EDWARD THOMMES, Department of Physics, University of Guelph
Modelling the birth of planetary systems with a hybrid symplectic integrator

Symplectic N-body maps have lead to a major leap forward in the numerical study of the Solar System and extrasolar planetary systems. Such methods conserve energy even with a relatively small number of timesteps per dynamical time, thus enabling simulations which span the entire lifetime of a planetary system. I will review past work and describe a new hybrid N-body integrator which is providing us with an unprecedented level of insight into the birth process of planetary systems, including our own.