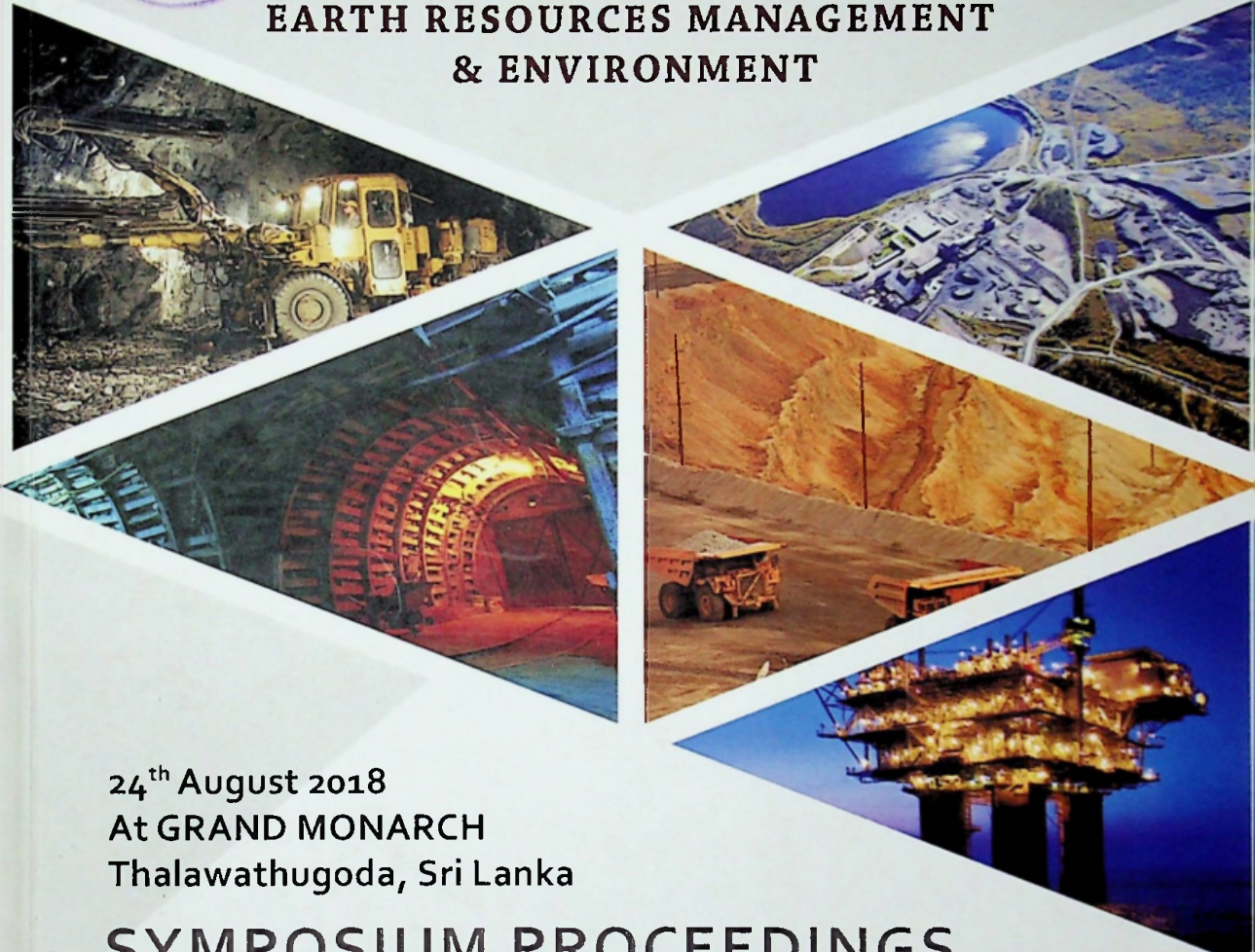




# ISERME 2018

INTERNATIONAL SYMPOSIUM ON  
EARTH RESOURCES MANAGEMENT  
& ENVIRONMENT



24<sup>th</sup> August 2018  
At GRAND MONARCH  
Thalawathugoda, Sri Lanka

## SYMPOSIUM PROCEEDINGS

**ORGANIZED BY**



DEPARTMENT OF EARTH RESOURCES ENGINEERING  
UNIVERSITY OF MORATUWA, SRI LANKA



# ISERME 2018

International Symposium

on

Earth Resources Management & Environment



Organized by

Department of Earth Resources Engineering

Faculty of Engineering

University of Moratuwa

Sri Lanka

24<sup>th</sup> August 2018, Thalawathugoda, Sri Lanka

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ISERME 2018

## Message from Dr. HMR Premasiri | Symposium Chair

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It is indeed a great pleasure in issuing this message for the International Research Symposium on Earth Resources Management and Environment (ISERME 2018) organized by the Department of Earth Resources Engineering, Faculty of Engineering, University of Moratuwa.



The Department of Earth Resources Engineering, University of Moratuwa has been conducting the ERE-Annual Conference for ten years. In the year 2017, the Department joined hands with Division of Sustainable Resource Engineering, Hokkaido University, Japan organized the first international symposium (ISERM2017). In the year 2018, the Department has organized 2<sup>nd</sup> International research symposium with the participation of researchers, academia, and industry personal from both local and overseas universities and institutes.

The Department of Earth Resources Engineering of the University of Moratuwa, is the only department in Sri Lanka, conducting undergraduate and post-graduate levels degree programmes in the fields of earth resources engineering and mining engineering.

This International Research Symposium is a land-mark event of the history of the department and it is a premier forum for the academia, researchers, industry leaders, geo-professionals to come together and have constructive discussions on earth resources and mining engineering and related environmental issues. I am sure that the symposium will provide a platform to showcase departments' research to the world and to strengthen the national international collaborations. I would like to extend my gratitude to Prof. Kapila Perera, Chief Guest (Vice Chancellor, University of Moratuwa) and Prof. Nalin Wickramarachchi, Dean/ Faculty of Engineering for admirable guidance and support given to make this event a success. I am extremely grateful to Prof. Bodapati Prasad, AKS University, Satna, India, who is delivering the Key Note Speech of the Conference. Also, I would like to thank our industry partners for their constant support and financial assistance to this event. I take this opportunity to convey my best wishes to all researches who will present their research finding in this symposium.

