

Global Flow Instability and Control IV

Sept 29 - Oct 2, 2009

Final Schedule In Detail

17:00-19:00	Mon, Sept 28 pm Registration	
19:00-21:00	Welcome Reception	
Tue, Sept 29 am		
08:00-08:45	Registration	
08:45-09:00	Opening Comments	
	Session I: Theoretical Foundations (Chair: Schmid)	
09:00-09:45	Kim	Physics and control of turbulent boundary layers
09:45-10:05	Hall, Sherwin	Streamwise vortices in shear flows - Part A: Analysis of a vortex-wave interaction
10:05-10:25	Sherwin, Hall	Streamwise vortices in shear flows - Part B: Numerical modelling of a vortex-wave interaction
10:25-10:45	Discussion	
		Coffee/ Tea Break
11:15-11:35	Okino, Nagata	Nonlinear solution of flow in a square duct
11:35-11:55	Meliga, Chomaz	Global stability and adjoint-based control of a confined impinging jet
11:55-12:15	Garbaruk, Magidov, Crouch	Quasi-3D analysis of global instabilities: vortex shedding on a wavy cylinder
12:15-12:35	Luchini, Giannetti, Pralits	Sparse-matrix algorithms for global eigenvalue problems
12:35-12:55	Discussion	
		Lunch Break
	Tue, Sept 29 pm	
	Session II: Lifting surfaces - analysis and experimentation (Chair: Monkewitz)	
14:30-15:15	Fasel	Reynolds number effects of separation control for lifting surfaces: simulations, laboratory and free-flight experiments
15:15-15:35	Stalnov, Fono, Seifert	Closed-Loop Bluff-Body Wake Stabilization via Fluidic Excitation
15:35-15:55	González, Artana, Gronskis, D'Adamo	An electrodynamic analogy of the moving surface control mechanism in bluff bodies
15:55-16:15	Discussion	
		Coffee / Tea Break
16:45-17:05	Kitsios, Ooi, Soria	Anisotropic closure for the triple decomposition stability analysis of a turbulent channel
17:05-17:25	Rodriguez, Theofilis	On the birth of stall cells on airfoils
17:25-17:45	Tsiloufas, Gioria, Meneghini, Carmo	Floquet stability analysis of flow around a stalled airfoil
17:45-18:05	Discussion	
		Dinner Break
	Discussion Sessions: I and II	
20:30-20:45	Wygnanski	On the generation and perseverance of streamwise vortices and their possible utilization in flow control
20:45-21:00	NN	TBA
21:00-22:30	Discussion Groups Meet at	Open Bar
Wed, Sept 30 am		
	Session III: Boundary and Shear Layers (Chair: Henningson)	
08:00-08:45	Schmid	Global modes, dynamic modes, microlocal modes
08:45-09:15	Marquet, Sipp	Global forcing/forced modes in spatially developing flows: the flat-plate boundary layer
09:15-09:35	Cherubini, Robinet, Bottaro, De Palma	The global optimal wave packet in a boundary layer and its non-linear evolution
09:35-10:05	Ehrenstein, Passaggia, Gallaire	Control of a separated boundary layer: Model reduction using global modes revisited
10:05-10:30	Discussion	
		Coffee/ Tea Break
10:50-11:10	Medeiros, Silva, Germanos	Towards natural transition in compressible flow
11-10-11:30	Cohen, Karp, Shukhman	The Formation of Packets of Hairpins in Shear Flows
11:30-11:50	Higuera, Sanchez, Vega	Structure of streaks in a Falkner-Skan boundary layer
11:50-12:10	Tempelmann, Hanifi, Henningson	Spatial Optimal Disturbances of Three-Dimensional Boundary Layers
12:10-12:30	Tumin	Towards the foundation of a global (bi-global) modes concept
12:30-12:50	Discussion	
		Lunch Break
	Wed, Sept 30 or Thu, Oct 1 pm	
	Session IV: Complex Flow Applications (Chair: Crouch)	
14:00-14:45	Blackburn	Global stability and transient growth of physiological-type flows
14:45-15:05	Monkewitz, Grandjean	Experimental investigation of 2D global modes in mixed Rayleigh–Benard–Poiseuille convection
15:05-15:25	Kuhlmann, Schoisswohl	Thermocapillary flow instabilities in open cylindrical pools
15:25-15:45	Gudmundsson, Colonus	The effects of nozzle serrations on the linear stability characteristics of turbulent jets
15:45-16:05	Romm, Greenblatt	Swirl-Induced Transition Control in Subcritical Pipe Flows
16:05-16:25	Discussion	
		Coffee / Tea Break
16:45-17:05	Ahmed, Kuhlmann	Instability of Lid-Driven Triangular Cavity Flow
17:05-17:25	Swaminathan, Govindarajan	Global instabilities in non-symmetric convergent-divergent channels
17:25-17:45	Juniper	Non-normal triggering in thermoacoustics
17:45-18:05	Discussion	
		18:45 - 20:30 Symposium Dinner
	Discussion Sessions: III and IV	
20:30-20:45	Tumin	The global mode studies: what should be done?
20:45-21:00	NN	TBA
21:00-22:30	Discussion Groups Meet at	Open Bar
Thu, Oct 1		
	Free Day	(Optional) Excursion to Santorini
Fri, Oct 2 am		
	Session V: Theoretical Flow Control (Chair: Luchini)	
08:30-08:50	Rowley, Mezić, Bagheri, Schlatter, Henningson	Spectral analysis of nonlinear flows
08:50-09:10	Barbagallo, Sipp, Schmid	Closed-loop control of cavity flow using reduced order models
09:10-09:30	Illingworth, Morgans, Rowley	System identification and robust feedback control of two-dimensional cavity oscillations
09:30-09:50	Ekaterinaris	MHD flow control of shock-induced separation
09:50-10:10	Discussion	
		Coffee / Tea Break
10:30-11:30	Reports of the Discussion Groups	
11:30-12:30	Symposium summary (Fasel)	