

**SISSA/ICTP Postdoc positions -- Friction and dissipation in nanosystems: a) theory; b) MD simulation (classical or ab initio).**

WHERE: SISSA ([www.sissa.it](http://www.sissa.it)) or ICTP ([www.ictp.it](http://www.ictp.it)) Trieste, Italy

WHEN : begin ASAP, and within 30 April 2016

WHAT: As part of the ERC Project MODPHYSFRICT (<http://ercmodphysfrict.sissa.it/>) based in SISSA ([www.sissa.it](http://www.sissa.it)) and in ICTP ([www.ictp.it](http://www.ictp.it)) Trieste, we are looking looking to fill 2-year postdoctoral level positions. Main areas of research are:

- Theory of AFM dissipation on systems with phase transitions
- Simulation of islands and clusters sliding on crystal surfaces
- High pressure tribochemistry and mechanochemistry (first principles)
- Theory of electronic friction
- Ionic liquid lubricants under electric fields
- Sliding in optical lattices: colloid monolayers and ion chains
- Basic friction theory
- Basic non-equilibrium sliding and dissipation dynamics

SALARY: depends on seniority. Base: ~ 2,000 E/month take home.

BENEFITS: Good research funds, postdocs can travel. SISSA has facilities for dependent children; ICTP sponsors families.

WHO: Scientific projects to be conducted with Erio Tosatti (<https://sites.google.com/site/tosattierio/>) and collaborators, including G.E. Santoro, S. Scandolo, A. Vanossi, F. Pellegrini, R. Guerra and others.

HOW: For more information please contact Erio Tosatti at [tosatti@sissa.it](mailto:tosatti@sissa.it). Work in ICTP will also involve Sandro Scandolo (<https://www.ictp.it/research/cmstp/members/head-members/sandro-scandolo.aspx>).