### Monday, September 07, 2020

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>4:00pm-5:00pm</td>
<td><strong>Student Math Finance</strong> -- Thomas Bernhardt (University of Michigan) <em>The exact number of members that remove idiosyncratic mortality risk in pooled annuity funds</em> -- <a href="https://umich.zoom.us/j/99487325343">https://umich.zoom.us/j/99487325343</a> Virtual</td>
</tr>
</tbody>
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### Tuesday, September 08, 2020

12:00am-12:00am  **Colloquium Series** -- Math Dept (University of Michigan) *Faculty Meeting* -- 1360 East Hall

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### Wednesday, September 09, 2020

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>4:00pm-5:00pm</td>
<td><strong>Algebraic Geometry</strong> -- Sebastian Olano (University of Michigan) <em>On the nonnegativity of stringy Hodge numbers</em> -- Zoom</td>
</tr>
</tbody>
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### Friday, September 11, 2020

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>11:00am-11:50am</td>
<td><strong>Representation Stability</strong> -- Jenny Wilson (UM) <em>Buildings II: The definition of a building</em> -- Online</td>
</tr>
<tr>
<td>3:00pm-12:00am</td>
<td><strong>Applied Interdisciplinary Mathematics (AIM)</strong> -- TBA -- (Zoom) East Hall</td>
</tr>
<tr>
<td>4:00pm-5:00pm</td>
<td><strong>Preprint Algebraic Geometry</strong> -- <em>Organizational Meeting</em> -- Zoom</td>
</tr>
<tr>
<td>4:00pm-5:00pm</td>
<td><strong>Student AIM Seminar</strong> -- (University of Michigan) <em>Planning meeting</em> -- Zoom East Hall</td>
</tr>
</tbody>
</table>
Abstracts for the week of September 6th, 2020 - September 12th, 2020

Student Math Finance
Monday, September 07, 2020, 4:00pm-5:00pm
https://umich.zoom.us/j/99487325343 Virtual
Thomas Bernhardt (University of Michigan)

The exact number of members that remove idiosyncratic mortality risk in pooled annuity funds

Since the financial crisis, the insurance sector seeks to reduce its risk exposure in retirement funds. Pooled annuity funds are promising candidates for future retirement products without any risk for the insurer but a possible unstable income for retirees. Partially, the instability comes from the difference between the empirical distribution of death times and the theoretical mortality distribution. Using Kolmogorov-Smirnov ideas from Statistics, we compute the exact number of members in the pool that remove that idiosyncratic risk regardless of the underlying mortality distribution.

Colloquium Series
Tuesday, September 08, 2020, 12:00am-12:00am
1360 East Hall
Math Dept (University of Michigan)

Faculty Meeting

Algebraic Geometry
Wednesday, September 09, 2020, 4:00pm-5:00pm
Zoom
Sebastian Olano (University of Michigan)

On the nonnegativity of stringy Hodge numbers

Stringy Hodge numbers are a generalization of the usual Hodge numbers of a smooth projective variety. Batyrev introduced them to formulate the topological mirror symmetry test for singular Calabi-Yau varieties. These numbers are defined on a wider class of projective varieties with mild singularities, which are studied in birational geometry. In contrast to the usual Hodge numbers, stringy Hodge numbers are not defined via a cohomology theory. Consequently, Batyrev conjectured that they are nonnegative. This nonnegativity represents a numerical constraint on the exceptional divisor of a resolution of singularities, and thus, it is of intrinsic interest in birational geometry. In this talk, I will present positive results towards Batyrev’s conjecture.

Representation Stability
Friday, September 11, 2020, 11:00am-11:50am
Online
Jenny Wilson (UM)

Buildings II: The definition of a building
Applied Interdisciplinary Mathematics (AIM)
Friday, September 11, 2020, 3:00pm-12:00am
(Zoom) East Hall

TBA

Preprint Algebraic Geometry
Friday, September 11, 2020, 4:00pm-5:00pm
Zoom

Organizational Meeting

Student AIM Seminar
Friday, September 11, 2020, 4:00pm-5:00pm
Zoom East Hall
(University of Michigan)
Planning meeting