

Sessions

Plenary and Contributed Papers

Opening Lecture

Leen van Wijngaarden (Netherlands)

Interplay Between Air and Water

Closing Lecture

Kazimierz Sobczyk (Poland)

Stochastic Dynamics of Engineering Systems

Sectional Lectures

Symbol	Title	Presenting Author
SL1	Multibody dynamics: bridging for multidisciplinary applications	Jorge Ambrosio
SL2	Rapid formation of strong gradients and diffusion in the transport of scalar and vector fields	Konrad Bajer
SL3	Near-critical point hydrodynamics and microgravity	Daniel A. Beysens
SL4	Suspensions: From Micromechanics to Macroscopic Behavior	John F. Brady
SL5	Nanoscale mechanics of biological materials	Huajian Gao
SL6	Variational and multiscale methods in turbulence	Thomas J. R. Hughes
SL7	Non-Newtonian fluid mechanics using molecular theory	Roland Keunings
SL8	Nonlinear dynamics in ocean engineering	Edwin Kreuzer
SL9	A bridge between the micro- and mesomechanics of laminates, fantasy or reality	Pierre J. Ladeveze

SL10	Turbulence and large-eddy simulations	Marcel Lesieur
SL11	Probability phenomena in perturbed dynamical systems	Anatoly Neishtadt
SL12	Mechanics of rubberlike solids	Raymond W. Ogden
SL13	Some issues in active vibration control of smart structures	Andre Preumont
SL14	Ocean circulation and its influence on climate	Peter B. Rhines
SL15	Microviscoelasticity of cells: cells as viscoplastic bodies	Erich Sackmann
SL16	Electrokinetics & electrohydrodynamics in microfluids	D. A. Saville
SL17	Problems in astrophysical fluid dynamics	Edward Spiegel
SL18	Scaling in quasi-2D turbulence experiments in a rotating flow	Harry L. Swinney

Mini Symposia

Symbol	Session subject	Responsible Chairs
MS1	Smart materials and structures	N. Sottos (USA), J. Holnicki-Szulc (Poland)
MS2	Tissue, cellular and molecular biomechanics	P. Janmey (USA), D. Barthes-Biesel (France), A. Hoger (USA)
MS3	Mechanics of thin films and nanostructures	K. Kim (USA), Z. Suo (USA), H. Jensen (Denmark)
MS4	Microfluids	P. Tabeling (France), R. Adrian (USA), J. Santiago (USA)
MS5	Microgravity flow phenomena	J. Legros (Belgium), G. Neitzel (USA), I. Alexander (USA)
MS6	Atmosphere and ocean dynamics	J. Sommeria (France), M. McIntyre (UK)

Pre-Nominated Sessions - Fluid Mechanics

Symbol	Topic	Responsible Chairs
FM1	Biological fluid dynamics	M. Gharib (USA), F. van de Vosse (Netherlands)
FM2	Boundary layers	P. Duck (UK), A. Kluwick (Austria)
FM3	Combustion and flames	N. Peters (Germany), P. Wolanski (Poland)
FM4	Complex and smart fluids	B. Khusid (USA), A. Yarin (Israel)
FM5	Compressible flow	H. Hornung (USA)
FM6	Computational fluid dynamics	L. Kleiser (Switzerland), W. Schroeder (Germany)
FM7	Convective phenomena	G. de Vahl Davis (Australia), K. Zhang (UK)
FM8	Drops and bubbles	J. Eggers (UK), A. Prosperetti (USA)
FM9	Environmental fluid dynamics	H. Huppert (UK), R. Narasimha (India)
FM10	Experimental methods in fluid mechanics	A. Leder (Germany), J. Westerweel (Netherlands)
FM11	Flow control	J. Freund (USA), M. Gad-el-Hak (USA)
FM12	Flow in porous media	A. Mojtabi (France), V. Nikolaevskiy (Russia)
FM13	Flow instability and transition	P. Huerre (France), P. Monkewitz (Switzerland)
FM14	Flow in thin films	N. Aksel (Germany), V. Shkadov (Russia)

