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Room:Convention Hall

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Efficient numerical approach for dynamic earthquake cycle simulation

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Recently, a simulation of the earthquake cycles is calculated based on the full-dynamic governing equations because the dynamic earthquake cycle simulation gives the different solution compared to the conventional quasi-static simulations (e.g. Lapusta and Liu, 2009). The dynamic simulation requires 1) the accuracy around the fault region, 2) representation of the inhomogeneous crust structure and 3) short to long scale calculations. Satisfying the above requirements is still in progress. I present some achievement and the progress to construct the framework to simulate the dynamic earthquake cycle simulation.

Keywords: dynamic earthquake cycle simulation, numerical method, finite element method