FLOW-NORDITA Summer School on Advanced Instability Methods for Complex Flows

May 6-10, 2013
Linné FLOW Centre, KTH Mechanics
Royal Institute of Technology
Stockholm, Sweden

http://www.mech.kth.se/flow/?q=node/127

Scope:

Stability and transition of flows belong to fundamental issues in the field of fluid mechanics. Predicting flow structures and characteristics requires deep understanding of the different routes of transition. Recent developments in this area concern the adoption of concepts from optimization and control theory, sensitivity and nonlinear modal analysis; these also enable to extend the analysis from canonical to complex flows. As currently there is limited material in this expanding area, we aim to provide Graduate education on a topic important for the training and research of future scientists and engineers working on fluid-flow systems. The use of tools from dynamical system theory as well as numerical simulations has indeed become crucial to study, understand and possibly manipulate flows in complex configurations.

The present school is organised in collaboration with AIM-ED, the Advanced Instability Methods Education International Graduate School, aimed at European and International PhD students in the broad areas of flow stability, transition to turbulence and control.

The school takes place at the start of the NORDITA program Stability & Transition, May 6-31, 2013
http://agenda.albanova.se/conferenceDisplay.py?confId=2883

Lectures:

Mon. 6/5	Hall V3, Teknikringen 72	8:30-12:30 -- 14:00-17:00
	Welcome, organisation of the school, administration **Matthew Juniper**: Classic modal stability theory	
Tue. 7/5	Hall E3, Osquars Backe 14	9:00-12:30 -- 14:00-17:00
	Luca Brandt: Non-modal stability	
Wed. 8/5	Hall E3, Osquars Backe 14	9:00-12:30 -- 14:00-17:00
	Rama Govindarajan: Nonlinear stability and dynamics	
Fri. 10/5	Hall E3, Osquars Backe 14	9:00-12:30 -- 14:00-17:00
	Carlo Cossu: Optimization and control Project description & Wrap-up of school	

Project work:

If desired, each pair of students could perform a project and send electronically to the school organisers for the final evaluation. Work is equivalent to 3.5 ECTS points.

Events:

Fri lunches will be served at **Restaurant Q (Quantum)**.
(Registered participants only)

The program includes a school dinner on Wednesday night (start 18:30) at Beirut Café, http://www.beirutcafe.se, walking distance from KTH.

Registration:

From 8:30 on Monday May 6 in the lecture hall V3, located in Teknikringen 72, http://www.kth.se/places/room/V3

Contact and organiser:

Prof. **Luca Brandt**
KTH Mechanics, Osquars Backe 18
SE-100 44 Stockholm, Sweden
luca@mech.kth.se

FLOW LINNÉ FLOW CENTRE NORDITA