

RAPID-FIRE CONFERENCE @MIT

Venue: Bush Room, MIT, 77 Massachusetts Avenue, Room 10-105

Date: Monday, October 26, 2015

Time: 8:45 a.m. through 5 p.m.

MORNING SESSIONS

Welcome and Introductory Remarks

8:45-9 a.m.

Welcome by MIT CEE Professor Eduardo Kausel

Introduce Markus Buehler, MIT CEE Department Head and Professor

General Engineering and Issues

9-10:15 a.m.

Whittle, Andrew (MIT): *Water mains: Where in the world is that leak?*

Rix, Glenn (Geosyntec, formerly at Georgia Tech): *Risk analyses in engineering and the cost of human life*

Ramón Gilsanz (Gilsanz, Murray & Steficek): *Regions-Hazards-People*

Mohasseb, Sassan : (SMTeam, Switzerland) *Designing the Swissmill Silo: Highest building in Zürich*

Kocur, George (MIT): *A radical approach to save a few billion dollars collecting fares in London*

Hunt, Hugh (Cambridge U. UK): *Can we engineer the climate?*

Break

10:15-10:30 a.m.

Earthquake Engineering

10:30-11:30 a.m.

Semblat, J. François (U. Paris-Est, France): *Seismology vs Soil Mechanics : Resonance or non-linearities?*

Assimaki, Domniki (Caltech): *Earthquake disasters and the 2015 Nepal anomaly*

Brunet, Santiago (SIRVE, Chile): *Seismic isolation using a layer of soil mixed with shredded tires*

Sarrazin, Mauricio (U. Chile): *Seismic isolation and energy dissipation devices used in Chile*

De la Llera, Juan Carlos (PUC, Chile): *Chile: A real-scale earthquake laboratory*

Miscellaneous, Theory & Methods

11:30 a.m.-12:15 p.m.

Kausel, Eduardo (MIT): *On strange pathologies of line dipoles: The infinitesimally thin thread that counts*

Kallivokas, Loukas (U. Texas at Austin): *Perfectly matched!*

Ulm, Franz: *Physics of dirty materials and messy systems*

Vanmarcke, Erik (Princeton U.): *Extremes of random fields: some intriguing new applications*

Lunch Served

12:15-1:00 p.m.

AFTERNOON SESSIONS

Experimental Methods, Measurements and Observations in Soil Dynamics

1:00–2:00 p.m.

Lai, Carlo (U. Pavia and EUCENTRE, Italy): *Damping in soils by inversion of dispersion of body waves*

Sánchez-Sesma, Francisco J. (UNAM, Mexico): *Soil Information Hidden in Ambient Seismic Noise*

Dobry, Ricardo, (Rensselaer PI): *Soil-structure Interaction, Earthquakes and Centrifuges*

Seale, Sandy (U. C. Sta. Barbara): *The Seattle Liquefaction Array: Trains are a Repeatable Source!*

Roësset, José Manuel (Texas A&M): *Issues in soil characterization procedures*

Soil Dynamics and Soil-Structure Interaction

2:00–3:30 p.m.

Savidis, Stavros (T.U. Berlin): *Deep excavations: SSI due to Construction Method*

Dasgupta, Gautam (Columbia U.): *Radiation damping: a Finite Element model*

Bielak, Jacobo (Carnegie Mellon U.): *Soil-structure interaction revisited*

Elgamal, Ahmed (U.C. San Diego): *Liquefaction-induced SSI: Physical and computational simulation*

Houston, Tom (CJCA): *SASSI under the microscope*

Vrettos, Christos (U. Kaiserslautern, Germany): *Footings on soils with inverse depth-inhomogeneity*

Break

3:30–3:45 p.m.

Structural Dynamics and Vibrations

3:45–5:00 p.m.

Todorovska, Maria (U. Southern Cal.): *Wave imaging of buildings for structural health monitoring*

Degrande, Geert (K.U. Leuven, Belgium): *Mitigation of railway induced vibrations at El Realengo in*

Alicante, Spain

Vandiver, Kim (MIT): *Predictions in flow-induced vibration: Pulling rabbits out of a hat.*

Hunt, Hugh (Cambridge U., UK): *The REAL physics of pendulums and the remarkable accuracy of Trinity*

College's clock

Adjourn and Free Time

5:00–6 p.m.

EVENING EVENT

Hyatt Regency Cambridge Hotel

575 Memorial Drive, Cambridge, MA (walking distance)

Empress Room, 14th floor

Cocktails: 6–6:30 p.m.

Dinner: 6:30–10 p.m.

Note: Guests at the dinner who have parked at the hotel garage may get a validation stamp for free parking for the duration of the banquet. (But this will not help if you are a hotel guest who needs to park overnight).