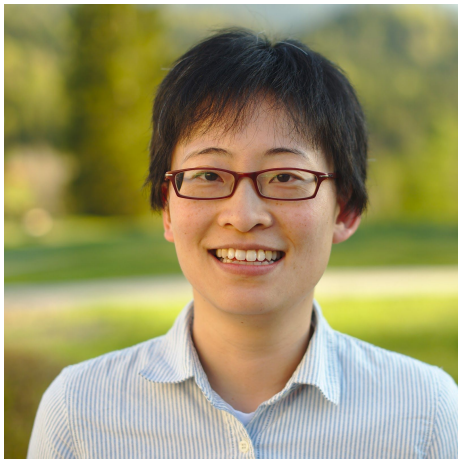
PRESS RELEASE

June 2, 2019

Melody Chan awarded 2020 AWM-Microsoft Research Prize



AWM will present the fourth AWM-Microsoft Research Prize in Algebra and Number Theory to **Melody Chan**, Assistant Professor of Mathematics, Brown University at the Joint Mathematics Meetings in Denver, CO in January 2020. Established in 2012, the AWM-Microsoft Research Prize recognizes exceptional research in algebra and number theory by a woman early in her career. This prize is in recognition of Chan's advances at the interface between algebraic geometry and combinatorics.

Chan received her doctorate in 2012 from University of California, Berkeley and held an NSF Postdoctoral Fellowship at Harvard University. She is currently an Assistant Professor at Brown University and a Sloan Research Fellow and has recently won an NSF CAREER Award.

Chan is known for an exceptional combination of strength in both combinatorics and algebraic geometry, as well as her ability to fearlessly digest difficult techniques from other fields of mathematics. Chan has proved numerous conjectures across tropical geometry, graph theory, and algebraic geometry.

In Chan's recent work with Galatius and Payne, they showed that the cohomology of the moduli space of genus g curves grows exponentially in a particular degree, an astounding result which contradicts conjectures of Kontsevich and Church-Farb-Putman that said this cohomology should vanish. This breakthrough comes from a deep study of moduli spaces of tropical curves.

Chan's foundational work on the moduli of metric graphs and tropical curves, both solo and with several co-authors, is central to the field, already having important applications, and is expected to continue to lead to further work far beyond the original papers. Chan's work with López Martín, Pflueger, and Teixidor i Bigas proves beautiful new results on the expected number of turns in a random Young tableau and then applies them to give explicit topological information on Brill-Noether varieties that seemed beyond reach before their work.

Beyond her outstanding scientific achievements, Chan has assumed leadership roles to promote the participation of women in research, co-organizing Women@AGNES (Algebraic Geometry Northeastern Series) at Brown and Yale; serving as Faculty Advisor for the Horizons Seminar at Brown, featuring talks and workshops on topics including diversity, community, and career development for young mathematicians; and organizing the peer Mentoring Network for women in math at Brown.

Researchers call Chan a "leader" and a "major force" and are impressed by both her insights and her technical prowess. AWM congratulates Melody Chan for her well-deserved AWM-Microsoft Research Prize.

Photo Credit: Joe Rabinoff

Established in 2012, the biennial presentation of this prize serves to highlight to the community outstanding contributions by women in the field of algebra and number theory, and to advance the careers of the prize recipients. This award is made possible by a generous contribution from Microsoft Research. Previous recipients of this honor include Sophie Morel, Lauren Williams, and Melanie Matchett Wood.

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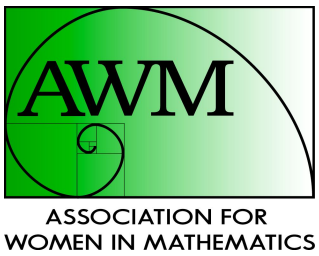

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