



MNGD

MAKING NETWORKS FOR GLOBAL DEVELOPMENT

Host and Organizer: SATREPS-JST MNGD Project

International Student Workshop

31ST JANUARY, 2023

16:00-18:10 (JAPAN TIME) / 10:00-12:10 (ETHIOPIA TIME)

ONLINE(ZOOM)

Program

* 20 minutes presentation and 20 minutes discussion.

16:00 (JST) Opening Remarks
10:00 (EAT)

16:05-16:45 (JST) *An experimental study on the coupled effect of diatomaceous earth and hydrated lime in expansive soil*
10:05-10:45 (EAT)

Alemshet Bekele Tadesse (University of Miyazaki / Addis Ababa Science and Technology University)

16:45-17:25 (JST) *Experimental Evaluation of Geotechnical Characteristics of Pseudo-Expansive Soil Modified from Unsaturated Clay Soils*
10:45-11:25 (EAT)

Frehaileab Admasu Gidebo (Ehime University / Addis Ababa Science and Technology University)

17:25-18:05 (JST) *Permeability of Soils Treated with Fine Shredded Paper (FSP)*
11:25-12:05 (EAT)

Teshome Birhanu Kebede (Kyoto University / Addis Ababa Science and Technology University)

18:05 (JST) Closing Remarks
12:05 (EAT)

18:10 (JST) Close
12:10 (EAT)

Abstract

An experimental study on the coupled effect of diatomaceous earth and hydrated lime in expansive soil

Alemshet Bekele Tadesse

(Ph.D. Candidate, Interdisciplinary Graduate School of Agriculture and Engineering, University of Miyazaki, Japan/
Lecturer, Addis Ababa Science and Technology University, Ethiopia)

Stabilizing expansive soil is one of the soil-ground improvement methods for minimizing embankment problems associated with clays with montmorillonite minerals. In this paper, macro-level mechanical and micro-level analysis is being conducted on Yanaizu expansive soils (YES) stabilized with 5% and 10% Diatomaceous Earth (DE) and 4% and 8% Hydrated Lime (HL). The effectiveness of DE and HL as a stabilizer is being evaluated using the one-dimensional swell consolidation (SC) test, unconfined compressive strength (UCS) test, and direct shear strength (DSS) test. Also, the soil water potential of Yanaizu expansive soil is under investigation. The

