pulkkinen Häme University of Applied Sciences, Hämeenlinna, Finland

María Graciela Badilla Quintana Facultad de Educación, Centro de Investigación en Educación y Desarrollo (CIEDE), Universidad Católica de la Santísima Concepción, Concepción, Chile

Adil E. Rajput College of Engineering, Effat University, Jeddah, Kingdom of Saudi Arabia

Alberto Real-Fernández Unidad Científica de Innovación Empresarial "Ars Innovatio", University of Alicante, San Vicente del Raspeig, Spain

Roberto Reda Department of Computer Science and Engineering, University of Bologna, Bologna, Italy

Eva Rimbau-Gilabert Open University of Catalonia, (Universitat Oberta de Catalunya), Barcelona, Spain

Lorayne Robertson Ontario Tech University, Oshawa, ON, Canada

Inma Rodríguez-Ardura Open University of Catalonia, (Universitat Oberta de Catalunya), Barcelona, Spain;

University of Miami, Coral Gables, FL, USA

Lucie Rohlíková Department of Computer Science and Educational Technology, University of West Bohemia, Plzen, Czech Republic

Miguel Torres Ruiz Instituto Politécnico Nacional, Centro de Investigación en Computación, Nueva Industrial Vallejo, Gustavo a. Madero, Mexico

Sajid Saleem School of Electrical Engineering and Computer Science (SEECS), National University of Sciences and Technology (NUST), Islamabad, Pakistan; Department of Computer and Network Engineering, College of Computer Science and Engineering, University of Jeddah, Jeddah, Saudi Arabia

Jose-Luis Sanchez-Romero University of Alicante, San Vicente del Raspeig, Spain

Akila Sarirete College of Engineering, Effat University, Jeddah, Kingdom of Saudi Arabia

Filippo Sciarrone Department of Engineering, Roma TRE University, Rome, Italy

Ricardo Sellers University of Alicante, San Vicente del Raspeig, Alicante, Spain **Enric Serradell-López** Universitat Oberta de Catalunya, Barcelona, Spain

Contributors xxiii

Chen-wen Shen Department of Business Administration, National Central University, Jhongli District, Taoyuan City, Taiwan, Republic of China

María Teresa Signes-Pont Department of Computer Technology and Computation, University of Alicante, Alicante, Spain

Muneeba Sirshar School of Electrical Engineering and Computer Science (SEECS), National University of Sciences and Technology (NUST), Islamabad, Pakistan

Rafael Mollá Sirvent Department of Computer Technology and Computation, University of Alicante, Alicante, Spain

Marco Spruit Department of Information and Computing Sciences, Utrecht University, Utrecht, The Netherlands

Marco Temperini DIAG-Dipartimento di Ingegneria Informatica, Automatica e Gestionale, Sapienza University of Rome, Rome, Italy

Diana Mihaela Țîrcă Constantin Brancusi University, Târgu Jiu, Romania; Faculty of Economics Sciences, Târgu Jiu, Romania

Orlando Troisi University of Salerno, Fisciano, ITA, Italy

Igor Trotskii Häme University of Applied Sciences, Hämeenlinna, Finland

Jiří Vyšata Department of Machining Technology, University of West Bohemia, Plzen, Czech Republic

Wei Wang College of Business Administration, Huaqiao University, Quanzhou, China

Yves Wautelet KU Leuven, Brussels, Belgium

Yenchun Jim Wu Graduate Institute of Global Business and Strategy, National Taiwan Normal University, Taipei City, Taiwan