Contribution ID: **20**   Type: **not specified**

Distribution of bricks and one-parameter families of stable modules

Wednesday, 20 December 2023 11:40 (50 minutes)

Let A be a finite dimensional associative algebra A over an algebraically closed field k. A (left) A-module M is called a brick if the endomorphism algebra of M over A is isomorphic to k. Bricks (also known as Schur representations) play decisive roles in the algebraic and geometric aspects of representation theory of algebras, including in the stability conditions, wall-and-chamber structures, (tau-)tilting theory and wide subcategories. In this talk, I will focus on the behavior of the 1-parameter families of stable modules (in the sense of King) and discuss some new results on a (still open) conjecture that I first posed in 2019. When restricted to the setting of tame algebras, the aforementioned conjecture states that A admits infinitely many non-isomorphic bricks if and only if there exists a 1-parameter family of stable modules under a fixed stability condition. I will discuss the conjecture over arbitrary algebras, present a reduction theorem in the general case, and then prove it for some important families of tame algebras. This talk is partially based on my joint work with Charles Paquette.

Presenter: MOUSAVAND, Kaveh (OIST)