1145-42-273   **Kevin O'Neill***, oneill@math.berkeley.edu. *A Sharpened Inequality for Twisted Convolution.*
Consider the trilinear form for twisted convolution on $\mathbb{R}^{2d}$:

$$\mathcal{T}_t(\mathbf{f}) := \iint f_1(x) f_2(y) f_3(x+y) e^{it\sigma(x,y)} dx dy,$$

where σ is a symplectic form and t is a real-valued parameter. It is known that in the case $t \neq 0$ the optimal constant for twisted convolution is the same as that for convolution, though no extremizers exist. Expanding about the manifold of triples of maximizers and $t = 0$ we prove a sharpened inequality for twisted convolution with an arbitrary antisymmetric form in place of σ. (Received August 27, 2018)