

Purdue Geotechnical Society Workshop Program

Saturday April 26, 2014

PMU East Faculty Lounge, Purdue Memorial Union, Purdue University, West Lafayette, IN

Theme: **ENERGY GEOTECHNICS**

7:30 a.m. Breakfast: coffee, juice, rolls, fruit, etc.

8:00 a.m. **Opening of Workshop** - *Philippe Bourdeau, Purdue University*

Welcome – *Rao S. Govindaraju, Bowen Engineering Head and Burke Professor of Civil Engineering*

MORNING SESSION Moderator: *Marika Santagata, Purdue University*; Coordinator: *Anuj Choudhari, Purdue Univ.*

8:15 a.m. **Keynote: “SUSTAINABLE” HYDROCRABON RECOVERY**

John McLennan, University of Utah

9:00 a.m. **COUPLED THM ANALYSIS OF AN UNDERGROUND COMPRESSED AIR STORAGE FACILITY IN SANDSTONE**

Marcelo Sanchez, Texas A&M University

9:20 a.m. **UNDRAINED SHEAR STRENGTH OF SUBMARINE SLOPES**

Cassandra Rutherford, University of Illinois at Urban- Champaign

9:40 a.m. **GEOPHYSICAL INVESTIGATION OF FAILURE ALONG ROCK DISCONTINUITIES**

Ahmadreza Hedayat, Indiana-Purdue University, Fort Wayne

10:00 a.m. **BREAK**

10:30 a.m. **GEOTECHNICAL AND ENVIRONMENTAL CHALLENGES IN THE CONSTRUCTION OF THE ROCKIES EXPRESS NATURAL GAS PIPELINE THROUGH INDIANA**

John A. Mundell, Mundell & Associates, Inc.

10:50 a.m. **MULTIPHYSICS CHARACTERIZATION AND SIMULATION IN SUPPORT OF ENERGY GEOTECHNOLOGY**

Xiong (Bill) Yu, Case Western University

11:10 a.m. **GEOTECHNICAL CONSTRAINTS TO IMPLEMENTING CARBON SEQUESTRATION: RESULTS FROM RECENT MODELING STUDIES ON INDUCED SEISMICITY IN SALINE FORMATIONS AND CO₂ STORAGE WITH ENHANCED METHANE RECOVERY IN HYDRAULICALLY FRACTURED SHALE**

Kevin Ellett, Indiana Geological Survey

11:40 a.m. **GROUP PHOTO ON PMU STEPS**

11:50 a.m. **LUNCH** – Room 118, Purdue Memorial Union

AFTERNOON SESSION Moderator: *Antonio Bobet, Purdue University*; Coordinator: *Amy Getchell, Purdue University*

1:00 p.m. **Keynote: ROLE OF ULTRAFINE CLAY PARTICLES IN OIL SANDS PROCESSING**

Cliff Johnston, Purdue University

1:40 p.m. **PERFORMANCE AND DESIGN CONSIDERATIONS OF THERMO-ACTIVE GEOSTRUCTURES FOR NEAR-SURFACE GEOTHERMAL ENERGY**

C. Guney Olgun, Virginia Tech

2:00 p.m. **NUMERICAL SIMULATION OF FLUID FLOW AND TIME-LAPSE SEISMICS APPLIED TO CO₂ SEQUESTRATION AT THE SLEIPNER-FIELD**

Juan E. Santos, Purdue University

2:20 p.m. **BREAK**

2:40 p.m. **FIBER OPTIC SENSORS – APPLICATION OF DISTRIBUTED TEMPERATURE, STRAIN AND ACOUSTIC MEASUREMENTS IN GEOTECHNICAL ENGINEERING RESEARCH**

Dante Fratta, University of Wisconsin - Madison

3:00 p.m. **MISSOURI S&T GEOTHERMAL PROJECT**

Ronaldo Luna, Missouri University of Science and Technology

3:20 p.m. **NEW ISSMGE TECHNICAL COMMITTEE ON “ENERGY GEOTECHNICS” (TC308)**

Marcelo Sanchez, Texas A&M University

3:25 p.m. **PANEL DISCUSSION** – Moderator: *Joe Sinfield, Purdue University*

4:10 p.m. **WORKSHOP CLOSURE**