

# COLLOQUIUM

**Vesna Stojanoska**  
University of Illinois at  
Urbana-Champaign

## **Duality for some Galois groups in stable homotopy theory**



Date: Friday March 18, 2022

Time: 3:30 PM

Zoom link:

<https://uregina-ca.zoom.us/j/92508741353?pwd=UzFOMjVMelVhRWhqR215cjd6dTICQT09>

**Abstract:** In classical algebra, the integer primes  $p$  help decompose objects as well as problems into their  $p$ -primary parts, which may be easier to study. The same is true in homotopy theory, but the situation is more interesting since for each integer prime  $p$ , there are infinitely many nested homotopical primes. For each of those homotopical primes, there is an (unramified) Galois group that governs the local story and encodes the symmetries of chromatic homotopy theory. These Galois groups turn out to be particularly nice profinite groups, known as compact  $p$ -adic analytic. Such groups and their fascinating duality properties within algebra were studied by Lazard. I will try to explain a newer result, which shows that their homotopical duality properties are even better, giving powerful implications for the chromatic Galois extensions that they govern.