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	Sommario/riassunto	The instability of fluid flows is a key topic in classical fluid mechanics because it has huge repercussions for applied disciplines such as chemical engineering, hydraulics, aeronautics, and geophysics. This modern introduction is written for any student, researcher, or practitioner working in the area, for whom an understanding of hydrodynamic instabilities is essential. Based on a decade's experience

of teaching postgraduate students in fluid dynamics, this book brings the subject to life by emphasizing the physical mechanisms involved. The theory of dynamical systems provides the basic structure of the exposition, together with asymptotic methods. Wherever possible, Charru discusses the phenomena in terms of characteristic scales and dimensional analysis. The book includes numerous experimental studies, with references to videos and multimedia material, as well as over 150 exercises which introduce the reader to new problems.