

CIG_04: New Developments in Geodynamic Modeling and Computational Infrastructure

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Session Description

Advances in numerical modeling capabilities and the influx of big data have widened the scope and scale of geodynamic modeling in the modern era. This session focuses on new developments facilitating modeling of Earth and planetary dynamics. These include generating scientific workflows, data assimilation, numerical methods, leveraging scientific libraries for reproducible research, advances in 3D data visualization, and incorporating new technologies in high performance computing infrastructure. Applications to all aspects of geodynamics are welcome from whole Earth mantle convection, geodynamo studies, short- and long-term tectonics, and as well as the seismic cycle and seismically imaged Earth structure.