

**MATHEMATICS DEPARTMENT SEMINAR SCHEDULE**  
**October 22-26, 2001**

**MONDAY, October 22, 2001**

**Group Representation & Cohomology**

2:30 - 3:30 p.m., Room 410

**Speaker:** Graham Matthews, University of Georgia

**Title of talk:** *“Representations of the Symmetric Groups”*

**Number Theory**

3:30 p.m., Room 304

**Speaker:** TBA

**Title of talk:** *TBA*

**Abstract:** TBA

**Analysis**

2:30 p.m., Room 322

**Speaker:** Ed Azoff, University of Georgia

**Title of talk:** *“Borel measurability in linear algebra”*

**Abstract:** The usual processes of linear algebra (e.g. choosing Jordan canonical forms of matrices) cannot be implemented in a continuous way, but they can be chosen as Borel measurable functions of their arguments.

**Topology**

3:00 p.m., Room 303

**Speaker:** Paolo Lisca, University of Pisa

**Title of talk :** *“An introduction to symplectic fillings”*

**Abstract:** Requiring the existence of a symplectic structure on a smooth, closed 4-manifold imposes several conditions on its differential topology. In the case of a 4-manifold with boundary, an appropriate analogous request is that the 4-manifold be a symplectic filling. In this talk, which is preparatory for a second one, I will describe some well-known results on symplectic fillings.

4:00 p.m., Room 303

**Speaker:** Jennifer Schultens, Emory University

**Title of talk:** *“Orbifold version of Heegaard splittings”*

**TUESDAY, October 23, 2001**

**VIGRE Seminar**

Room 302, 2:00 p.m.-3:15 p.m.

*No Meeting this week*

**Geometry Seminar**

Room 302, 2:00 p.m.

**Speaker:** Adam Parusinski, Visiting Professor

**Title of talk:** "*Preparation theorem for subanalytic functions*"

**Algebraic Geometry**

3:30 p.m., Room 326

**Speaker:** Robert Varley, University of Georgia

**Title of talk:** "*Analysis of the tangent cones to a Prym theta divisor at points where RST fails*"

**Abstract:** R. Smith and I have previously given a necessary and sufficient condition for the "Riemann singularities theorem to hold" at a point of a Prym theta divisor (in other words, a nec. and suff. condition for Mumford's Pfaffian equation not to be identically 0). In continuing work, I will use elementary deformation theory to analyze the multiplicity in the simplest case when RST fails, and thus give a sufficient condition for an exceptional singularity to be a double point.

**Student Number Theory**

3:30 p.m., Room 303

*No Meeting this week*

**WEDNESDAY, October 24, 2001****Group Representation & Cohomology**

2:30 - 3:30 p.m., Room 410

**Speaker:** Graham Matthews, University of Georgia

**Title of talk:** '*Representations of the Symmetric Groups*', *continued*

**Faculty and Graduate Social**

3:00 p.m., Room 409

Coffee, Tea, Cookies

**Representation Theory**

3:30 p.m., Room 302

**Speaker:** Markus Hunziker, University of Georgia

**Title of talk:** "*Hilbert series of determinantal varieties and highest representations III*", *continued*

**Colloquium**

3:30 p.m., Room 304

**Speaker:** Peter Borwein, Simon Fraser University

**Title of talk:** "*Excursions in Computational and Diophantine Number Theory*"

**Abstract:** A good number of classical and not so classical open problems in analysis and number theory concern finding polynomials with integer coefficients that are small in

some norm. These include some old chestnuts like Lehmer's Conjecture, the Tarry-Escott problem and Littlewood's (other) Conjecture. Typically these problems, while very hard, are easy to formulate and lend themselves to interesting extensive computational experimentation.

**THURSDAY, October 25, 2001**

*Fall Break*

**FRIDAY, October 26, 2001**

*Fall Break*