

Meeting: 1001, Evanston, Illinois, SS 11A, Special Session on Stability Issues in Fluid Dynamics

1001-76-134 **Yuri Latushkin*** (yuri@math.missouri.edu), Department of Mathematics, University of Missouri, Columbia, MO 65211. *Linear Stability in an Ideal Incompressible Fluid.*

This is a report on the joint paper by Misha Vishik and the speaker (CMP 233 (2003) 439-461). The main focus is on the linearized Euler operator in dimension three. Using the bicharacteristic amplitude system, we give an explicit construction of approximative eigenfuncions for the linearized Euler operator and, under certain conditions, show that the linear hydrodynamic stability is controlled by the position of the spectrum of the operator. (Received August 20, 2004)