1138-35-327 **Willie W.-Y. Wong*** (wongwwy@math.msu.edu). *A novel vector-field approach to the dispersive estimate for 2D wave equations.*

A long standing difficulty for the study of nonlinear wave equations in two spatial dimensions using the physical-space-based vector field method is the inability to capture the dispersive decay of the solution itself (as opposed to its higher derivatives). In this talk I will present a modified vector field method that proves an almost-sharp (with a logarithmic loss in time) interior decay estimate for solutions to the linear wave equation with compactly supported initial data in two dimensions. The same method also yields minor improvements over the classical vector field method in higher dimensions, which will be briefly described. Time permitting, applications will be sketched. (Received February 12, 2018)