1. Should Critical State Soil Mechanics (CSSM) be taught at the undergraduate (UG) level?

Nova: CSSM presents a unified framework for soil mechanics. How can we discuss the soil behavior without such a framework that ties drained and undrained behavior in one unified framework? CSSM is needed.

Dafalias: I agree with Nova. We do teach CSSM at an elementary level at UC Davis. We use the original approach by Schofield that does not use plasticity for presenting CSSM. I suggest that CSSM is needed but introduction of Cam clay without plasticity will not be possible.

Muraleetharan: If we talk of Cam clay, what about sand?

Vardoulakis: We should not ignore the fact that current UG curriculum is based on elasticity and is not using plasticity because of the lack of computational capabilities in the 19th century and early 20th century.

Mayne: Maybe we should come up with some simplified way to teach CSSM. For instance come up with three papers on CSSM. First could be titled CSSM for Dummies, second one can be a little more elaborate and third one covers applications.

Fragaszy: May be we should consider the change in UG curriculum in a more fundamental manner so that other non-geotech. courses are also revised to back up the background needed for introduction of CSSM.

Hueckel: Modeling should be a part of teaching soil mechanics so that students know and get excited about the opportunities that exist in modeling.

Muraleetharan: Are we going to submit some unsolicited proposal on Katrina? (question to Rick Fragaszy)?

Fragaszy: There are possibilities of doing something substantial on the Katrina event. But this is currently being formulated at NSF.

Selvadurai: Is the fund, possibly allocated for Katrina research, going to drain the funds from other programs?
Fragaszy: Not necessarily. The main focus is on multidisciplinary research.

Oka: Coupled analysis is needed for problems involving seepage. The work also involves the contribution from hydraulic engineers because it involves surface flow.

Fellice: How do we engage our construction efforts in handling disasters like Katrina?

Ghaboussi: My emphasis yesterday was about self-learning simulation. Self-sim involves neural network but it is not just that. One limitation of self-sim is that it is restricted to the problem which it has been trained for. Question of uniqueness always come up. Our experience has been that we never came across non-uniqueness. Because we use gradual approach which makes the solution process highly robust. Sufficiency of data is another question. Hybrid modeling is another opportunity in self-sim.