

Introductory remarks

This special issue comprises five refereed papers on the topic of transitional/turbulent spots in boundary layers and related flows. Such spots arise in a number of ways in real applications, including in turbomachinery, airfoil flows and other important technological areas. They also form a fascinating subject scientifically in terms of the fundamental fluid dynamics involved. The topic covers a wide area indeed, and the papers in this issue correspondingly are intended to reflect the wide range of active research approaches. In particular it is felt to be vital for the sake of overall balance that a range of theoretical, computational and (especially) experimental work is presented herein, for this extensive topic. Other papers, some of which included direct numerical simulations, were originally invited also and although they did not materialise they would likewise have reinforced the extent of the subject. Spots have been studied seriously over four decades at least. Spots are regarded sometimes as elements in themselves, possibly leading on to the construction of a full turbulent flow, but on the other hand spots contain much interesting internal structure also. The present issue aims partly to show how much is known or not known about this large topic and partly to raise key questions. It is hoped that the papers herein will stimulate further research as well as presenting the current exciting state of the subject.

F.T. Smith