Special Session :

Digital Transformation (DX) and Monitoring Technologies in Environmental Management of Mines and Landfill Sites

Organized by

> Japan Society of Material Cycles and Waste Management（JSMCWM）
> and The Landfill Systems & Technologies Research Association of Japan (LSA)

This session explores the pivotal role of advanced digital technologies in enhancing environmental stewardship within the mining and waste management sectors. The urgent need to incorporate sustainable practices into these fields is increasingly evident. Organized by the Japan Society of Material Cycles and Waste Management (JSMCWM) and The Landfill Systems & Technologies Research Association of Japan (LSA), the session aims to highlight the transformative potential of digital innovation in improving operational efficiency, minimizing environmental impact, and strengthening monitoring and regulatory mechanisms.

14:00-15:30, March 17 2024

Program

Opening greetings

Chair: Prof. Kazuei ISII, Hokkaido University & Chairperson of LSA, Japan

Part 1 : DX in Mining Management

1. Proposal of Environmentally Sustainable Mining Development System Utilizing "Smart Mining +"
   Prof. Youhei KAWAMURA, Hokkaido University, Japan
   Mr. Natsuo OKADA, Hokkaido University, Japan

2. Immersive Technologies and Digital Twin in Mining Application and Research
   Dr. Chengguo Zhang, UNSW Sydney, Australia

Part 2 : DX in Landfill Management

3. Implementing IoT for Landfill Liner Construction and Environmental Monitoring at Landfill Sites   (Online presentation)
   Assoc. Prof. Hirofumi NAKAYAMA, Kyushu University, Japan

4. A Geophysical Approach to Assessing Landfill Mining Feasibility: The Buriram Landfill Experience
   Assist. Prof. Komsilp Wangyao, The Joint Graduate School of Energy and Environment (JGSEE), Thailand

5. DX in Landfill Management   (Online presentation)
   Mr. Shinji MIZOGUCHI, TKK Engineering, Japan

Panel discussion

 Chairperson, Speakers