FM15	Fluid mechanics of materials processing	F. Dupret (Belgium), R. Moreau (France)
FM16	Fluid mechanics of suspension	R. Bonnecaze (USA), E. Guazzelli (France)
FM17	Granular flows	R. Behringer (USA), I. Goldhirsch (Israel)
FM18	Low-Reynolds-number flow	R. Davis (USA), C. Pozrikidis (USA)
FM19	Magnetohydrodynamics	P. Davidson (UK), A. Thess (Germany)
FM20	Multiphase flows	S. Balachandar (USA), J. Magnaudet (France)
FM21	Solidification and crystal growth	M. Glicksman (USA), M. Worster (UK)
FM22	Stirring and mixing	H. Aref (USA), E. Villermaux (France)
FM23	Topological fluid mechanics	P. Boyland (USA), K. Ohkitani (Japan)
FM24	Turbulence	O. Metais (France), R. Moser (USA)
FM25	Vortex dynamics	E. Krause (Germany), G. van Heijst (Netherlands)
FM26	Waves	W. Melville (USA), V. Shrira (UK)

Pre-Nominated Sessions - Solid Mechanics

Symbol	Topic	Responsible Chairs
SM1	Computational solid mechanics	T. Belytschko (USA), P. Wriggers (Germany)
SM2	Contact and friction mechanics	I. Goryacheva (Russia), A. Klarbring (Sweden), G. Szefer (Poland)
SM3	Control of structures	F. Chernousko (Russia), S. Pellegrino (UK)
SM4	Damage mechanics	M. Chrzanowski (Poland), P. Steinmann (Germany)
SM5	Dynamic plasticity of structures	N. Jones (UK), T. Wierzbicki (USA)
SM6	Elasticity	R. Kienzler (Germany), L. Wheeler (USA)
SM7	Experimental methods in solid mechanics	I. Emri (Slovenia), J. Freire (Brazil)
SM8	Fatigue	J. Dominguez (Spain), K. Reifsnider (USA)
SM9	Fracture and crack mechanics	D. Gross (Germany), A. Needleman (USA)
SM10	Functionally graded materials	R. Batra (USA), G. Paulino (USA)
SM11	Impact and wave propagation	A. Norris (USA), K. Wilmanski (Germany)
SM12	Material instabilities	D. Bigoni (Italy), H. Petryk (Poland)
SM13	Mechanics of composites	S. Adali (South Africa), N. Fleck (UK)
SM14	Mechanics of phase transformations (jointly with IACM)	F. Fischer (Austria), A. Molinari (France)

SM15	Mechanics of porous materials	W. Ehlers (Germany), J. Huyghe (Netherlands)
SM16	Mechatronics	W. Schiehlen (Germany), M. Tomizuka (USA)
SM17	Multibody dynamics	M. Geradin (Italy), F. Pfeiffer (Germany)
SM18	Plasticity and viscoplasticity	E. van der Giessen (Netherlands), P. Perzyna (Poland)
SM19	Plates and shells	H. Mang (Austria), E. Ramm (Germany)
SM20	Rock mechanics and geomechanics	Z. Mroz (Poland), I. Vardoulakis (Greece)
SM21	Solid mechanics in manufacturing	B. Heimann (Germany), T. Inoue (Japan)
SM22	Stability of structures	Z. Gaspar (Hungary), S. Kyriakides (USA)
SM23	Stochastic micromechanics	Y. Brechet (France), Y. Shibutani (Japan)
SM24	Structural optimization	K. Choi (USA), J. Herskovits (Brazil)
SM25	Structural vibrations	I. Blekhman (Russia), K. Popp (Germany)
SM26	Vehicle dynamics	S. Iwnicki (UK), R. Sharp (UK)
SM27	Viscoelasticity and creep	A. Cocks (UK), N. Ohno (Japan)

Pre-Nominated Sessions - Topics involving both fluid mechanics and solid mechanics

Symbol	Session subject	Responsible Chairs
FSM1	Acoustics	T. Geers (USA), N. Peake (UK)
FSM2	Chaos in fluid and solid mechanics	I. Mezic (USA), G. Rega (Italy)
FSM3	Continuum mechanics	K. Rajagopal (USA), G. Saccomandi (Italy)
FSM4	Fluid-structure interaction	J. Grue (Norway), M. Paidoussis (Canada)
FSM5	Mechanics of foams and cellular materials	S. Hilgenfeldt (Netherlands), D. Weaire (Ireland)
FSM6	Multiscale phenomena in mechanics	A. Carpinteri (Italy), C. Miehe (Germany)
FSM7	Education in mechanics	R. Engel (USA), B. Karahaloo (UK)