1145-43-2056 **Marina Iliopoulou*** (m.iliopoulou@berkeley.edu), Evans Hall, Berkeley, CA 94720, and **Larry Guth** and **Jonathan Hickman**. *Sharp estimates for Hörmander-type oscillatory integral operators according to the signature of the phase function.*

At the heart of harmonic analysis lies the restriction problem: the study of Fourier transforms of functions that are defined on curved surfaces. The problem came to life in the late 60s, when Stein observed that such Fourier transforms have better behaviour than if the surfaces were flat. Soon after, Hörmander conjectured that oscillatory integral operators with more general phase functions should also demonstrate similar agreeable behaviour. Surprisingly, 20 years later Bourgain disproved Hörmander's conjecture. In this talk, we present sharp estimates for such operators, according to the signature of the phase function. This is joint work with Jonathan Hickman, continuing our joint work with Larry Guth. (Received September 24, 2018)