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Wei Cai* (wcai@uncc.edu), 9201 University City Blvd, Charlotte, NC 28223. *Discontinuous Galerkin Method for PDEs with Dirac sources with applications in Optical Fiber Laser*. Preliminary report.

In this talk, we will present a new formulation of discontinuous Galerkin Method for the Beam propagation model of optical fiber laser. The BPM involves the solutions of nonlinear Schrodinger equation with dirac sources, and the discontinuous Galerkin method will be modified to calculate the resulting solutions. (Received September 26, 2006)