Colloquium

Dr. Pamela Harris

Associate Professor of Mathematics

Williams College

Thursday, May 5th, 2022 @ 12:30pm

Lapham Hall, N101

Dr. Pamela Harris

UW-Milwaukee Department of Mathematical Sciences

EMS Building, Room E403 3200 North Cramer Street Milwaukee, Wisconsin 5321 414-229-4836

On Kostant's partition function

In this talk we recall that Kostant's partition function counts the number of ways to represent a particular weight (vector) as a nonnegative integral sum of positive roots of a Lie algebra. We provide two fundamental uses for this function. The first is associated with the computation of weight multiplicities in finite-dimensional irreducible representations of classical Lie algebras and the second is in the computation of volumes of flow polytopes. We present some recent results in both of these areas including a connection to multiplex juggling and directions for future research.

Refreshments will be served in EMS, E408 following this event.

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