



November 16, 2010

QUEEN'S UNIVERSITY AT KINGSTON
Department of Mathematics and Statistics
<http://www.mast.queensu.ca>

CALENDAR		
Friday, November 19	Number Theory Seminar Time: 11:30 a.m. – 12:20 p.m. Place: Jeffery 422	Speaker: Hector Pasten, Queen's University Title: Squares in quadratic progression Abstract Attached
Friday, November 19	Department Colloquium Time: 2:30 p.m. Place: Jeffery 234	Speaker: Tài Huy Hà, Tulane University Title: Minimal graded free resolution Abstract Attached
Monday, November 22	Solar Seminar Time: 3:30 p.m. – 4:30 p.m. Place: Jeffery 225	Speaker: Ken Tapping, Herzberg Institute of Astrophysics Title: "Is the Rhythm of Solar Activity Changing?" Abstract Attached
Monday, November 22	Algebraic Geometry Seminar Time: 4:30 p.m. – 5:30 p.m. Place: Jeffery 319	Speaker: Kirill Zainoulline, University of Ottawa Title: The Grothendieck gamma-filtration, varieties of Borel subgroups, and the Rost invariant for linear algebraic groups Abstract Attached
Monday, November 22	Seminar on Free Probability and Random Matrices Time: 4:30 pm – 6:00 pm Place: Jeffery 102	Speaker: Emily Redelmeier, Queen's University Title: Genus expansion for Haar-distributed orthogonal matrices Part II Abstract Attached

Items for the Info Sheet should reach Anne (burnsa@mast.queensu.ca) by noon on Monday. The Info Sheet is published every Tuesday.

Friday, November 19, 11:30 a.m. Jeffery 422

Number Theory Seminar

Speaker: Hector Pasten

Title: Squares in quadratic progression

Abstract: In this talk we will present the 'n-squares problem' about integer squares in quadratic progression, an open problem in Number Theory with remarkable consequences in Logic. We will discuss the current state of the problem and some analogues over rings of arithmetic interest.

Friday, November 19, 2:30 p.m. Jeffery 234

Department Colloquium

Speaker: Tài Huy Hà

Title: Minimal graded free resolution

Abstract: Minimal graded free resolution is an active research theme in commutative algebra and algebraic geometry. It could be viewed as an abstraction of the notions of the nullspace and linear dependence relations of a collection of vectors. In this talk, I will give an introduction to this object of study. I will also discuss a number of current topics of investigation on minimal graded free resolution that have strong interactions with graph theory.

Monday, November 22, 3:30 p.m. Jeffery 225

Solar Seminar

Speaker: Ken Tapping

Title: Is the Rhythm of Solar Activity Changing?

Abstract: The recent extended minimum between the end of the last solar activity cycle and the beginning of the present one was an indication the Sun has subtly changed its behaviour. Closer examination of solar activity indices suggests that the change occurred just after the maximum of the last cycle. This casts uncertainties on how we relate solar activity to phenomena here on Earth and in Near-Earth Space, and undermines our attempts to model solar contributions to historical changes in the Earth's climate. In this talk we'll examine some of the evidence, the consequences, and how we need to adapt our main stethoscope on the Sun to accommodate a less-well-behaved Sun.

Monday, November 22 4:30 p.m. Jeffery 319

Algebraic Geometry Seminar

Speaker: Kirill Zainoulline

Title: The Grothendieck gamma-filtration, varieties of Borel subgroups, and the Rost invariant for linear algebraic groups

Abstract: Let X be the variety of Borel subgroups of a simple and strongly inner linear algebraic group G over a field k . We prove that the torsion part of the second quotient of Grothendieck's gamma-filtration on X is a cyclic group of order dividing the Dynkin index of G . As a byproduct of the proof we obtain an explicit cycle which generates this cyclic group; and we relate the generating cycle with the Rost invariant and the torsion of the respective generalized Rost motives.

Monday, November 22, 4:30 p.m. Jeffery 102

Seminar on Free Probability and Random Matrices

Speaker: Emily Redelmeier

Title: Genus expansion for Haar-distributed orthogonal matrices Part II

Abstract: I will present some results on Haar-distributed orthogonal matrices connected with second-order freeness.