MSCS ♜ MESS

MSCS Colloquium

Network of Thrones

Whom: Andrew Beveridge
Where: RNS 310
When: Monday, April 16th | 3:30 p.m.

About the talk: Who is the main character in "Game of Thrones?" Who is the protagonist? Are these different questions? Network Science is an interdisciplinary field that studies the patterns of connection in complex systems. We will explore the social dynamics of the fictional world of Westeros by creating and analyzing a network of character interactions. Just like the real world networks that surround us, the structure of the connections identify coherent communities and important characters. We go one step further and discuss a synthesis of mathematics and dramatic criticism which uses data visualization techniques to reveal insights into the narrative structure of this epic series. Warning: here there be dragons and spoilers.

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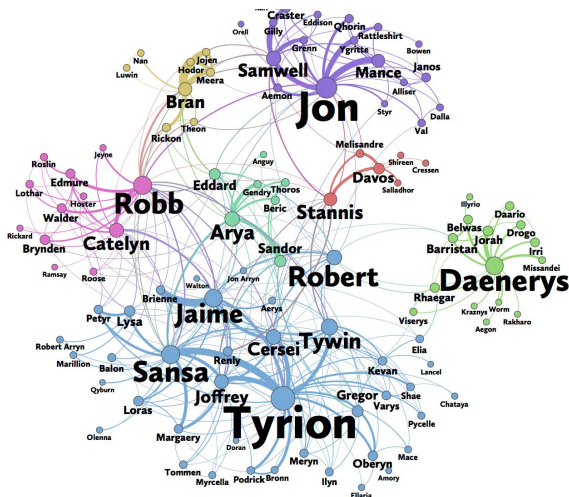
Power domination on graphs
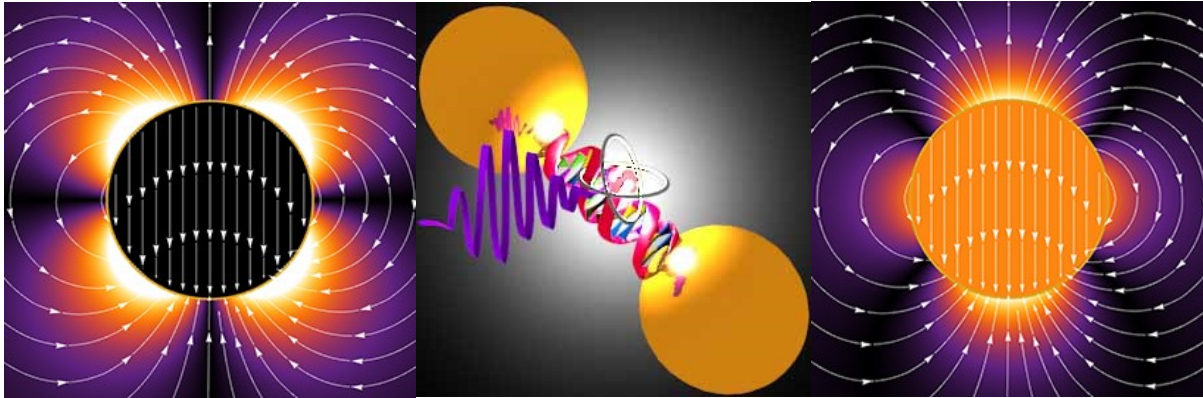
Whom: Chassidy Bozeman, MSCS Candidate
Where: RNS 310
When: Wednesday, April 18th | **3:00** p.m.

Abstract: Phasor Measurement Units (PMU) are machines used to monitor the U.S. electric power network. In this talk, we will learn some basic graph theory, we will learn the rules by which the PMUs work, and we will learn how graph theory is used to model and study the process of monitoring the electric power network.

Bio: Chassidy Bozeman received her Ph.D. in mathematics from Iowa State University in April 2018. Her research interest include graph theory, linear algebra and combinatorial matrix theory. She enjoys road trips and traveling abroad, game nights, Thai and Indian food, reading, and DIY projects.

MSCS Research Seminar

Temporal control of graphene plasmons
Whom: Josh Wilson '13
Where: RNS 310
When: Friday, April 20th | 3:45 p.m.

About the talk: Graphene can support electromagnetic surface waves called plasmons. Plasmons are usually manipulated by creating spatial patterns in graphene, for example by arranging it in strips of varying widths. In this talk we will investigate the possibility of instead controlling plasmons by modulating the conductivity of graphene in time. We will derive a simple equation to describe the time-dynamics of graphene plasmons and use it to investigate temporal versions of the Fresnel equations.

About the speaker: Josh Wilson graduated from St. Olaf in 2013 and is now in the final year of their PhD in applied mathematics at the University of Minnesota. Their research interests include optics, special functions, and scientific computing.

MSCS Recital

Back by popular demand, on *Wednesday April 18th* come on down to *Ytterboe Lounge* to see the greatest show on earth: The MSCS Recital! The recital is an annual recognition of the wide range of talents represented in the MSCS community. Faculty and students will perform for a few hours starting at *7:00 p.m.* Anyone associated with MSCS is welcome to attend, or better yet, participate with a talent. This is a fun, relaxed gathering of students and faculty and we sincerely hope you will join us. Murmurings around the department suggest there will be homemade food. If you are interested in performing, feel free to contact Bob Eisinger at *eising2@stolaf.edu*. Hope to see you all there!

Quinton Neville, Editor
William Grodzicki, Adviser
Ellen Haberoth, Mess Czar