

SCEC Utilization of Ground Motion Simulation (UGMS) Committee
Action items from the Nov. 30th, 2015 meeting, SCEC Room 265 from 10:00 a.m. – 3:00 p.m.

Member attendees (in person)	Member attendees (online)	Members Absent	Observers
C.B. Crouse – chair	N. Abrahamson	J. Bielak	D. Asimaki
R. Bachman	J. Anderson	R. Hamburger	B. Aagard
R. Graves	A. Frankel	M. Lew	A. Baltay
J. Hooper	J. Baker	F. Naeim	D. Gill
M. Hudson	S. Razaean	C. Haselton	C. Goulet
T. Jordan		C. Kircher	S. Callaghan
N. Luco			T. Huynh
P. Somerville			T. Lin
			K. Milner
			M. Moschetti
			K. Olsen
			R. Taborda
			A. Skarlatoudis

Meeting page with agenda, copies of presentations and links to results:

http://scec.usc.edu/scecpedia/SCEC_UGMS_Committee_Meeting_5

Important points still needing to be resolved

- Define the procedure for addressing site effects. V_{S30} scaling only applied to GMPE part of the model? Retrieve V_{S30} from the CVM or from the NGA-West2 database (consistent with GMPE development)? Consider instead only providing results for a reference site condition?
- CyberShake data dissemination / interface with the USGS (site-specific hazard curves, disaggregation, time series, etc.).

Action items, grouped per topic

Action Item	Responsibility	Start	End
CyberShake validation			
1. Generate simulation results from small M events used in the inversion. Compare simulations performance relative to GMPE results, relative to recorded data. Need to consider how to address the depth issue.	Goulet, Jordan, Callaghan, Milner	Now	Provide update at May workshop, results within 12 months
2. Consider combining a subset of event results and to aggregate them for comparison to GMPEs in the M, R ranges for which they are well constrained (similar to “Part B” BBP type of validation).	Graves, Goulet, Jordan	?	Provide update at May workshop, results within 12 months

3. Repeat the average-base factorization (ABF) study with the CyberShake 15.4 results.	Jordan, Wang?	Now	Provide update at May workshop, results within 12 months
4. Repeat the Villani study (residual analyses conducted with CyberShake1 results) using the latest data.	Abrahamson, Villani	Now	Provide update at May workshop, results within 12 months
5. Develop tools to automatically complete suites of validation exercises (items 1-2 above) for each CyberShake model inversions/calcs.	Maechling, Goulet, Jordan, Callaghan, Milner	Now	?
6. Start thinking of FAS validation schemes. Start with NGA process and think about metrics for the future.	Goulet, Jordan	March	Within a year
Documentation and additional data products for evaluation			
7. Document the process for the selection of the newly added 50 sites, such as the desire to increase the resolution near sharp ground-motion gradients	Goulet, Jordan, Milner	Now	May workshop
8. Generate hazard disaggregation plots and data for the 14 sites to go with the MCER results.	Milner	Now	Provide update at May workshop, results within 10 months
9. Consider showing the epistemic uncertainty and the aleatory variability from GMPEs in the MCER spectra – this would provide a basis for judging differences implied by site-specific Cybershake results.	Crouse, Milner?	?	?
10. Define spectrum smoothing protocol: try alternative approaches, apply them to a large number of sites and make a decision.	Crouse	Now	May workshop
Dissemination of committee goals to engineers and building officials			
11. Develop a single-page prospectus summarizing the goals and approach of the UGMS	Crouse, Goulet	Now	May workshop

committee. Have F. Naeim provide feedback on the write-up.			
12. Develop a list of relevant building officials in the Los Angeles area; initiate/continue contact. Do not limit to the City of LA territory.	Bachman	Now	Provide update in 6 months
13. Contact SEAOSC and the ASCE Geotech group to organize a joint meeting on UGMS in the fall of 2016	Hudson, Bachman	Now	May workshop
Site effects modeling			
14. Need to get ratio of NL site-specific to Lin. Cybershake profile response.	Asimaki, Crouse to disseminate	Now	May workshop
15. Need to look at disag to see what would be a reasonable scaling of the Tabas event – to establish the threshold.	Crouse	Now	May workshop
16. Consider other sites and/or input records to obtain a statistical representation of the issue. Is this pervasive for most sites or only for specific profiles?	Asimaki	Now	May workshop
Computational web tool – intermediate products			
17. Interface with the USGS on tool development – define resource requirements and roles.	Jordan, Luco, Goulet?	Now	May workshop
18. Implement trial version of the tool.	?	March 2016	July 2016
19. Evaluate the interpolation of results from the tool. Are there drastic differences between results at a given distance?	Crouse	May 2016	Nov. 2016
20. Define the procedure for addressing site effects in terms of tool implementation (see bigger underlying site effects issue described above).	Crouse	?	?