MATHEMATICS DEPARTMENT SEMINAR SCHEDULE
April 7 – April 11, 2003

All seminars are held in Boyd Graduate Studies unless otherwise noted

MONDAY, April 7, 2003

Group Representation and Cohomology
2:30p.m., Room 410
Speaker: Kenyon Platt, University of Georgia
Title of talk: *Cohomology Products*

Topology
2:30p.m.Room 326
Speaker: Nancy Wrinkle, University of Georgia
Title of talk: *The Markov theorem for transverse knots*

Faculty and Graduate Social
3:00 p.m., Room 409
Coffee, Tea, Cookies

C A T S
Combinatorics, Algorithms, and Theoretical Computer Science Seminar
4:40 PM, 306 Boyd Graduate Studies
Speaker: Rod Canfield, Professor, UGA Computer Science Dept.
Title of talk: *Locally Restricted Compositions**
Abstract: Compositions $n=a_1+a_2+\cdots$, $a_k>0$, have been studied classically. More recently, compositions with the local restriction $a_k\ne a_{k+1}$ (Carlitz compositions) have been studied by various authors. We consider the compositions with more general local-nonequality restrictions, including multiline compositions. We obtain recursions, bounds on growth rate, and other properties of a randomly selected restricted composition.

** joint work with Ed Bender at UCSD*

TUESDAY, April 8, 2003

VIGRE
2:00-3:15 p.m., Room 304
Speaker: Joseph Rusinko, University of Georgia
Title of talk: *Calculating the Rank in families of Elliptic Curves*

Abstract: In the 1920's Mordell proved that the rational points on an elliptic curve formed a finitely generated abelian group. Unfortunately his proof does not give us a method for figuring out which group the rational points form. Our VIGRE research group has explored the rank of certain elliptic curves which live in certain families of elliptic curves. I will discuss our computational findings and some of the problems one faces when trying to calculate the rank of over 100,000 such curves.

Student Number Theory
3:30 p.m., Room 222
Speaker: Joe Rusinko, University of Georgia
Title of talk: TBA

Analysis
3:30, Room 322
Speaker: Ken Johnson, University of Georgia
Title of talk: *Equivariant first order differential operators for parabolic Geometries, continued*

WEDNESDAY, April 9, 2003

Wavelet Analysis
10:10-11:10 a.m., Room 524
Speaker: Okkyung Cho, University of Georgia
Title of talk: *Biothogonal Wavelets*

Graduate Student Teaching Seminar
2:30 p.m., Room 328. *Please note the room change.*
Speaker: Herb Gross, Bunker Hill Community College
Title of talk: *"A conversation about teaching with Herb Gross"*
Professor Herb Gross of Bunker Hill Community College is just completing his 50th year of teaching. He has taught in diverse settings ranging from Central Prison's Death Row in Raleigh, North Carolina to MIT's Center for Advanced Engineering Study where he produced the critically acclaimed video course “Calculus Revisited". He has a long list of achievements in the area of community college mathematics, including instating a special version of the present “Gateway to Arithmetic” program that is a unique vehicle for improving students' self-image as well as their mathematical skills; presenting a course via distance learning to teachers in K-12 in Puerto Rico; and developing remediation programs at Alabama A&M and Clark Atlanta University.

Algebraic Geometry
2:30 p.m., Room 303
Speaker: Robert Varley, University of Georgia
Title of talk: *The geometry of a principal bundle over a Riemann surface*
Abstract: I will describe a recent result of Biswas, Parameswaran, and Subramanian showing that certain line bundles are ample on any divisor in the principal bundle.

Problem Solving Group
2:30 p.m., Room 322

Faculty and Graduate Social
3:00 p.m., Room 409
Coffee, Cookies, Tea

Numerical Analysis
3:30 p.m., Room 410
No Meeting this week

Lie Theory
3:30 p.m., Room 303
No Meeting this week

Arithmetic Geometry/Number Theory
3:30 p.m., Room 304
Speaker: Rene Shumbusho, University of Georgia
Title of talk: *Elliptic curves over K=Q(i) with prime conductor and K-rational 2-torsion points.*
Abstract: I will describe the elliptic curves over K=Q(i) that have prime conductor P, where P is a prime in K not dividing 2, and that admit K-rational 2-torsion points. I will also describe conditions in which it is possible to say that for a given prime P, any elliptic curve with conductor P must have a K-rational 2-torsion point.

FRIDAY, April 11, 2003

Geometry
2:30 p.m., Room 322
Speaker: Chad Mullikin, University of Georgia
Title of talk: *Thoughts on the distortion of knots (or) distorted thoughts on knots.*

VIGRE Research Group
4:30 p.m., Room 410
Speaker: Ivan Cheltsov, University of Georgia
Title of talk: *"Birational geometry of 3-folds"*