

## Special Issue

# Recent Advances in Non-Newtonian Fluid Flows and Pumping of Concrete

### Message from the Guest Editors

**This Special Issue welcomes topics including, but not limited to:**

- Rheological properties of cement-based materials, filling slurry, drilling fluids, sewage sludge, muds, etc.
- 3D concrete/slurry printing processes.
- Flow behavior of concrete during pumping and/or 3D printing.
- Pumping prediction models and validations.
- Interrelations of non-Newtonian fluid dynamics, rheology, and the processing of concrete and other similar fluids.
- Test methods to characterize concrete rheology and lubrication layer properties.
- Changes in materials properties induced by pumping/processing.
- Long-distance slurry pipeline transportation and filling processes.
- Active rheology control and the design of yield-stress fluids.
- Data-driven and/or physics-driven methods for Non-Newtonian Fluid Flows.
- Digital twins for non-Newtonian fluids.
- Advances in experimental, theoretical, and computational studies of yield-stress fluids.
- New technologies and perspectives in Non-Newtonian Fluid Flows and the processing of yield-stress fluids.

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### Deadline for manuscript submissions

closed (30 September 2023)



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