

# Lethbridge Number Theory and Combinatorics Seminar

Wednesday, February 14, 2024

1:45 to 2:45 p.m. in M1060

Online Registration Link: <https://uleth.zoom.us/meeting/register/tJEucirrzIsG9cXKQ0Be5JuREYTIiesCb4U>

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## Hilbert Class Fields and Embedding Problems

The class number one problem is one of the central subjects in algebraic number theory that turns back to the time of Gauss. This problem has led to the classical embedding problem which asks whether or not any number field  $K$  can be embedded in a finite extension  $L$  with class number one. Although Golod and Shafarevich gave a counterexample for the classical embedding problem, yet one may ask about the embedding in 'Polya fields', a special generalization of class number one number fields. The latter is the 'new embedding problem' investigated by Leriche in 2014. In this talk, I briefly review some well-known results in the literature on the embedding problems. Then, I will present the 'relativized' version of the new embedding problem studied in a joint work with Ali Rajaei.

**EVERYONE IS WELCOME!**

Organizers: Félix Baril Boudreau and Ertan Elma. Visit the seminar web page at <http://www.cs.uleth.ca/~nathanng/ntcoseminar/>