### Monday, August 12, 2019

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>9:30am-11:00am</td>
<td><strong>Teaching Mathematics</strong> -- LCIT Discussion () <strong>Reading Group Meeting 6:</strong> Hottinger chapters 5, 6 -- 4866 East Hall</td>
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<tr>
<td>2:00pm-3:00pm</td>
<td><strong>Topology</strong> -- Paul Apisa (Yale) <em>What are affine invariant submanifolds? (and why to care!)</em> -- 1866 East Hall</td>
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### Tuesday, August 13, 2019

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| 11:00am-12:00pm| **RTG Seminar on Geometry, Dynamics and Topology** -- Chaya Norton (University of Michigan)  
*Vector Bundles on a Riemann surface and Tyurin parameters* -- 3088 East Hall |
Abstracts for the week of August 11th, 2019 - August 17th, 2019

Topology
Monday, August 12, 2019, 2:00pm-3:00pm
1866 East Hall
Paul Apisa (Yale)

What are affine invariant submanifolds? (and why to care!)

Beginning with a concrete problem in billiards we will naturally be led to think about the GL(2, R) action on the moduli space of translation surfaces. By the "magic wand" of Eskin-Mirzakhani-Mohammadi, GL(2, R) orbit closures are always manifolds in moduli space! These manifolds are affine invariant submanifolds. We will discuss how to use to flat geometry to navigate around these manifolds (the cylinder deformation theorem), what the boundaries of these manifolds look like (the Mirzakhani-Wright partial compactification), and how to combine these observations to yield new constraints on affine invariant submanifolds and to prove new results about billiards.

Teaching Mathematics
Monday, August 12, 2019, 9:30am-11:00am
4866 East Hall
LCIT Discussion ()

Reading Group Meeting 6: Hottinger chapters 5, 6

RTG Seminar on Geometry, Dynamics and Topology
Tuesday, August 13, 2019, 11:00am-12:00pm
3088 East Hall
Chaya Norton (University of Michigan)

Vector Bundles on a Riemann surface and Tyurin parameters

We will discuss the Tyurin parameterization of an open part of the moduli space of vector bundles. In addition we hope to introduce some ideas for Tyurin parameters in general, and how to understand co-tangent directions (Higgs Fields) corresponding to variation of the Tyurin data.