



# THE UNIVERSITY OF CHICAGO

## COMPUTATIONAL AND APPLIED MATHEMATICS STUDENT SEMINAR

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### Approximations of Topological Invariants

Tuesday, October 27, 2020, 3:00 PM (CDT)

Zoom Meeting ID: 972 4989 6395

Password: 673056

### ABSTRACT

We consider systems that have topologically protected edge modes at the interface between two-dimensional materials in different topological phases. To numerically approximate the corresponding interface conductivity, it is natural to work in a setting where the underlying space is periodic. Although periodicity allows us to accurately compute edge modes via spectral methods, it destroys any nontrivial topological properties that may have been present in the infinite domain case. We introduce an interface conductivity for periodic systems, and derive sufficient conditions for which it is stable and remains close to its infinite domain analogue.