

# Advances in Intelligent Systems and Computing

Volume 1401

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Editors

# 16th International Conference on Soft Computing Models in Industrial and Environmental Applications (SOCO 2021)

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# Preface

This volume of *Advances in Intelligent and Soft Computing* contains accepted papers presented at the *16th International Conference on Soft Computing Models in Industrial and Environmental Applications* (SOCO 2021). This conference was held in the beautiful seaside city of Bilbao, Spain, in September 2021.

Soft computing represents a collection or set of computational techniques in machine learning, computer science, and some engineering disciplines, which investigate, simulate, and analyze very complex issues and phenomena.

After a through peer-reviewed process, the SOCO 2021 International Program Committee selected 78 papers which are published in these conference proceedings and represents an acceptance rate of 48%. In this relevant edition, a special emphasis was put on the organization of special sessions. Seven special sessions were organized related to relevant topics as: Applications of machine learning in computer vision; soft computing applied to autonomous robots and renewable energy systems; optimization, modeling and control by soft computing techniques; challenges and new approaches toward artificial intelligence deployments in real-world scenarios; time series forecasting in industrial and environmental applications; soft computing methods in manufacturing and management systems; and applied machine learning.

The selection of papers was extremely rigorous in order to maintain the high quality of the conference, and we would like to thank the members of the program committees for their hard work in the reviewing process. This is a crucial process to the creation of a high standard conference, and the SOCO conference would not exist without their help.

SOCO 2021 enjoyed outstanding keynote speeches by distinguished guest speakers: Prof. Javier del Ser, who is a principal researcher in data analytics and optimization at Tecnia, Spain, and is a part-time lecturer at the University of the Basque Country, Spain; Prof. Concha Bielza, who is a full professor in the Department of Artificial Intelligence, Polytechnic University of Madrid, Spain; and Prof. Enrique Zuazua, who holds a chair in Applied Analysis at Friedrich Alexander University, Germany, and a chair of Computational Mathematics at University of Deusto, Spain.

SOCO 2021 has teamed up with “Neurocomputing” (Elsevier) and “Logic Journal of the IGPL” (Oxford University Press) for a suite of special issues including selected papers from SOCO 2021.

Particular thanks go as well to the conference main sponsors, Startup Ole, Department of Education and Universities of the Basque Government, Logistar Project of DeustoTech, and University of Deusto, who jointly contributed in an active and constructive manner to the success of this initiative.

We would like to thank all the special session organizers, contributing authors, as well as the members of the program committees and the local organizing committee for their hard and highly valuable work. Their work has helped to contribute to the success of the SOCO 2021 event.

September 2021

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