



ERE 2010

Proceedings of 5th Annual Conference

Earth Resource for National Development



Department of Earth Resources Engineering
Faculty of Engineering
University of Moratuwa
Sri Lanka

Proceedings of
ERE 2010
"Earth Resources for National Development"

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on
“Earth Resources for National Development”

24th September 2010

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(All articles are refereed)

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I am delighted to have you here sharing the 5th Annual Conference Organized by the Department of Earth Resources Engineering, University of Moratuwa.

"The Annual Conference" is the zenith of the key events of the department where the present students and Alumni get-together and actively take part in presenting their new findings to their colleagues for constructive discussion, leading the way for mining engineering applications of those findings for betterment of the trade, industry and standards of public life.

This year our theme is Earth Resources for National Development. After a long period of war, finally peace has dawn to our motherland. We as a nation are striving to develop the country. Careful management of our earth resources would definitely lead us to a better future. I hope this timely theme would enhance your knowledge on Sri Lankan Earth Resources and would inspire to manage them properly leading to fulfil our development aspirations.

I would like convey my heartfelt gratitude towards the members of the editorial board and reviewers who have put so much of effort to bring this edition into a successful one. This gathering would not have been possible without the cordial assistance of our sponsors.

Prepare yourself to be challenged, excited and inspired!

Dr. N. P Ratnayake

Conference Coordinator
ERE 2010

24th September 2010

MESSAGE FROM HEAD OF DEPARTMENT

It is my pleasure and privilege to welcome you all to the 5th Annual conference ERE 2010, organised by the department of Earth Resources Engineering, University of Moratuwa.

This event in 2010 marks a celebration in two different aspects, first being the completion of five years of ERE conference since its inception in 2006 and the second, completion of ten years of the second rebirth of the department after renaming and restructuring admission procedure of the department. It is first and foremost responsibility to pay my respect and utmost gratitude to all those who were responsible for bringing this department to its present state.

ERE 2010 being an annual research dissemination seminar, has undertaken the responsibility to share the latest research activities and studies carried out by the research students, undergraduate students, industry and academic personals, creating a healthy partnership among each other.

The forum gathered here today to discuss the Earth Resources for National Development will lead to fruitful deliberations to enhance the understanding which may lead to the betterment of the future of Sri Lanka and the world as a whole. Use of Earth Resources in a sustainable manner has become the challenge in front of all of us in the 21st centenary. It is my sincere wish ERE annual conference will act as a stepping stone for the future Earth Resources Ambassadors to make the world a better place for us as well as for the future generations.

I invite you all for a fruitful day along dialog on "Earth Resources for National Development" with the speakers as well as the colleagues, I wish to make this an opportunity to congratulate the conference coordinator and editor in chief of the conference proceedings, Dr. Nalin Ratriyake and the organising committee and the reviewer team lead by him for the good work done to make this day a memorable one for us all.

Last but not least, I wish to acknowledge and appreciate the generous support extended by the sponsors Holcim (Lanka) Ltd , Maga Engineering (Pvt) Ltd, GSMB Technical Service (Pvt) Ltd, Soil Tech (Pvt) Ltd, Engineering & Laboratory Services (Pvt) Ltd, Progressive Builders & Resorts (Pvt) Ltd and Bogala Graphite Lanka Limited for making this event possible.

Dr. Shiromi Karunarathna
Head, Department of Earth Resources Engineering

24th September 2010



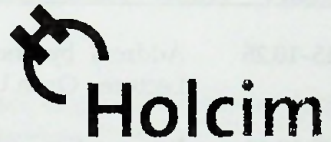
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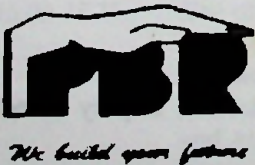
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- 8.30-9.00 Registration
- 9.00-9.10 Opening ceremony
- 9.10-9.15 Welcome address by the Head, Department of Earth Resources Engineering, University of Moratuwa
- 9.15-9.25 Address by the Dean, Faculty of Engineering, University of Moratuwa
- 9.25-9.55 Key note address by Mr. Pascal Pajens, Vice President (Manufacturing), HOLLAND CEMENT Lanka Limited (topic-Earth Resources for National Development)
- 9.55-10.15 TEA BREAK

