

Why a CVM TAG?

To make further progress on the development of the SCEC CVMs, open-source workflows are needed to evaluate and/or update these models, methods need to be developed to merge new high-resolution localized models into the existing models, strategies to integrate constraints from other geophysical, geotechnical, and geological sources are required, and methods for assessing model uncertainty must be developed. This TAG will facilitate research initiatives at the intersection of seismology, ground motion, and computational science.

The proposed goals for the CVM TAG are:

- Develop open methods for improving SCEC CVMs
- Develop methods for CVM assessment and validation, including providing uncertainty estimates
- Expand the participation of SCEC researchers in work related to improving and utilizing the CVMs

The tasks for the workshop are

(1) to reach consensus on the mission and goals statement of the TAG

(2) to refine and prioritize the identified action items, and

(3) to coordinate plans for submission of related SCEC 2020 proposals as well as future proposals to other funding agencies.

The primary outcomes expected from the workshop are a completed mission and goals statement for the CVM TAG, including prioritized action items, and plans for submission of coordinated and collaborative proposals in response to the 2020 SCEC Science Collaboration Plan and other funding opportunities.

SATURDAY, SEPTEMBER 7, 2019

08:30 - 09:00	Workshop Check-In	
	Session 1: Overview, Desired Outcomes, Motivation, and Framework	
	<i>Moderators: Cliff Thurber and Elizabeth Berg</i>	
09:00 - 09:20	Welcome and Overview of Workshop Objectives	Cliff Thurber
09:20 - 09:40	Perspective on SCEC's CVM needs	Yehuda Ben-Zion
09:40 - 10:00	CVMs and the UCVM	Phil Maechling
10:00 - 10:30	Discussion	<i>All</i>
10:30 - 10:40	<i>Break</i>	
	Session 2: Improving SCEC CVMs	
	<i>Moderators: Amir Allam and Alan Juarez</i>	
10:40 - 11:00	Efforts to improve CVM-H	Andreas Plesch
11:00 - 11:20	Developing an open-source FWT workflow	Carl Tape
11:20 - 11:40	Discussion	<i>All</i>
11:40 - 12:40	Lunch	

Session 2: CVM assessment and validation

Moderators: Carl Tape and Chengping Chai

12:40 - 13:00	Assessment of Community Velocity Models through the lens of Ground Motion Simulation Validation	Ricardo Taborda
13:00 - 13:20	Example of CVM assessment and validation II	Artie Rogers
13:20 - 13:40	Assessment of CVM-S5 Including A Statistical Model of Small-scale Heterogeneities	Kim Olsen
13:40 - 14:00	Discussion	<i>All</i>

Session 3: New Techniques and Related Efforts

Moderator: Phil Maechling

14:00 - 14:20	New imaging techniques	Rob Clayton
14:20 - 14:40	Imaging earth structure with machine learning	Michael Bianco
14:40 - 15:00	San Francisco Bay Area 3D geologic and seismic velocity models	Brad Aagaard
15:00 - 15:20	New Zealand CVMs	Brendon Bradley
15:20 - 15:40	Discussion	<i>All</i>
15:40 - 16:00	<i>Break</i>	

Session 4: Action Item Prioritization and Funding Opportunities

Moderators: Cliff Thurber and Lise Retailleau

16:00 - 16:10	Action items recap	Cliff Thurber
16:10 - 16:30	Funding opportunities within and outside SCEC	Yehuda Ben-Zion
16:30 - 17:00	Discussion: Workshop recommendations and future plans	<i>All</i>
17:00	<i>Workshop Adjourns</i>	

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<https://www.scec.org/research/cvm>