

## Mathematical Colloquia

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**Monday, 10 December 2018**

17:15 h, Lecture Room 119

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# Distinguishing knots with L2- invariants

### Abstract:

In this talk, I will review the basics of knot theory and the theory of L2-invariants.

The first one dates back to the 19th century and consists in classifying 3-dimensional embeddings of the circle up to deformation.

The second one was launched by Atiyah in the seventies, and uses von Neumann algebras to construct infinite-dimensional versions of classical invariants.

I will sketch how such L2-invariants are constructed and how strongly they can distinguish knots.

No prior knowledge of knot theory or operator algebras will be required.