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*Jie Deng*  
*University of California, Los Angeles*

**Research topic:**

Planetary materials at extreme conditions

**Problems:**

Elastic properties of  $\text{MgSiO}_3$  (mantle materials of planets), Fe (core materials)

Interactions of planetary materials (crystallization, melting, elemental partitioning)

...

**MD simulations:**

Ab initio, classic MD



**Post-processing:**

Elastic properties, transport properties, melting temperature



Homemade codes

*Jie Deng*  
*University of California, Los Angeles*



**Big data**

