

About ACES: (<http://www.aces.org.au/>)

The objectives of the APEC Cooperation for Earthquake Simulation are:

- to develop realistic numerical simulation models for the physics and dynamics of the complete earthquake generation process and to assimilate new earthquake observations into such models,
- to foster collaboration between the relevant complementary programs of participating member economies, and to foster development of the required research infrastructure and research program.

ACES grew from discussions commencing in 1995 between scientists of Australia, China, Japan and USA, and recognition that a new paradigm for advancement in earthquake science was made possible by advances in HPC technology, understanding of earthquake physics, and numerical simulation methodology. A proposal sponsored by Australia and co-sponsored by China, Japan and USA was endorsed by the APEC Industrial Science & Technology Working Group on October 1, 1997 during the Singapore APEC meeting. The headquarters is currently located at QUAKES, The University of Queensland, Australia, and acts as a central point for the visitors program. The ultimate goal of ACES is to develop a unified simulation model for earthquake cycles in different tectonic settings. This capability will provide a virtual laboratory to study earthquake behaviour and the earthquake cycle. Hence, it offers a new opportunity to gain understanding of the earthquake nucleation process, precursory phenomena, and space-time earthquake patterns, and thus provides a means to develop improved earthquake hazard quantification and forecasting. The Inaugural Workshop was held on January 31 – February 5, 1999 in Brisbane and Noosa, Queensland, Australia, the 2nd and 3rd Workshops were held January 17-20, 2000 in Tokyo, Japan, and May 5 - 10 2002 in Maui, Hawaii respectively.

About the 3rd ACES Workshop: (<http://www.aces.org.au/workshop2002/>)

The 3rd ACES Workshop was held on May 5 - 10 2002 in Maui, Hawaii, allowing working groups to reconvene, researchers to increase familiarity with the complementary work of other participants, discussions on the state of the science, and specification of activities. The theme of the meeting was: Computational Science, Data Assimilation, and Information Technology for Understanding Earthquake Physics and Dynamics. Workshop themes were addressed in sessions on:

- International development of ACES and related organizations
- Microscopic simulation
- Scaling physics
- Macro-scale simulation in earthquake generation and cycles
- Macro-scale simulation in dynamic rupture and wave propagation
- Computational environment and algorithms
- Data assimilation and understanding
- Model applications

The sessions were convened by Andrea Donnellan, Terry Tullis, Bill Klein, Yehuda BenZion, Kim Olsen, Harvey Gould, Jay Parker, and David Jackson, respectively.

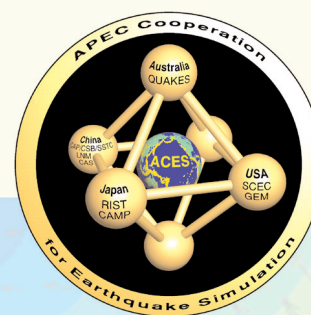
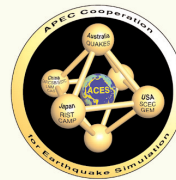
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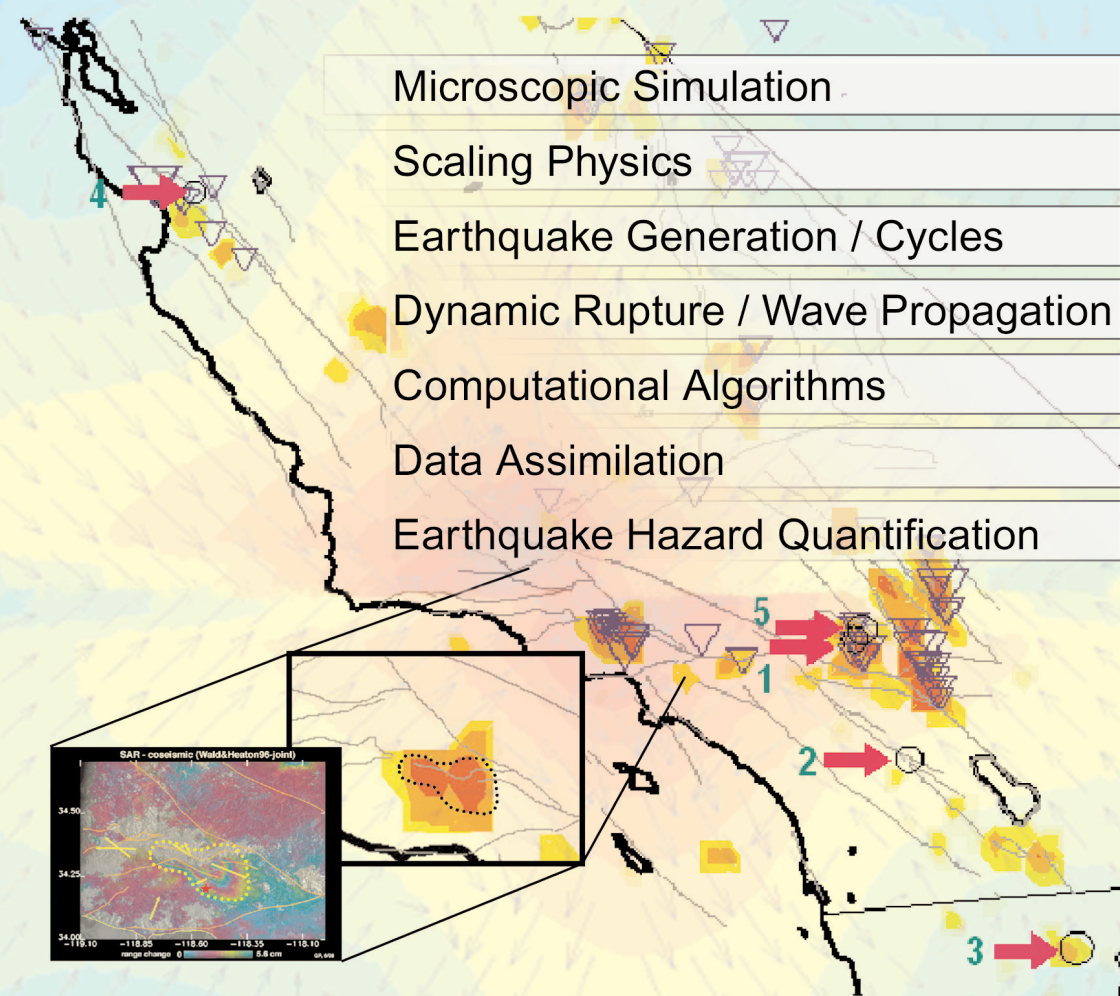


APEC Cooperation for Earthquake Simulation

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3rd ACES Workshop Proceedings

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