

MATHEMATICS DEPARTMENT SEMINAR SCHEDULE
October 7 – October 11, 2002

All seminars are held in Boyd Graduate Studies unless otherwise noted

MONDAY, October 7, 2002

Group Representation & Cohomology

2:30pm, Room 410

Speaker: Kenyon Platt, University of Georgia

Title of talk: “*Blocks of Modular Representations*”

Topology

2:30p.m.Room 326

Speaker: Nancy Wrinkle, University of Georgia

Title of talk: “*An introduction to Ozsvath-Szabo invariants of 3-manifolds*”, continued

Faculty and Graduate Social

3:00 p.m., Room 409

Coffee, Tea, Cookies

Analysis

3:30pm, Room 222

Speaker: TBA

Title of talk: “*TBA*”

Cats

3:30 p.m., Room 328

Speaker: TBA

Title of talk: “*TBA*”

TUESDAY, October 8, 2002

VIGRE

2:00 p.m-3:15 p.m., Room 304

Speaker: Cal Burgoyne, University of Georgia

Title of talk: “*String Theory*”

Abstract: Introduction to string field theory:

I. A very brief discussion of field quantization, including the canonical formalism and the path integral formalism.

II. A brief discussion of why it has proven to be difficult to unite the general theory of relativity and quantum mechanics.

III. A brief summary of the history of string theory: a) the dual resonance model and Nambu strings; b) early models of open and closed strings; c) the no ghost theorem for $d = 26$; d) the Green-Schwartz model and super-symmetry; e) $d = 10$ and the problem of compactification.

The discussion will be very general, with little calculational detail. I will try to indicate the general ideas of string theory, what are the major results and unsolved problems in the theory.

Algebraic Geometry

3:30 p.m., Room 326

Speaker: Bill Rulla, University of Georgia

Title of talk: *“A discussion of Green's Conjecture”*

Abstract: I will discuss a famous conjecture of Mark Green on the free resolutions of ideals of canonically embedded curves. I'll explain the conjecture and some of the motivation for believing it, and talk about some calculational techniques we used in producing examples to illuminate it during an REU conducted last Summer.

Student Number Theory

3:30 p.m., Room 303

Speaker: Rene-Michel Shumbusho , University of Georgia

Title of talk: *“Representing primes as the sum of two squares”*

Abstract: It is well known that any prime congruent to 1 modulo 4 is a sum of two squares. I will discuss an algorithm that allows to explicitly find such a representation.

WEDNESDAY, October 9, 2002

Wavelet Analysis

10:10 – 11:00 a.m., Room 410

Speaker: Kyunglim Nam, University of Georgia

Title of talk: *“Construction of tight frames” (cont.)*

Graduate Teaching Seminar

2:30 p.m., Room 303

Speaker: Sybilla Beckmann-Kazez, University of Georgia

Title of talk: *“Writing on Teaching”*

Abstract: Sybilla Beckmann will present summaries of some math education studies on calculus. Seminar participants will then break into small groups to discuss essays on their teaching.

Faculty and Graduate Social

3:00 p.m., Room 409

Coffee, Tea, Cookies

Numerical Analysis

3:30pm, Room 410

Speaker: MingJun Lai , University of Georgia

Title of talk: “*Convergence of SSC method*”

Abstract: We give a fundamental theorem on the convergence of the SSC method. Then we will discuss how to deal with some concrete estimates.

Lie Theory

3:30 p.m., Room 302

Speaker: Dan Nakano, University of Georgia

Title of talk: “*The restricted nullcone*”

Number Theory

3:30 p.m., Room 304

Speaker: Sungkon Chang, University of Georgia

Title of talk: “*Hasse-Weil L-function and Hecke L-series*”

Abstract: In this presentation, I shall review the complex multiplication diagram, and prove the Deuring's result: $L(E,s)=L(s,\Psi)L(s,\overline{\Psi})$

FRIDAY, October 11, 2002**Geometry**

2:30 p.m., Room 322

Speaker: Kenny Little and Jenn Robinson, University of Georgia

Title of Talk: “*On knotted necklaces of pearls*”