BI-CO MATHEMATICS COLLOQUIUM

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" On the relativistic Vlasov-Maxwell System"

Monday, October 31, 2016

Talk at 4:00 – H109
Tea at 3:30 – KINSC Math Lounge, H208

Abstract:

We consider the relativistic Vlasov-Maxwell (VM) system with initial data of unrestricted size in the whole three dimensional space. VM is a fundamental physical model in plasmas physics. We will begin with a substantial historical introduction to the problem and the mathematics surrounding it. It is a long standing open problem to prove the existence and uniqueness of solutions to the Vlasov-Maxwell system in large times. This talk will explain various different mathematical attempts at solving this problem in particular the study of conditional regularity and also the study of continuation criteria. We will further explain the current state of the art of what is known about each.

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