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ICAI Workshops (ICAIW 2023)

Joint Proceedings of the

- **4th International Workshop on Applied Artificial Intelligence (WAAI 2023)**

- **5th International Workshop on Applied Informatics for Economics, Society and Development (AIESD 2023)**

- **2nd International Workshop on Intelligent Transportation Systems and Smart Mobility Technology (WITS 2023)**

- **3rd International Workshop on Knowledge Management, Innovation and Technologies (WKMIT 2023)**

- **2nd International Workshop on Systems Modeling (WSM)**

co-located with the 6th International Conference on Applied Informatics (ICAI 2023)

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Preface

This volume contains the proceedings of the workshops: 4th International Workshop on Applied Artificial Intelligence (WAAI 2023), 5th International Workshop on Applied Informatics for Economy, Society, and Development (AIESD 2023), 2nd International Workshop on Intelligent Transportation Systems and Smart Mobility Technology (WITS 2023), 3rd International Workshop on Knowledge Management, Innovation and Technologies (WKMIT 2023), and 2nd International Workshop on Systems Modeling (WSM 2023). These workshops were co-located with the 6th International Conference on Applied Informatics (ICAI 2023)[1] which took place at Universidad Ecotec in Guayuaquil, Ecuador, from 26 to 28 October 2023.

4th International Workshop on Applied Artificial Intelligence (WAAI 2023). The workshop on Applied Artificial Intelligence is an annual event intended to be an important forum of the Artificial Intelligence (AI) community, organized by the GRUPO GEMIS of the Universidad Tecnológica Nacional Facultad Regional Buenos Aires. The workshop aims to provide a forum for researchers and AI community members to discuss and exchange ideas and experiences on diverse topics of AI. It also seeks to strengthen a space for discussion of innovative ideas as well as the development of emerging technologies and practical experiences related to Artificial Intelligence in general, and each of its technologies in particular. Submissions are invited on both applications of AI and new tools and foundations.

5th International Workshop on Applied Informatics for Economy, Society, and Development (AIESD 2023). The workshop on Applied Informatics for Economy, Society, and Development organized by the Universidad Ecotec (Ecuador) seeks to promote discussion and dissemination of current economics research, systems for territorial intelligence, e-participation, e-democracy, and territorial economic development; with special emphasis on social and environmental development. The objective of this edition of AIESD is to discuss aspects related to computer science applied in society. The idea is to learn the different techniques and tools that are used to study social phenomena, economic growth, and the interaction between economic analysis and decision-making. The workshop seeks to promote an atmosphere of dialogue among the community of professionals working on issues related to technology and its application in the economy as well as society.

2nd International Workshop on Intelligent Transportation Systems and Smart Mobility Technology (WITS 2023). The digital transformation of traffic monitoring systems has led to an increased interest from the academic community, governments, and the general public in the concept of smart mobility, consisting of the optimized use of transport networks through the automated analysis of traffic data and, especially, the implementation of intelligent transportation systems. This type of technology focuses on optimizing how people travel, decreasing traffic congestion, improving road safety, and enhancing governmental decision-making during the construction or expansion of infrastructure. The International Workshop on Intelligent Transportation Systems and Smart Mobility Technology (WITS), part of the International Conference on Applied Informatics (ICAI), is an annual event organized by Universidad Antonio Nariño in Bogotá, Colombia, and intended to be an important forum

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[1] http://icai.itiud.org/

for the discussion and dissemination of contemporary research on the study and design of software providing integrated information to allow drivers, commuters and pedestrians to make a safer and more coordinated use of urban transport networks. Participants in the workshop will find a space for the exchange of innovative ideas and practical experiences on the use of this type of technology as well as for the establishment of collaborative networks. The workshop welcomes submissions on both practical and theoretical proposals on ITSs and related technological solutions.

3rd International Workshop on Knowledge Management, Innovation and Technologies (WKMIT 2023)). The workshop on Knowledge Management and Information Technologies is an annual event intended to be an important forum of the Knowledge Management (KM) community, organized by the GRUPO GEMIS of the Universidad Tecnológica Nacional Facultad Regional Buenos Aires. The knowledge is a strategic resource to obtain better results in the organizations and its management promotes continuous improvement practices and innovation. Complete and integral knowledge management requires an approach from different perspectives: people, organizational culture, processes, tools and technologies, among others. The workshop aims to provide a forum for researchers and KM community members to discuss and exchange ideas and experiences on diverse topics of KM. It also seeks to strengthen a space for discussion of innovative ideas, development of emerging technologies, and practical experiences related to Knowledge Management in general and each of its technologies in particular.

2nd International Workshop on Systems Modeling (WSM 2023) The International Workshop on Systems Modeling (WSM) aims to bring together researchers and practitioners working in different areas of systems modeling to provide an opportunity for the modeling community to further advance the foundations of modeling and modeling in emerging areas.

The workshops received 28 submissions in total. All submitted papers underwent a double-blind peer review process, where each paper was reviewed by at least two (2) experts. After a careful discussion, the diverse program committees decided to accept 15 research papers overall. This volume contains these papers. These papers are distributed across the workshops as follows:

- Nine submissions received for WAAI, of which three were accepted;

- Ten submissions received for AIESD, of which six were accepted;

- One submission received for WITS, which was accepted;

- Four submissions received for WKMIT, of which two were accepted;

- Four submissions received for WSM, of which three were accepted.

All the workshops took place on 26 October 2023. In all of them, each paper presentation was immediately followed by comments from session chairs and a plenary discussion. We thank all session chairs for their careful preparations and for triggering insightful discussions.

October 2023   Hector Florez
                                                                   Ixent Galpin
                                                              Christian Grévisse

Organization

6th International Conference on Applied Informatics (ICAI 2023)

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4th International Workshop on Applied Artificial Intelligence (WAAI 2023)

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5th International Workshop on Applied Informatics for Economics, Society and Development (AIESD 2023)

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Lizethe Méndez Heras	Universidad Ecotec, Ecuador
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2nd International Workshop on Intelligent Transportation Systems and Smart Mobility Technology (WITS 2023)

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Omar Rey	Escuela Superior de Administración Pública, Colombia

3rd International Workshop on Knowledge Management, Innovation and Technologies (WKMIT 2023)

Organizing Committee

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Mauricio Rozo Rodriguez	Universidad Tecnológica Nacional Facultad Regional Buenos Aires, Argentina

2nd International Workshop on Systems Modeling (WSM 2023)

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Rocio Rodriguez	Universidad Distrital Francisco Jose de Caldas, Bogotá, Colombia
Alix Rojas	Universidad Ean, Bogotá, Colombia

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