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Elizabeth Thoren* (ethoren@math.ucsb.edu). *Linear instability for Euler's equation - Two classes of perturbations.*

In this talk we will consider 2- and 3-dimensional Euler's equation linearized at steady-state solutions and examine the growth of high frequency perturbations in two separate classes: those that preserve circulation and the corresponding factor space. Instability criteria for each type of perturbation will be established in the form of lower bounds for the essential spectral radius of the linear evolution operator restricted to each class. (Received December 13, 2011)