ipam institute for pure & applied mathematics

Actions of Tensor Categories on C*-algebras

January 25 - 29, 2021

Scientific Overview

Classical group actions on spaces can be viewed as symmetries of the corresponding operator algebra of continuous or measurable functions on the space. This vastly generalizes to quantum symmetries on non-commutative spaces. The underlying space is replaced by a non-commutative operator algebra, and the group action by the more general notion of symmetry via tensor categories.

Many major recent breakthroughs in the classification of C*-algebras of finite topological dimension have been underpinned by the large scale transfer of von Neumann techniques on multiple levels. Today C*-algebras stand at exactly the analogous stage to where von Neumann algebra theory was around the early '80s when Jones' pioneered subfactor theory.

The overarching objective of this workshop is to bring together researchers at the interface of the rapidly developing areas of the structure and classification of C*-algebras and subfactor theory/ tensor categories. Advanced minicourses (making up around half the workshop) will enable a rich dialogue between the two communities, and participants will leave with many new problems to explore, as well as deeper insights about how C*-algebraic and von Neumann algebraic techniques interact.

This workshop will include a poster session; a request for posters will be sent to registered participants in advance of the workshop.

Participation

Additional information about this workshop including links to register and to apply for funding, can be found on the webpage listed below. Encouraging the careers of women and minority mathematicians and scientists is an important component of IPAM's mission, and we welcome their applications.

Organizers

David Penneys (OSU), Emily Peters (LUC), Aaron Tikuisis (UOttawa), and Stuart White (Oxford).

Speakers

A complete list of speakers will be announced at a later date.

NSF UCLA

For more information, visit the program webpage:
www.ipam.ucla.edu/atc2021