

MATHEMATICS DEPARTMENT SEMINAR SCHEDULE

December 9-10, 2002

All seminars are held in Boyd Graduate Studies unless otherwise noted

MONDAY, December 9, 2002

Group Representation & Cohomology

2:30pm, Room 410

Speaker: Julia Pevtsova, Institute for Advanced Study

Title of talk: *Support varieties for finite group schemes*

Abstract: (joint work with Eric Friedlander) For a finite group scheme G over an algebraically closed field k of characteristic $p > 0$ we construct the support space $\mathcal{P}(G)$ of abelian p -points of G equipped with Zariski topology. To each finite-dimensional G -module M , we associate a subspace $\mathcal{P}(G)_M \subset \mathcal{P}(G)$. Our construction is purely representation-theoretic and it specializes to two well-known constructions in modular representation theory : Carlson's rank varieties for elementary abelian p -groups and representation-theoretic support varieties for restricted Lie algebras. In general, we exhibit a natural homeomorphism between $\mathcal{P}(G)$ and the projectivization of the spectrum of the cohomological algebra of G .

Topology

2:30 p.m., Room 326

Speaker: Ko Honda, USC

Title: Knots and contact geometry

Abstract: In this talk I will present joint work with John Etnyre on classification and structure theorems for Legendrian knots in the standard contact 3-space. I will describe some of the unexpected phenomena that arise along the way.

Faculty and Graduate Social

3:00 p.m., Room 409

Coffee, Tea, Cookies

Tuesday, December 10, 2002

Seminar Schedule will resume in January 2003

Departmental Holiday Luncheon

12:00 p.m., Room 409

Food Sign-up sheet is on the mailroom door