Dr. HMR Premasiri – Chair of the Symposium  
Head/Department of Earth Resources Engineering, University of Moratuwa  
Sri Lanka  
24<sup>th</sup> August 2018

## Message from Eng. PVA Hemalal | Symposium Secretary

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It is with great pleasure I fulfill the responsibility of coordinating the activities leading to ISERME-2018 the theme "Earth Resources Management and Environment" as the coordinator. The symposium is no doubt the greatest annual academic event of the Department of Earth Resources Engineering of the University of Moratuwa. I consider it an honor to play a pivot role in organizing activities leading to this great event, networking with a large number of organizations and individuals.



The event brings together many academics, students, industry leaders, alumni and well-wishers and is graced by the vice chancellor as the chief guest and Professor Bodapati Prasad, professor of mining engineering, Mining Technology Department, AKS University, India, the key-note speaker.

This forum provides an ideal opportunity for the students to mix along with the senior industry professionals and industrialists and learn firsthand the new trends of development in the industry and in academia elsewhere and, sharpen ones skills to suit the changing circumstances. In an informal setting the academic will also have a chance to feel the pulse of the industry and exchange views which will help guide future research.

I hope that the theme is an inspiration to the young professionals to chart their future role as there is still a lot to be done to tap the vast potential of industrial minerals in the country and accordingly plan their future and make themselves ready to undertake the future management of country's mineral resources raising the stature of the industry to greater heights.

I sincerely thank all the academic colleagues for the valuable advice offered, non-academic staff members and the student body effectively fulfilling the individual tasks undertaken to make the event a success. This event would not have been possible without the financial assistance of the sponsors.

Eng. PVA Hemalal  
Senior Lecturer - Symposium Secretary  
ISERME 2018  
24<sup>th</sup> August 2018

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