

MATHEMATICS DEPARTMENT SEMINAR SCHEDULE

November 25 – November 29, 2002

All seminars are held in Boyd Graduate Studies unless otherwise noted

MONDAY, November 25, 2002

Group Representation & Cohomology

2:30 p.m., Room 410

Speaker: Graham Matthews, University of Georgia

Title of talk: “*A Transfer Theorem for Modular Representations*” by J.A.Green.”

Topology

2:30 p.m., Room 326

Speaker: Nancy Wrinkle and Gordana Matic, University of Georgia

Title of talk: “*Worked examples of the Ozsvath-Szabo invariants*”

Faculty and Graduate Social

3:00 p.m., Room 409

Coffee, Tea, Cookies

Cats

4:40 p.m., Room 306

Speaker: Liming Cai, Faculty member in Computer Science

Title of talk: *RNA Structure Determination with Stochastic Grammatical Modeling**

Abstract: A family of RNA molecule sequences can be defined by a Chomsky grammar in terms of rewriting rules to specify how bases interact within a sequence and how sequences are structurally formed. Due to the uncertainty about sequences under investigation, usually stochastic versions of grammars are adopted. In this way, probability distributions can actually be defined over all possible structures of each sequence as well as over all sequences in a family. Each specific process to produce a sequence by the grammar yields not only a possible structure for the sequence but also the probability to admit such a structure; with the optimal structure having the highest probability. An advantage of the stochastic grammatical modeling is the automated generation of algorithms to solve a number of problems related to RNA structure determination: the prediction of single-sequence structure, the prediction of consensus structure, homology structural search of databases, and parameter re-estimation for model training. This presentation will examine some basic algorithmic techniques to solve these problems. Our discussions will apply to RNA pseudoknotted structures as well stem loops.

*A joint work with Dr. Russell Malmberg of the Plant Biology Department at UGA

TUESDAY, November 26, 2002

VIGRE

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

No meeting this week

Algebraic Geometry

3:30 p.m., Room 326

No Meeting this week

Student Number Theory

3:30 p.m., Room 303

No Meeting this week

WEDNESDAY, November 27, 2002

No Seminars Scheduled – University Holiday

THURSDAY, November 28, 2002

No Seminars Scheduled – University Holiday

FRIDAY, November 29, 2002

No Seminars Scheduled – University Holiday