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Sinan Melih Nigdeli · Joong Hoon Kim ·
Gebrail Bekdaş · Anupam Yadav
Editors

Proceedings of 6th International Conference on Harmony Search, Soft Computing and Applications

ICHSA 2020, Istanbul

 Springer

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Preface

International Conference on Harmony Search, Soft Computing and Applications (ICHSA) is a prestigious academic event, where both potential and young researchers meet to discuss their knowledge and study. In 2020, the venue of the sixth edition of the event was Istanbul, Turkey. Unfortunately, the event was organized online due to Covid-19 outbreak because of travel restrictions and health care. The conference was organized with the support of Istanbul University—Cerrahpaşa. The earlier editions of the conference were organized at South Korea, Spain, India and China.

This book is a curated collection of the articles which were presented during the conference. The book focuses on the current and recent developments in the harmony search algorithm and their engineering applications. It demonstrates the new variants of harmony search algorithms for water distribution system operation, neural networks for predicting the drought index, prediction of soil plasticity using ANN, optimum designs of reinforced concrete retaining walls under static and dynamic loads, total protein optimization using metaheuristics, harmony search for extreme learning machines, ML-based pedotransfer function for estimating the soil–water characteristic curve, optimum transportation path assignment within airports in Turkey, defect detection in fruits and vegetables using soft computing techniques, potentials of AI in Military, and hybrid harmony search algorithm for optimum design of vibration absorber system.

In conclusion, the edited book comprises papers on diverse aspects of harmony search and other metaheuristic techniques with their application in areas, such as engineering optimization, water distribution system operation, drought indexing, landslide monitoring, mechanical engineering problems, and machine learning predicting models.

Turkey, China
July 2020

Sinan Melih Nigdeli
Joong Hoon Kim
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