FUNCTIONAL ANALYSIS AND OPERATOR THEORY WEBINAR

The role of unitary elements in the algebraic structure of a unital JB^*-algebra

María Cueto-Avellaneda

University of Granada, Spain

Motivated by the Hatori-Molnár theorem, this talk is devoted to studying surjective isometries between the unitary sets of two unital JB^*-algebras. The possibility of extending R-linearly these distance preserving mappings shall naturally lead us to explore whether two unital JB^*-algebras can be completely identified by the metric spaces determined by their sets of unitaries. We shall also consider the special case of JBW^*-algebras, which means a positive partial answer to the unitary Tingley's problem. This is a joint work with A.M. Peralta.

[1] M. CUETO-AVELLANEDA AND A.M. PERALTA, *Can one identify two unital JB^*-algebras by the metric spaces determined by their sets of unitaries?*, preprint, arXiv:2005.04794, 2020.

[2] O. HATORI AND L. MOLNÁR, *Isometries of the unitary groups and Thompson isometries of the spaces of invertible positive elements in C^*-algebras*, J. Math. Anal. Appl. **409** (2014), 158–167.

17 March 2021, 12:00 London time

You can join the event via this link:
https://istaustria.zoom.us/j/97256950873?pwd=bWd6U1kyVXZFQk1wNll5ZTlXTE1ZQT09
Meeting ID: 972 5695 0873
Passcode: 582736

More information about the webinar series can be found at the following homepages
https://www.renyi.hu/~titkos/faot.html
https://researchseminars.org/seminar/FAOT

The slides and video recordings of all previous talks are available in this google drive folder:
https://drive.google.com/drive/folders/1Vo6musdFZwhsMmoD3OKuJQ35Q_IWSZwd