## Welcome remarks

The Moroccan Association of Additive Manufacturing and 3D Printing is an association dedicated among other things to the promotion of scientific research in the promising field of additive manufacturing and 3D printing in Morocco. The organization of workshops is one of the key strategies to achieve this goal.

Following a modest start in 2019 with 20 researchers and 8 oral presentations, and building on the success of the 2022 and 2023 editions, the fourth MW3DP workshop was held on July 3, 2024, at the Mohamed Sekkat University Library, Hassan II University of Casablanca. The event featured three prominent keynote speakers from the UK and Morocco, addressing standardization in additive manufacturing, 3D printing of buildings, and 3D printing of clay-based artisanal pottery. With 50 registered participants, including 20 doctoral students from nine Moroccan universities, the workshop showcased fifteen oral presentations and was a resounding success across all dimensions.

This book compiles the proceedings of the workshop, featuring fifteen papers that explore various aspects of additive manufacturing, including applications, challenges, modeling, simulation, process optimization, monitoring, qualification, and post-processing operations. These contributions have enriched the field and contributed to the workshop's success.

The editors express sincere gratitude to the Organizing Committee, session chairs, attendees, and keynote speakers for their enthusiastic participation and timely submission of manuscripts. We also acknowledge the invaluable contributions of the workshop's Organizing and Scientific Committees in planning and producing the proceedings. Special thanks go to Hassan II University of Casablanca, Casablanca Higher School of Technology, the National Center for Scientific and Technical Research, and the Laboratory of Advances Research in Industrial and Logistics Engineering for their support and partnership.

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