1153-19-194   **Anna Duwenig*** (`aduwenig@uvic.ca`) and **Heath Emerson**. *Non-commutative Poincaré duality of the irrational rotation algebra.*

The irrational rotation algebra is known to be Poincaré self-dual in a KK-theoretic sense. The required K-homology fundamental class was constructed by Connes out of the Dolbeault operator on the 2-torus, but so far, there has not been an explicit description of the dual element. In this talk, I will geometrically construct a finitely generated projective module representing said K-theory class, by using a pair of transverse Kronecker flows on the 2-torus. (Received August 27, 2019)