1144-43-280 **Marina Iliopoulou*** (m.iliopoulou@berkeley.edu), Department of Mathematics, 849 Evans Hall, Berkeley, CA 94720, and **Michael Christ**. *The Riesz-Sobolev inequality on compact connected Abelian groups.*

The Riesz-Sobolev rearrangement inequality in $\mathbb{R}$ states that the 'number' of pairs of elements of two sets $A, B \subset \mathbb{R}$ whose sum lies in another set C, i.e. $\int_C \mathbf{1}_A * \mathbf{1}_B$, is smaller than what it would be if the sets A, B, C were intervals with appropriate centers. In this talk we will discuss a version of the Riesz-Sobolev inequality for compact connected Abelian groups, as well as the structure that A, B and C have if the above integral is nearly maximal. This is joint work with M. Christ. (Received August 27, 2018)