

PREFACE

Dear Distinguished Delegates, Colleagues and Guests,

The IICBE Organizing Committees warmly welcomes our distinguished delegates and guests at CCBEE-24 Conferences scheduled on *Nov. 21-22, 2024 Cape Town (South Africa)*. The main themes and track are organized Conferences on Science, Engineering, Technology, Natural Resources, Chemical, Agricultural, Biological and Environmental Sciences.

These conferences are managed and sponsored by IICBE are striving hard to compile the research efforts of scientists, researchers and academicians across the broad spectrum of Science, Engineering and Technology. These conferences are aimed at discussing the wide range of problems encountered in present and future high technologies among the research fraternity.

The conferences are organized to bring together the members of our international community at a common platform, so that, the researchers from around the world can present their leading-edge work. This will help in expansion of our community's knowledge and provide an insight into the significant challenges currently being addressed in that research. The conference Program Committee is itself quite diverse and truly international, with membership from the America, Australia, Europe, Asia and Africa.

The conference has solicited and gathered technical research submissions related to all aspects of major conference themes and tracks. This proceeding records the fully refereed papers presented at the conference.

All the submitted papers in the proceeding have been double blind peer reviewed by the reviewers drawn from the scientific committee, external reviewers and editorial board depending on the subject matter of the paper. Reviewing and initial selection were undertaken electronically. After the rigorous peer-review process, the submitted papers were selected on the basis of originality, significance, and clarity for the purpose of the conference. The main goal of these events is to provide international scientific forums for exchange of new ideas in a number of fields that interact in-depth through discussions with their peers from around the world.

The program has been structured to favor interactions among attendees coming from many diverse horizons, scientifically, geographically, from academia and from industry. We would like to thank the program chairs, organization staff, and the members of the program committee for their work. We like to thank and show gratitude to Editors from IICBE. We are grateful to all those who have contributed to the success of IICBE November 2024 Conference. We hope that all participants and other interested readers benefit scientifically from the proceedings and also find it stimulating in the process in their quest of achieving greater heights. Finally, we would like to wish you success in your technical presentations and social networking. **The ISBN number of the Proceedings is 978-989-9121-42-3.**

We hope you have a unique, rewarding and enjoyable week at IICBE Conference at colorful
Cape Town

With our warmest regards,

Organizing Committee

Nov. 21-22, 2024

Cape Town (South Africa)