1086-65-1763 **Prince Chidyagwai*** (chidyagp@temple.edu), Department of Mathematics, 638 Wachman Hall, 1805 N. Broad Street, Philadelphaia, PA 19122, and **Benjamin Seibold**, **Martin Frank** and **Philipp Monreal**. *Discontinuous Galerkin method for the M_1 moment closure model for radiative transfer.*

Radiative transfer plays an important role in many engineering and physics applications. We consider the radiative transport equation applied to electron radiotherapy. In this case the transport equation describes the distribution of electrons in time and space assuming that the electrons do not interact with each other. The full radiative transfer equation is computationally expensive to solve because it is a high dimensional equation. We consider the minimum entropy approximation to the radiative transfer equation using the Discontinuous Galerkin method. The numerical schemes provide an approximation to the particle distribution which must remain positive.We present a positivity preserving numerical scheme, convergence results and benchmark test cases for problems in radiative therapy simulations. (Received September 24, 2012)