



The Math/Stats Colloquium
Department of Mathematics and Statistics
San José State University



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SJSU

Modeling Charged Particle Transport: A Eulogy for the Coulomb logarithm

NOVEMBER 28, 2018, MH320

Abstract: Charged particle transport is of key importance to understanding the non-equilibrium processes of high energy-density matter; however, theoretical descriptions can be challenging due to both the long-range interactions between particles as well as many-body effects. We have derived a simplified approach within the framework of a convergent kinetic theory to produce accurate cross sections and collision integrals relevant to constructing transport coefficients, where results are validated with both experiments and first principles simulations.

Background: One course in each of multivariable calculus and differential equations.

About the speaker: Liam Stanton earned his Ph.D. in Applied Mathematics from Northwestern University in 2009. Before joining the faculty at SJSU, Dr. Stanton was a staff scientist at Lawrence Livermore National Laboratory, where his primary research focused on multiscale modeling with applications to high energy-density physics and, more recently, the biophysics of oncogenic processes.

SNACKS IN MH331B AT 2:30 PM

TALK STARTS AT 3:00 PM

For more information, see our full schedule at:

<http://www.timhsu.net/colloq/>