Monday, September 07, 2020
4:00pm-5:00pm **Student Math Finance** -- Thomas Bernhardt (University of Michigan) *The exact number of members that remove idiosyncratic mortality risk in pooled annuity funds* -- https://umich.zoom.us/j/99487325343 Virtual

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

Wednesday, September 09, 2020
4:00pm-5:00pm **Algebraic Geometry** -- Sebastian Olano (University of Michigan) *On the nonnegativity of stringy Hodge numbers* -- Zoom

Friday, September 11, 2020
11:00am-11:50am **Representation Stability** -- Jenny Wilson (UM) *Buildings II: The definition of a building* -- Online
3:00pm-12:00am **Applied Interdisciplinary Mathematics (AIM)** -- TBA -- (Zoom) East Hall
4:00pm-5:00pm **Preprint Algebraic Geometry** -- TBA -- (Zoom) East Hall
4:00pm-5:00pm **Student AIM Seminar** -- (University of Michigan) *Planning meeting* -- Zoom East Hall
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