Ground Motion Selection and Modification (GMSM) Working Group
10am – 2pm August 21, 2006
New PEER Headquarters,
325 Davis Hall
UC Berkeley

10 – 11:00 Progress on nonlinear structural models:

Erol and Curt will present the structural characteristics of the models that were requested by the group. The characteristics presented shall include:

1. Plan and elevation views
2. Year of design
3. Building code used for design
4. Fundamental mode periods and their mass participation factors
5. Design base shear and corresponding weight
6. Expected global ductility
7. Pushover curve

For the following models:

1. 4-story RC frame benchmark building (Curt)
2. 12-story RC frame ATC (Curt)
3. 20-story RC frame ATC (Curt)
4. 6-story steel frame (Erol)
5. 13-story steel frame (Erol)
6. 19-story steel frame (Erol)
7. 12-story RC shear wall (Curt)
8. 12-story RC soft-story (Curt)
9. 12-story RC non-ductile (Curt)

Jack Moehle will provide update on the "Tall Buildings Initiative" and tentative plan to link that project (and structural models) with this working group (GMSM).

Yousef will update the group on the feasibility of using the UCSD supercomputer to run Drain, and the availability of models.

Farzin (former student of Krawinkler – now at UCI) will give a short presentation about his various Drain models. One or two Drain models will be chosen by the Group for analysis.

11:00 – 11:15: Review of current provisions in building code about ground motion selection and modification

Jennie will distribute copies of the relevant provisions (IBC, ASCE-7, etc.)

11:15- 11:45: Equivalent SDOF system
Erol will present an example of how to estimate equivalent SDOF for a MDOF system via pushover analysis.

11:45 – 12:30 Example analysis using preliminary results:

Jennie will present an example computation of "true" structural response given a M7 Rrup10 event using the process agreed upon by the group at the July 17, 2006 meeting.

12:30-12:45 Lunch

12:45 - 1:30: List and summary of ground motion selection and modification methods

Nico and Christine will present the updated list of methods.

1:30 – 2: Working Group members present on-going research