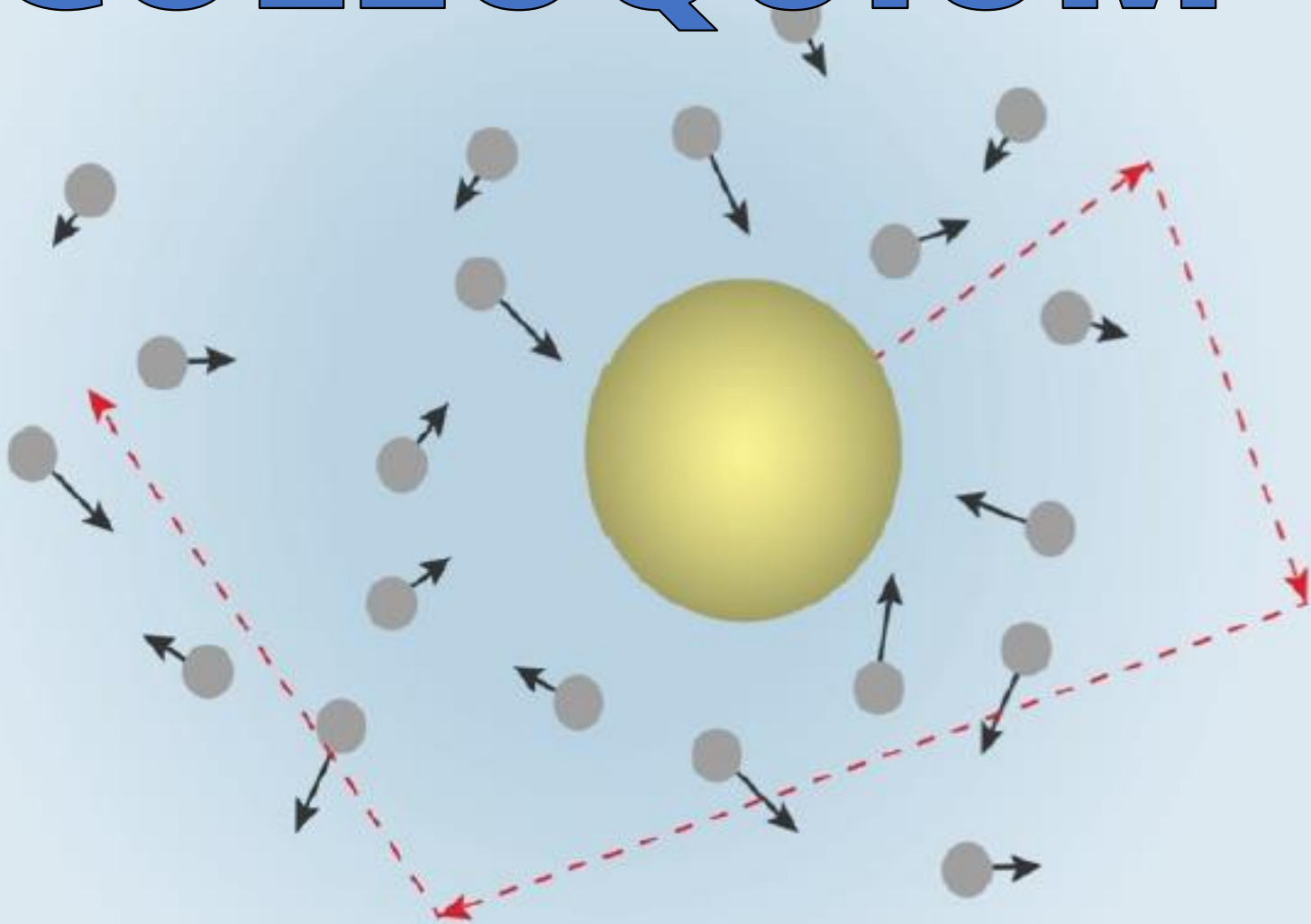


COLLOQUIUM



2-9-23

LINDSEY-KAY LAUDERDALE

School of Mathematical & Statistical
Sciences

Southern Illinois University

Place: Neckers 156

Time: 3:00pm

Reception immediately
following in the Math Library.

SIU Southern Illinois
University
CARBONDALE

**Title: On a new invariant: the
action-genus of a finite group**

Abstract: In this talk, we will define a new invariant for finite groups, called the action-genus. Let G be a finite group. Among all graphs Γ whose automorphism group is isomorphic to G , define the action-genus of G to be the minimal genus of a closed connected orientable surface on which Γ can be cellularly embedded. Here, we will elucidate some basic properties for the action-genus of a finite group, establish the action-genus of a few infinite families of finite groups, and then conclude with some open questions about the action-genus of finite groups in general.