

MATHEMATICS DEPARTMENT SEMINAR SCHEDULE
March 25 – March 29, 2002

All seminars are held in Boyd Graduate Studies unless otherwise noted

MONDAY, March 25, 2002

Faculty and Graduate Social

3:00 p.m., Room 409

Coffee, Tea and Cookies

Group Representation and Cohomology

2:30 p.m., Room 410

Speaker: Dan Nakano, University of Georgia

Title of talk: “*Connections between the cohomology of GL_n and Schur algebras*”

Topology

3:00 p.m., Room 322

Speaker: TBA

Title of talk: *TBA*

Number Theory

3:30 p.m., Room 304

Speaker: TBA

Title of talk: *TBA*

Numerical Analysis

3:30 p.m., Room 410

Speaker: Okkyung Cho, University of Georgia

Title of talk: “*Construction of Biorthogonal Wavelets*”

Abstract: In this talk, we discuss how to construct concrete examples of biorthogonal wavelets.

Lie Theory

3:30 p.m., Room 302

Speaker: Markus Hunziker, University of Georgia

Title of talk: “*Duality III: The Springer Correspondence*”

CATS

4:40 p.m., Room 306

Speaker: Weiwei Zhong, Graduate Student, Computer Science Dept.

Title of talk: *“The Multiple Sequence Alignment Problem”*

Abstract: Multiple sequence alignment (MSA) is one of the most important problems in computational biology. One of the methods to score multiple alignments is the sum-of-pairs (SP) objective function. An exact solution to the SP alignment problem can be obtained by dynamic programming in $\Theta(n^k)$ time where n is the length of each string and k is the number of strings.

Heuristic approaches are widely used in practice. One of the most popular methods is the progressive alignment approach, which builds up a multiple alignment gradually by aligning the closest strings first and successively adding in the more distant ones.

I will give a brief introduction to the dynamic programming approach. Then the presentation will be focused on progressive alignment and examples of programs that use progressive alignment.

TUESDAY, March 26, 2002

VIGRE

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

Speaker: Emille Davie, University of Georgia

Title of talk: *“Simple mathematical models with very complicated dynamics”*

Graduate and Faculty Social

3:00 p.m., Room 409

Coffee, Tea, Cookies

Colloquium

3:30 p.m., Room 304

Speaker: Frank Lowenthal California State University, Hayward

Title: *“Replacement of a Service Department by an Outside Supplier: Solution by Markov Analysis”*

Abstract: In a manufacturing company certain departments can be characterized as production and others as service. Examples of the latter are purchasing, computing services, repair, etc. The costs of these must be allocated to the production departments, which in turn will allocate them to the products. This cost allocation process can be viewed as an absorbing Markov process, with the production departments as the absorbing states and the service departments as the transient states. Using Markov analysis we will determine the price that the company should pay to an external supplier of the same service currently supplied by the internal service department. (This talk represents joint work with Massoud Malek.)

Algebraic Geometry

3:30 p.m., Room 326

Speaker: Robert Varley, University of Georgia

Title of talk: *The analogue of Kempf's theorem for double covers*

Abstract: I will recall the definition and structure of the special variety X of divisors associated to an étale double cover of a nonhyperelliptic curve of genus at least three. Then I will discuss joint work with R. Smith on the first order deformations of X . Under some simplifying hypotheses, such as the smoothness of X , we seem to be able to show that all first order deformations of X come from first order deformations of the double cover. This generalizes the corresponding result obtained for genus 3 by H. Yin 1996.

Analysis

3:30 p.m., Room 304

No Meeting this week

Student Number Theory

3:30 p.m., Room 302

No Meeting this week

WEDNESDAY, March 27, 2002**Group Representation and Cohomology**

2:30 - 3:20, Room 410

Speaker: Kenyon Platt, University of Georgia

Title of talk: *"Representations of symmetric groups"*

UGA Math Club Problem Solving Group

2:30 p.m., Room 302

Faculty and Graduate Social

3:00 p.m., Room 409

Coffee, Tea, Cookies

Arithmetic Geometry

3:30 p.m., Room 304

No Meeting this week

FRIDAY, March 29, 2002**Geometry**

2:30 p.m., Room 322

Speaker: Jason Cantarella, University of Georgia

Title of talk: *"On simulating the gradient flow for ropelength"*

Special Seminar Series

3:30 – 4:30 p.m., Room 322

Speaker: Cal Burgoyne, University of Georgia

Subject: “We will talk about the vector potential, simple gauge transformations, the wave equation and the Bohm-Aharonov effect”