Session I - Theme - Mineral Exploration

- 10.15-10.25 Address by the Session Chairman - Dr. Rohan Fernando, Senior Lecturer, Open University of Sri Lanka
- 10.25-10.40 Demarcation of Potential Sites for Construction Material Using RS and GIS Techniques in Eastern Province, Sri Lanka. Palamakumbure D, Colombage HDP, Kodippili TKA, Wickramasekara KT, Premasiri HMR, Abeysinghe AMKB, Chaminda SP and Disanayaka DMDOK
- 10.40-10.55 Occurrence and Depositional Character of Monazite Deposit in the Offshore and Coastal Zone around South-West Region in Sri Lanka. Egodawatta EADMU, De Zoysa GDP, Prasanna DAKDG, Mohommedshiffa J, Ratnayake NP and Weerawarnakula S
- 10.55-11.10 Suitability of Locally Occurring Clay as Liner Material. Indunil HWI, Jayasekara JMNP, Mahesh TPC, Veenuganan S. Karunarathne S, and Puswewala UGA
- 11.10-11.25 Determination of Soil Overburden on Panirendawa Iron Ore Deposit for selection of Appropriate Mining Method/s. Jayathilaka BRPM, Perera MSR, Jayasekara DAIA, Liyanawaduge CY, Abeysinghe AMKB, Premasiri HMR and Chaminda SP

Session II - Theme - Mining and Mineral Processing

- 11.25-11.35 Address by the Session Chairman - Mr. Anil Peris, Deputy Director Mining, Geological Survey and Mines Bureau
- 11.35-11.50 Gold Recovery from Gem Gravel. Sampath JDS, Abyegunawardana PH, Anojan R, Gunasekara RDI, Dharmarathne PGR and Rohitha LP
- 11.50-12.05 Evaluation of Existing Timber Supports in Bogala Mine and Proposals for Alternatives. Rathnapala AVAOC, Perera TSLC, Hetttiarachchi

DSW, Gangatheepan B, Chaminda SP, Dharmaratne PGR and Senanayaka IP

- 12.05-12.20 Pneumatic Sludge Pump Re-Design for Performance Enhancement in the Conditions of Bogala Mines. Senarathne DEN, Perera KLHD, Madusanka DAG, Muthukuda MASL, Dharmaratne PGR, Rohitha LPS and Chaminda SP
- 12.20-13.20 LUNCH
- 13.20-13.35 Cleaner Production Assessment of a Quarry Mine. Wijegunawardana DS, Sabesan S, Karunagalage KVS, Kumara HMCR, Karunaratne S, Rohitha LPS and Karunanayake P
- 13.35-13.50 Analysis of Effects on Vibration and Air Blast in Rock Quarrying. Senadeera SMADSI, Erangika MD, Herath MHBCW, Wickramasinghe WIUS, Chaminda SP and Dharmarathna PGR

Session III - Engineering Geological Applications

- 13.50-14.00 Address by the Session Chairman - Mr. Mahinda Rathnasiri, General Manager, Engineering & Laboratory Services (Pvt) Ltd.
- 14.00-14.15 Modeling Simple Craters Using Gravity Measurements. Henkel H and Ekneligoda TC
- 14.15-14.30 Structural Mitigation for Stabilizing Rock Slope Failure at Peradeniya on Colombo-Kandy Mainroad: Geotechnical and Constructional Aspects. Premathilaka KKW, Munasinghe MPNJ, Kasthurirathna KANS, Kumara ALDP, Senapathi LR, Abeyasinghe AMKB, Premasiri HMR, Chaminda SP, Puswewala UGA and Wijewickrama MIDH
- 14.30-14.45 Effects of Discontinuous Properties on the Stability of Tunnels. Nawarathna THK, Kulathilake LKNS, Perera HDH, Premalal PAM, Dharmaratne PGR, Chaminda SP and Rohitha LPS
- 14.45-15.00 Spatial Properties of Lineaments Using a Computer Software. Ekneligoda T C and Henkel H
- 15.00-15.15 Use of Electrical Resistivity Method for Investigating Geological and Hydrological Conditions at the Proposed Site for Institute of Technology, University of Moratuwa. Wanasundara WMAD, Siriwardena KKGIL, Sajieve Y, Chandrakumari GR, Weerawarnakula S and Abeyasinhe AMKB
- 15.15-15.30 Closing Ceremony and vote of thanks
15. 30 TEA [End of the Program]
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