

Preface

It is with great honor and immense pleasure that we welcome you to the 1st International Conference on Materials Sciences and Mechatronics for Sustainable Energy and the Environment (MSMS2E 2024), organized by **Engineering and Applied Physics Team (EAPT)**, **The Moroccan Association of Sciences and Techniques for Sustainable Development (MASTSD)** at Beni Mellal and **Sultan Moulay Slimane University** in the **Higher School of Technology in Béni-Mellal, Morocco**, from October 1 to 3, 2024. This landmark event takes place in Béni-Mellal, Morocco, from October 1 to 3, 2024. The aim of this conference is to foster a dynamic exchange of ideas, research, and technologies among leading researchers, scientists, and industry professionals from all over the world. The main focus of the event is to explore how cutting-edge advancements in materials sciences and mechatronics can contribute to the sustainable energy sector and address pressing environmental concerns.

At the heart of MSMS2E 2024 lies a commitment to promoting interdisciplinary collaboration. In an era where global challenges such as climate change and resource scarcity demand innovative solutions, it is crucial to bridge the gaps between different scientific fields. The fields of materials science and mechatronics play a key role in this endeavor, as they contribute to the development of advanced technologies that improve energy efficiency, reduce waste, and support the transition to more sustainable industrial processes. By gathering a diverse array of experts, this conference seeks to provide a platform for fruitful discussions, the sharing of cutting-edge research, and the establishment of long-term partnerships across borders.

Moreover, the conference will feature keynote lectures by distinguished speakers who are at the forefront of innovation in sustainable energy and environmental technologies. In addition, a variety of technical sessions, workshops, and poster presentations will allow participants to delve deeper into specialized topics, exchange ideas, and collaborate on new research projects. This interdisciplinary approach is designed to foster creativity and inspire novel solutions to the complex challenges faced by our society today.

We would like to take this opportunity to express our deepest gratitude to all the authors, reviewers, session chairs, and committee members whose hard work and dedication have made this event possible. Additionally, we extend our sincere thanks to the partners who have supported MSMS2E 2024 and helped to ensure the success of this international gathering. Without their support, this conference would not have been possible.

Finally, we encourage all participants to make the most of this opportunity to engage with peers, explore new research avenues, and contribute to the collective effort of advancing knowledge in materials sciences and mechatronics for a sustainable future. We are confident that the insights and collaborations emerging from this conference will have a lasting impact on the scientific community and beyond. We wish you a productive and inspiring conference experience in the vibrant and welcoming city of Béni-Mellal.

Pr. Younes Ziat (استاذ يونس زيات)

On behalf of the MSMS2E 2024 & editorial team

Beni Mellal, 14 October 2024