Practical approaches to mentoring undergraduate research projects
(Org: **Elisa Bellah** (University of Toronto) and/et **Yuveshen Mooroogen** (University of British Columbia))

ADRIAN CHITAN, Western University
Mentoring Success: Lessons from a Graduate-Undergraduate Model

Drawing on experience as a DRP(directed reading program) organizer and mentor, this talk addresses the core challenge of scoping rewarding yet feasible undergraduate research projects within a single semester. I will discuss effective project design methods that structure the term into distinct phases for background mastery and focused investigation of deep results through examples experienced locally. This approach enables mentors to design "failsafe" projects that guarantee positive learning outcomes, build student confidence, and provide techniques for successfully transitioning undergraduates into self-directed mathematical research, specifically from the graduate student position.

PARKER GLYNN-ADEY, University of Toronto (UTSC)
Supporting A Departmental Culture of Undergraduate Research

Research, at any level, does not occur in a vacuum. It is an organic process rooted in the local culture. In this talk, I describe a pair of initiatives at UTSC that support undergraduate research: The $U(T)$-Mathazine and Undergraduate Seminar. After recounting their histories, I describe how they support a culture of undergraduate research and how to go about starting similar initiatives at your institution.

HAZEM HASSAN, McGill University
Interaction between directed reading programs and undergraduate research projects

The Directed Reading Program offers (DRP) undergraduate students an intermediate step before jumping into more formal undergraduate research projects. I will discuss the synergy between these two types of projects, how the DRP prepares students for research projects and possible room for coordination between the two programs.

MICHAEL LAMOUREUX, University of Calgary
Mathematical visualizations in undergraduate research projects

Over several decades, a common theme has emerged in the undergraduate research projects I have supervised: the visualization of mathematical ideas via easy-to-use computational tools. The projects cover a diverse set of topics such as algebraic curves, self-similarity of operator spectra, mapping properties of analytic functions, and more. This talk will discuss the lessons learned in supervising students on such projects, including how to make "hard math" accessible and how to navigate rapidly evolving computing environments. Examples will include developing calculus without the use of limits.

Some recent work can be seen here: www.mlamoureux.ca

ALEX LOSEVICH,
Research as an integral part of undergraduate curriculum

In this talk, I will argue that concrete research activities should become an integral part of the undergraduate mathematics curriculum. I will describe some recent efforts in this direction at the University of Rochester in the context of the SteForAll undergraduate research program.