Emergent Research:

Pacific Institute *for the* Mathematical Sciences

The PIMS Postdoctoral Fellow Seminar

May 25, 2022 | 9:30am Pacific
Online

Subgraphs in Semi-random Graphs

Natalie Clare Behague

PIMS PDF, University of Victoria

ABSTRACT:
The semi-random graph process can be thought of as a one player game. Starting with an empty graph on n vertices, in each round a random vertex u is presented to the player, who chooses a vertex v and adds the edge uv to the graph (hence 'semi-random'). The goal of the player is to construct a small fixed graph G as a subgraph of the semi-random graph in as few steps as possible. I will discuss this process, and in particular the asympotically tight bounds we have found on how many steps the player needs to win. This is joint work with Trent Marbach, Pawel Pralat and Andrzej Rucinski.

SPEAKER BIO:
Natalie completed her PhD in 2020 at Queen Mary University of London under the supervision of Robert Johnson. Prior to this, she completed both her Bachelors and Masters degrees at the University of Cambridge. After finishing her PhD she spent a year at the University of Ryerson in Toronto with the Graphs at Ryerson research group. She has worked on various problems under the broad umbrella of probabilistic and extremal combinatorics, including automata, graph saturation, graph factorization and probabilistic zero-forcing (a model for infection or rumour spreading across networks). Since the start of 2022 she has been a postdoctoral fellow at the University of Victoria, working with Natasha Morrison and Jonathan Noel.

For more information and registration:
https://www.pims.math.ca/seminars/PIMSPDF

ABOUT PIMS PDF SEMINARS:
PIMS ongoing lecture series featuring our Postdoctoral Fellows every three weeks. You will have the opportunity to connect with emerging research in the mathematical sciences from a PIMS Postdoctoral Fellow. PIMS PDFs are amongst the top young researchers in Canada, and this is an excellent opportunity to learn about them, and their work.