

1118-35-146

**Gieri Simonett\*** ([gieri.simonett@vanderbilt.edu](mailto:gieri.simonett@vanderbilt.edu)). *On fluid flows and phase transitions.*

Moving surfaces are ubiquitous in many areas of mathematics and the applied sciences. In this talk I will introduce a thermodynamically consistent model for the motion of heat-conducting, viscous, incompressible two-phase fluids that may undergo phase transitions. The resulting model combines the Navier-Stokes equations with the Stefan problem. Existence of solutions and stability properties of equilibria will be investigated. (Received January 29, 2016)