

ISERME 2022

International Symposium on
Earth Resources Management
& Environment

23rd December 2022
Colombo – Sri Lanka



PROCEEDINGS



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Message from Dr. S.P. Chaminda - Symposium Chair

Welcome to the sixth International Symposium on Earth Resources Management and Environment [ISERME 2022], organized by the Department of Earth Resources Engineering, University of Moratuwa, Sri Lanka.

The research culture of the department revolutionary changed sixteen years back, and in year 2005 with the implementation of World Bank funded project for Improving Relevance and Quality of Undergraduate Education [IRQUE]. We are grateful the "IRQUE" Project for encouraging and funding the department to organise the first annual research conference in year 2006, which eventually evolved up to an International Symposium in year 2017.



Since 2017, the department has been networking with the international Mining Engineers and Earth Scientists in organizing this symposium, annually.

On behalf of the Department of Earth Resources Engineering, I wish to extend my sincere thanks to Senior Professor N. D. Gunawardena, Vice-Chancellor of the University of Moratuwa and Professor K.T.U.M. Hemapala, Dean-Faculty of Engineering of the University of Moratuwa for granting their kind permissions to hold the inauguration of this year's symposium in the hybrid-mode at the University of Moratuwa.

I greatly appreciate Professor Ajith De Alwis, Dean-Faculty of Graduate Studies of the University of Moratuwa for providing Boardroom facilities of the Faculty, for hosting the inauguration of the symposium on hybrid-mode.

The external reviewers of the symposium are commended for their timely given insightful reviews. Thanks, are also extended to all the authors for their excellent submissions made to this symposium.

I'm certain that this symposium will continue to network with more researchers in the fields of Mining and Earth Resources Engineering, in the coming years.

I wish you all, a productive and enjoyable Symposium!

Dr. S.P. Chaminda
Symposium Chair | ISERME 2022

Head - Department of Earth Resources Engineering, University of Moratuwa
23rd December 2022

Message from Dr. (Mrs.) A.B.N. Dassanayake - Symposium Secretary

On behalf of the Organizing Committee and as the coordinator of the symposium, I would like to warmly welcome your participation in the 6th International Symposium on Earth Resources Management and Environment organized by the Department of Earth Resources Engineering, University of Moratuwa, Sri Lanka.



The event with the theme of "Earth Resources Management and Environment" brings together many academics, students, industry leaders, alumni, and well-wishers and is graced by Prof. R.A.R.C. Gopura, Director-Office of Research, University of Moratuwa as the Chief Guest, and Eng. Chirantha Weerawardena, an experienced professional in Mining Engineering, mining technology and mine operations, as the keynote speaker. This event creates an international forum for academics, researchers, industry leaders, professionals, and alumni to come together sharing the latest findings, and have constructive discussions across a broad range of disciplines related to Mining and Earth Resources Engineering. The event also seeks to network with a large number of organisations and individuals at national and international levels.

I wish to express our special recognition to our sponsors and supporting institutions for their financial support and dedication. I sincerely thank the organising committee and technical program committees for their contribution toward ISERME 2022 and all the academic and non-academic staff members of the Department of Earth Resources Engineering for effectively fulfilling the individual tasks undertaken to make the event a success.

We would like to express our deepest appreciation to the authors whose technical contributions are presented in these proceedings. It is because of their excellent contributions and hard work that we have been able to prepare this proceeding.

Dr. (Mrs.) A.B.N. Dassanayake
Symposium Secretary | ISERME 2022

Senior Lecturer, Department of Earth Resources Engineering, University of Moratuwa
23rd December 2022

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