

名前 : Camila Sehnem

教員の大分野名 : Mathematical Sciences

教員の小分野名 : Operator Algebra Theory

分野のキーワード :  $C^*$ -algebras,  $C^*$ -correspondences, partial group actions

研究分野紹介 :

My main research interests are in operator algebra theory. I am particularly interested in various generalized notions of symmetries on an operator algebra, such as Hilbert bimodules (a generalization of a Hilbert space) and partial automorphisms. I have been working on constructions of operator algebras, mostly  $C^*$ -algebras, from actions of combinatorial and geometrical structures by these more general notions of symmetry. These include  $C^*$ -algebras associated to semigroups (e.g. the Toeplitz algebra generated by the unilateral shift on separable Hilbert space),  $C^*$ -correspondences and partial group actions. On one hand this setting is sufficiently general to encompass a broad class of interesting operator algebras, and on the other hand it allows for applications of powerful tools. Lately I have also grown interest in the interplay between the theories of self-adjoint and non-self-adjoint operator algebras.

志願者に期待すること :

I expect enthusiasm for analysis, and a good background on linear algebra and topology; some knowledge of functional analysis is desirable.