

AUGSBURG

(The Augsburg College Mathematics Department Colloquium Newsletter)

Upcoming colloquium:

September 17, 2014, 4:30–5:30 PM, Old Main 105

MILES OTT, AUGSBURG COLLEGE

Birds of a Feather:
Homophily, Social Networks, and Sampling Hidden Populations



Abstract: How do people choose their friends? The old saying “birds of a feather flock together” implies that people who share certain attributes (race, gender, age, etc...) are more likely to be friends with each other. In the field of social networks, this phenomenon is known as homophily. In this talk, we will explore measures of homophily, how homophily impacts sampling for networked hidden populations, and how to improve estimates of homophily from link-tracing designs. No previous knowledge of social networks or statistics is necessary.

Colloquium (and other seminar) dates for the fall semester:

Colloquia: September 25 (Th noon); October 8, 22; November 5, 19; December 3 (all W 4:30–5:30 PM)

AugSTEM seminar: November 14 (F)

Featured Faculty Member

John Zobitz, (New) Department Chair



I was on parenting leave and sabbatical in 2013-2014. While the parenting leave had a lot of time chasing after twin infants, during the sabbatical I had a lot of focused time to work on research projects. I completed revisions and published a paper in Agricultural and Forest Meteorology which had two undergraduate co-authors. I also started work launching curriculum development incorporating civic engagement and mathematics — which is part of Calculus I this fall term. New directions in research include projects developing mathematical models of mayfly populations and microbes in the soil. Stay tuned as to how these projects will develop!

Featured Mathematician

Yakov G. Sinai, Princeton University

What is viewed as the equivalent of the Nobel Prize in mathematics, the Abel Prize for 2014 was awarded to Yakov G. Sinai, a mathematician from Princeton University and the Landau Institute for Theoretical Physics, Russian Academy of Sciences. The prize was awarded “for his fundamental contributions to dynamical systems, ergodic theory, and mathematical physics.” This award comes after numerous other awards such as the Wolf Prize, the Henri Poincaré Prize, and the Nemmers Prize. Citing Wikipedia: “Yakov G. Sinai is a mathematician known for his work on dynamical systems. He contributed to the modern metric theory of dynamical systems and connected the world of deterministic systems with the world of probabilistic systems.” The University of Minnesota will be hosting its 4th Abel Conference, celebrating Yakov Sinai, October 31 - November 2, 2014.



PROBLEM OF THE WEEK #2:

You are given some matches and two incense sticks such that each would completely burn in 1 hour. The sticks are not identical, and they burn with variable yet unknown rates (they are hand-made). Can you use these tools to measure out exactly 45 minutes? How?

(Solutions are due to Prof. B. Ilik (handwritten or e-mailed) by the end of the day Friday, Sept. 26.)

