



Physical Sciences Seminar

Secondary flows in turbulent boundary layers over heterogeneous roughness

Christina Vanderwel (University of Southampton)

Host: Björn Hof

Large-scale secondary flows can sometimes appear in turbulent boundary layers formed over rough surfaces, creating low- and high-momentum pathways along the surface. The presence of these flows violates the assumption of homogeneity which is at the basis of traditional rough-wall models, and so it is critical to understand when and how these flows manifest. We investigate experimentally the dependence of these secondary flows on surface/flow conditions, using Particle Image Velocimetry, hot-wire, and oil-film measurements in a wind tunnel. Bio: Dr Christina Vanderwel is a Lecturer in the Aerodynamics and Flight Mechanics Research Group at the University of Southampton since 2015. She specialises in experimental fluid mechanics, turbulence, and dispersion. In particular, her research involves conducting laboratory experiments using laser-based diagnostics to study the mechanisms of transport of turbulent flows. She completed her PhD in Mechanical Engineering in 2014 at the University of Ottawa, Canada

Monday, March 19, 2018 11:00am - 12:00pm

IST Austria Campus Big Seminar room Ground floor / Office Bldg West (I21.EG.101)



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