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Mathematics and Statistics

**Seminars & Colloquium**

**November 8-12**

**Colloquium:**

No Colloquium This Week

**Monday – November 8**

**GK-12 seminar**

Location: MATH 115

Time: 4:00-5:00pm

Speaker: Kathy Dial

Topic: Continued Development of a Fixed-Frequency Albedometer

**Noyce Scholars seminar**

Location: MATH 115

Time: 12:00-1:00pm

Speaker: Tara Stevens

Topic:Dealing with Professional Isolation

**Geometry seminar**

Location: MATH 109

Time: 4:00-5:00pm

Speaker: Alistair Hamilton

Topic: Orbi-cell decomposition of moduli space

Abstract:

I will cover a famous theorem due to Harer-Mumford-Penner-Thurston that the moduli space of Riemann surfaces can be decomposed as an orbi-cell complex.

**Tuesday – November 9**

**Logic-Topology Seminar**

No Seminar This Week

**Math Education seminar**

No Seminar This Week

**Wednesday – November 10**

**Analysis Seminar**

Time: 4:00-5:00pm

Room: MATH 109

Speaker: Alexander Solynin

Title: Green’s Function and Brownian Motion

**Applied Math Seminar**

No Seminar This Week

**Thursday – November 11**

**Friday – November 12**

**Algebra Seminar**

Time: 3:00–4:00 pm

Room: MATH 016

Speaker: Henrik Holm (University of Copenhagen)

Topic: Rings without a Gorenstein analogue of the Govorov-Lazard theorem

Abstract:

It was proved by Beligiannis and Krause that over certain Artin algebras, there are

Gorenstein flat modules which are not direct limits of finitely generated Gorenstein projective modules. That is, these algebras have no Gorenstein analogue of the classical Govorov-Lazard Theorem. We show that, in fact, there is a large class of rings without such an analogue. Namely, let R be a commutative local noetherian ring. Then the analogue fails for R if it has a dualizing complex, is henselian, not Gorenstein, and has a finitely generated Gorenstein projective module which is not free.

The proof is based on a theory of Gorenstein projective (pre)envelopes. We show, among other things, that the finitely generated Gorenstein projective modules form an enveloping class in the category of finitely generated R-modules if and only if R is Gorenstein or has the property that each finitely generated Gorenstein projective module is free. This is analogous to a recent result on covers by Christensen, Piepmeyer, Striuli, and Takahashi, and their methods are an important input to our work.

This talk is a report on joint work with Peter Jørgensen.