1056-65-1490   **Yingda Cheng*** (`ycheng@math.utexas.edu`), Dept. of Mathematics, Univ. of Texas at Austin, Austin, TX 78712, and **Irene M Gamba**, **Armando Majorana** and **Chi-Wang Shu**. *A Discontinuous Galerkin Solver for Full-Band Boltzmann-Poisson Models.*

In this talk, I will present some of the recent work on the discontinuous Galerkin solvers applied to deterministic computations of the transients for the Boltzmann-Poisson system describing electron transport in semiconductor devices. Full band models are accurate physical descriptions of the energy-band function. They are widely used in DSMC simulators, but only recently the transport Boltzmann equation was considered. We report simulations based on very general band structures. Preliminary benchmark numerical tests on Kane and silicon full band models are provided. (Received September 22, 2009)