http://www.depts.ttu.edu/registrar/animated.gifTexas Tech University

Mathematics and Statistics

**Seminars & Colloquium**

**November 7 – November 11**

**Colloquium:**

**David Vogan**

***MIT***

“Coxeter Groups and Regular Polyhedra**”**

Thursday, November 10, 2011 at 3:30 p.m. in CH 101

Refreshments will be served in Math 238 at 3:00 p.m.

**Monday – November 7**

**GK-12 Seminar**

Location: MATH 016

Time: 4:00-5:00pm

Speaker: Laci Singer

Topic: Hydrocarbon Functionalization Using Base Metals

**Statistics Seminar**

No Seminar This Week

**Logic-Topology Seminar**

Location: MATH 111

Time: 3:00-4:00pm

Speaker: Wayne Lewis

Topic: Hyperspaces of Continua - II

**Tuesday – November 8**

**Bio-Math Seminar**

Location: MATH 108

Time: 3:30-4:30pm

Speaker: Pooya Aavani

Topic: Absolute Stability in Discrete Delay Difference Equations

**Wednesday – November 9**

**Geometry Seminar**

Location: MATH 115

Time: 4:00-5:00pm

Speaker: Lance Drager

Topic: Exterior Differential Systems and the Calculus of Variations: Part 4

**Applied Math Seminar**

Location: MATH 010

Time: 4:00-5:30pm

Speaker: Siva Vanapalli

Topic: TBA

**Diaconis Seminar**

Location: MATH 011

Time: 3:00-4:00pm

Speaker: Clyde Martin

Topic: Chapter 7

**Thursday – November 10**

**Noyce Scholar & Math Education Seminar**

Location: MATH 238B

Time: 10:00-11:00am

Speaker: Braden Courtney

Topic: Topics in Teaching Mathematics

**Colloquium**

Location: Chem 101

Time: 3:30pm

Speaker: David Vogan

Topic: Coxeter Groups and Regular Polyhedra

**Friday – November 11**

**Algebra Seminar**

Location: MATH 115

Time: 4:00-5:00pm

Speaker: David Vogan (MIT)

Topic: Model Representations of Finite Coxeter Groups

Abstract:

|  |  |
| --- | --- |
|  | Suppose G is a finite group. The most basic and interesting representation of G is the regular representation, by left translation lambda on the space C[G] of complex-valued functions on G. This is the sum of all the irreducible representations of G, each representation appearing with multiplicity equal to its dimension: (lambda,C[G]) = \sum\_{pi irreducible} dim(pi) pi. Gelfand (on the basis of many interesting examples) posed the problem of finding a "model representation" of G: some natural representation (mu,M) with the property that (mu,M) = \sum\_{pi irreducible} pi. The first issue is to find a natural space whose dimension is the sum of the dimensions of the irreducible representations of G. Frobenius and Schur showed that every irreducible representation pi of G falls into exactly one of three cases:   * pi is real (meaning it is the complexification of a representation on a real vector space) * pi is quaternionic (meaning that the complex vector space structure can be extended to a quaternionic vector space structure respected by G) |