

Special Issue on
**Thermal Uses of Ground and
 Groundwaters: Ground and Aquifers for
 Thermal Energy Uses and Heat Storage
 Proposes**

CALL FOR PAPERS

Geothermal technology harnesses the earth's heat. Just a few feet below the surface, the earth maintains a near-constant temperature, in contrast to the summer and winter extremes of the ambient air above ground. In some regions, tectonic and volcanic activity can bring higher temperatures much closer to the surface.

Geothermal energy is considered a renewable resource. Ground source heat pumps and direct use geothermal technologies serve heating and cooling applications. The water from direct geothermal systems is hot enough for many applications, including large-scale pool heating, space heating, cooling, and on-demand hot water for buildings of most sizes, district heating (i.e., heat for multiple buildings in a city), heating roads and sidewalks to melt snow, and some industrial and agricultural processes. Direct use takes advantage of hot water that may be just a shallow depth below the surface, but this technology is limited to regions with natural sources of hot groundwater at or near the surface.

We here invite authors to publish all their original contributions to the field which involves ground fluids for space heating and cooling and/or underground heat or cold storage. The special issue topic prefers articles that cover subjects of fluid-thermomechanical problems in the geosciences, combining field work, lab experiments, analytical studies, and computer simulations.

We especially welcome submissions related to finalized field and/or conceptual, laboratory, and/or numerical models to investigate ground heat transfer processes, which involve groundwater and act on scales much larger than the samples.

Likewise, the Guest Editors encourage publishing articles which describe the current state of the art on the field of use of groundwater for thermal energy purposes, including also hydrothermal sources or GSHP (ground/groundwater source heat pumps) systems.

The induced environmental impact of these groundwater uses on the subsoil could be considered and evaluated.

Potential topics include but are not limited to the following:

- ▶ New developments in groundwater solutions for air conditioning
- ▶ Sustainable practice of hydrothermal fluids
- ▶ Heat as a groundwater tracer/pollution
- ▶ Geothermal heat exchanger: technical concept and performance
- ▶ Heat transfer modeling in closed and open loop ground heat exchanger systems
- ▶ Theoretical calculations, laboratory experiment, field studies, and the analysis of geothermal heat energetic uses
- ▶ Hazard of ground and groundwater heat exchanger systems during the implementation and running phases

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/geofluids/gasat/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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Submission Deadline

Friday, 25 January 2019

Publication Date

June 2019