

Smart Innovation, Systems and Technologies

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Álvaro Rocha · Robson Pacheco Pereira
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Developments and Advances in Defense and Security

Proceedings of MICRADS 2019

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Preface

This book contains a selection of papers accepted for presentation and discussion at The 2019 Multidisciplinary International Conference of Research Applied to Defense and Security (MICRADS'19). This Conference had the support of IME (Military Institute of Engineering) of Brazil, ESPE (University of Armed Forces) of Ecuador, and AISTI (Iberian Association for Information Systems and Technologies). It took place at Rio de Janeiro, Brazil, during May 8–10, 2019.

The 2019 Multidisciplinary International Conference of Research Applied to Defense and Security (MICRADS'19) is an international forum for researchers and practitioners to present and discuss the most recent innovations, trends, results, experiences, and concerns in the several perspectives of defense and security.

The Program Committee of MICRADS'19 was composed of a multidisciplinary group of more than 100 experts from 35 countries around the world and those who are intimately concerned with Research Applied to Defense and Security. They have had the responsibility for evaluating, in a 'double-blind review' process, the papers received for each of the main themes proposed for the Conference: (A) systems, communication and defense; (B) strategy and political-administrative vision in defense; and (C) engineering and technologies applied to defense.

MICRADS'19 received about 100 contributions from 11 countries around the world. The papers accepted for presentation and discussion at the Conference are published by Springer (this book) and by AISTI and will be submitted for indexing by ISI, Ei Compendex, Scopus, and/or Google Scholar, among others.

We acknowledge all of those that contributed to the staging of MICRADS'19 (authors, committees, workshop organizers, and sponsors). We deeply appreciate their involvement and support that was crucial for the success of MICRADS'19.

Rio de Janeiro, Brazil
May 2019

Álvaro Rocha
Robson Pacheco Pereira

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About the Editors

Álvaro Rocha holds a Habilitation (postdoctoral degree) in Information Science, Ph.D. in Information Systems and Technologies, M.Sc. in Information Management, and B.C.S. in Computer Science. He is currently a Professor of Information Systems and Software Engineering at the University of Coimbra, researcher at CISUC (Centre for Informatics and Systems of the University of Coimbra) and a collaborator researcher at LIACC (Laboratory of Artificial Intelligence and Computer Science) and CINTESIS (Centre for Research in Health Technologies and Information Systems). His main research interests are in Information Systems Planning and Management, Maturity Models, Information Systems Quality, Online Service Quality, Intelligent Information Systems, Software Engineering, e-Government, e-Health, and Information Technology in Education. He is also President of the AISTI (Iberian Association for Information Systems and Technologies), Chair of the IEEE Portugal Section Systems, Man, and Cybernetics Society Chapter, and Editor-in-Chief of both JISEM (Journal of Information Systems Engineering & Management) and RISTI (Iberian Journal of Information Systems and Technologies).

Professor Rocha has also served as a Vice-Chair of Experts in the European Commission's Horizon 2020 initiative, as an Expert at the Italian Ministry of Education, University and Research, and as a General Chair of the WorldCIST (World Conference on Information Systems and Technologies).

Robson Pacheco Pereira holds a degree in Chemistry (2000) and a doctorate in Physics/Chemistry (2005) from the Federal University of Rio de Janeiro. He is currently a Professor at the Military Institute of Engineering (IME/RJ), where he coordinates the Nanotechnology Group and Physics and Chemistry, and develops projects in the areas of nanotechnology, materials, electrochemistry, biosensors and theoretical chemistry, intended for use in the area of Defense. The Group chiefly pursues work on nanotechnology, physicochemistry, polymeric materials and inorganic and nano-structured nanoparticles, kinetics, electrochemical solids, corrosion, and power conversion and storage devices. Professor Pereira has also published extensively in international journals.