

**THEME/SESSION TITLE FOR THE 2009 GEOFLUIDS VI CONFERENCE:**

**COMPUTATIONAL MODELLING OF GEOFLUID FLOW,  
GEOHERMAL AND ORE-FORMING PROCESSES**

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In recent years, numerical methods and computational modelling have provided a new way to deal with many problems in the geosciences, for which traditionally-used theoretical and experimental methods may not be valid due to the large time and length scales involved in the problems themselves. This enables many hitherto unsolvable geoscience problems to be addressed using numerical methods and computational modelling approaches. In particular, computational modelling has been successfully used to solve many problems, in which geofluid flow, geothermal and ore-forming processes play an important role in the controlling dynamic mechanisms.

This theme/session will provide a forum for presentation and discussion of state-of-the-art computational modelling of geoscience problems. Emphasis will be on computational modelling of geofluid flow, geothermal and ore-forming processes. Contributions are solicited in (but not restricted to) the following modelling areas:

- Convective and advective geofluid flow;
- Multi-phase geofluid flow;
- Geofluid dissipation during consolidation;
- Geofluid-rock interaction;
- Geofluid focussing and mixing processes;
- Reactive transport process;
- Ore-forming processes in both hydrothermal and magmatic systems;
- Geothermal process;
- Fully-coupled problems involving material deformation, geofluid flow, heat transfer, mass transport and chemical reactions;
- Geofluid flow processes associated with geo-environmental problems;
- Physical and chemical processes associated with magma ascent phenomena;
- Constraints on chemical - thermal interactions for non equilibrium thermodynamics.