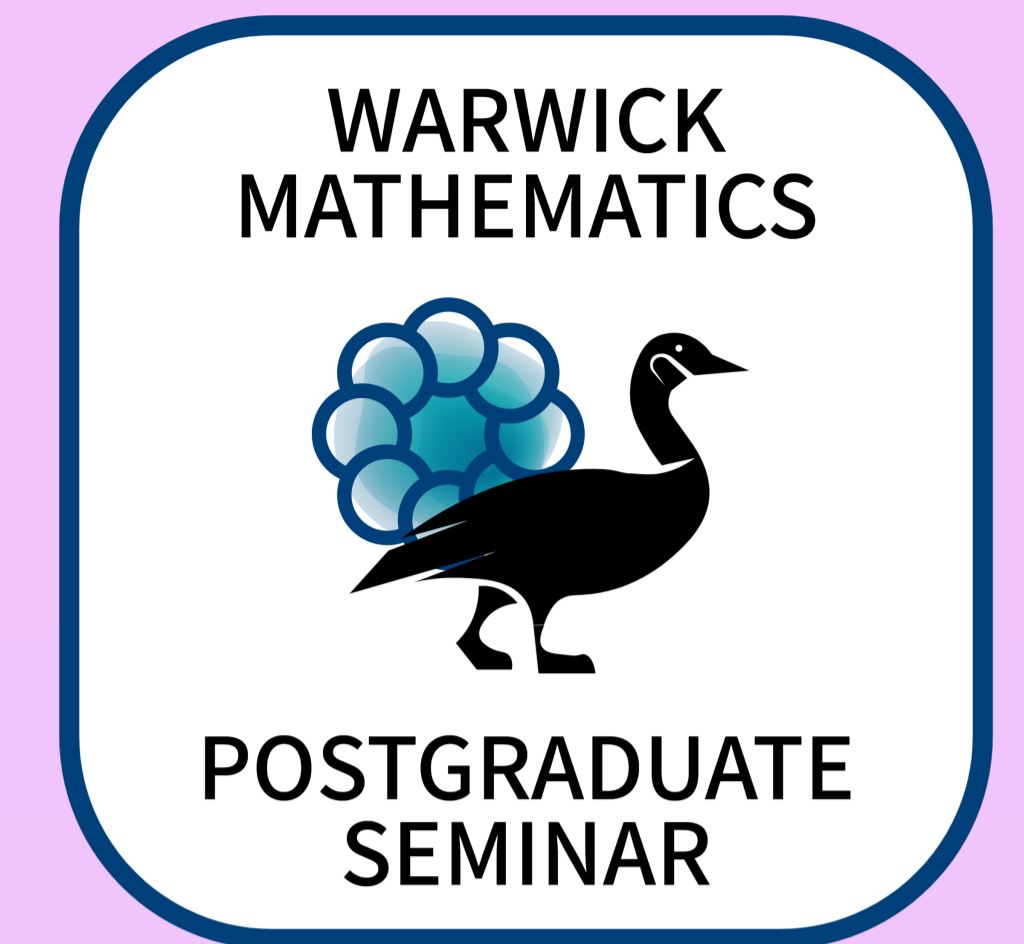


Homological stability for $O_{n,n}$

Sunny Sood

Week 1 - Term 1



Abstract

Motivated by Hermitian K-Theory, we study the homological stability of the split orthogonal group $O_{n,n}$. Specifically, let R be a commutative local ring with infinite residue field such that $2 \in R^*$. We prove that the natural homomorphism $H_k(O_{n,n}(R); \mathbb{Z}) \rightarrow H_k(O_{n+1,n+1}(R); \mathbb{Z})$ is an isomorphism for $k \leq n - 1$ and surjective for $k \leq n$.

This will be an excellent opportunity to introduce esoteric concepts such as group homology and hyperhomology spectral sequences at the postgraduate seminar. This is all joint work with my supervisor Dr Marco Schlichting.

Time

12 pm, 5th
October 2022

Location

Room B3.02

Organisers

Alvaro Gonzalez Hernandez
Katerina Santicola