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Interdisciplinary Innovations and Developments towards Smart and Sustainable Industries

Proceedings of the 2022 International Conference on Advancements in Interdisciplinary Research towards Smart and Sustainable Society (AIR2022)

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AIR 2022 Conference Proceedings contain the peer-reviewed articles from the contributions presented during the International Conference on “Advancements in Interdisciplinary Research: AIR-2022” held online on May 6 - 7, 2022. The AIR-2022 conference was organized by the Department of Applied Mechanics, Motilal Nehru National Institute of Technology Allahabad, Prayagraj, India, in association with Nexance- The Next Generation Alliance for Scientific and Professional Advancements. It focused on fundamental and applied research to design, understand, and promote an environmentally sustainable and socially resilient society.

In today’s era, automation and the development of intelligent systems have unlocked the potential for environmental safety and sustainable development. The development of these intelligent systems provides opportunities to resolve the challenges affecting our lives in adverse ways. This rapid progress of global urbanization, urban expansion, and increasing urban population density, also poses unprecedented challenges to the environment, energy/natural resources, and society. This book aims to discuss some of the important issues and their solutions for developing and managing a smart and sustainable society for everyone.

AIR-2022 was aimed to bring together researchers, academicians, scientists and experts from industry in a single platform to exchange their ideas for a sustainable future with sustainable development through interdisciplinary research approach. While sustainable development is needed for a significant impact on worldwide society, this interdisciplinary conference covered various engineering problems of different thrust areas. The areas covered in AIR-2022 were: Innovative Engineering Solutions, Engineering Applications in Health care and Transformative Technologies.

This book presents technological advancements in terms of machines and materials used, advancements in biomedical, energy, and fluid engineering for sustainable growth, and various transformative technologies. Some of these transformative technologies discussed in this book are security and privacy models for a secure society and industries, Intelligent methods, machine learning, deep learning-enabled applications, development of optimized networking infrastructure, optimized solutions, robotics, and computer vision. It also focuses on the latest trends, technological frameworks, and applications of computers in interdisciplinary engineering for solving real-life problems.

The topics covered and presented during AIR2022 represented a vast pool of research knowledge, resources, and expertise of the various research and technological communities from India and other countries like USA, UK, Canada, and South Korea. Such participation in AIR-2022 made a substantial contribution to the overall national development in the emerging field of energy, artificial intelligence, IoT applications in agriculture, and health care systems.

The topics covered and presented during Air2022 must have inspired the participants to take up the challenges in hot areas of engineering applications.



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