

NONLINEAR DYNAMICS AND STRUCTURE FORMATION IN COMPLEX SYSTEMS: CHALLENGES AND OPEN PROBLEMS FOR MODERN PHYSICS

September 21-22, 2009

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Agenda and Links to Presentations (October 5, 2009)

September 21, 2009

8.30	Registration	
8.50	Opening	A. Pizzuto <i>Welcome address by Dr. A. Pizzuto, Head of Research Unit of EURATOM-ENEA Association</i>
9.00	Chair: G. Dattoli	M. Ferrario <i><u>The Free Electron Laser projects SPARC/X and related beam dynamics issues</u></i>
9.45	Chair: G. Dattoli	S. Savin <i><u>ROY mission: implication for magnetospheric and fusion boundary layers</u></i>
10.30	Coffee	
11.00	Chair: J.J. Rasmussen	F. Zonca <i><u>Complex behaviors in fusion plasmas: the role of FAST</u></i>
11.45	Chair: J.J. Rasmussen	K. Rypdal <i><u>Multifractal analysis of experimental time series - does it disclose or obscure the physics?</u></i>
12.30	Lunch	
14.00	Chair: F. Zonca	J.J Rasmussen <i><u>Aspects of tracer particle transport in plasma turbulence</u></i>
14.45	Chair: F. Zonca	R. Sanchez <i><u>Non-diffusive transport in plasma turbulence: origin, characterization and consequences</u></i>
15.30	Coffee	
16.00	Chair: R. Sanchez	G. Zimbardo <i><u>Superdiffusive and subdiffusive transport of energetic particles in astrophysical plasmas: numerical modeling and experimental evidence</u></i>
16.45	Chair: R. Sanchez	A.V. Milovanov <i><u>Routes to complex behavior: examples from geo-space and fusion plasmas</u></i>
17.30	Close	

September 22, 2009

9.00	Chair: A. Renieri	M. Migliorati <u>Nonlinearities due to wake-fields in particle accelerators</u>
9.45	Chair: A. Renieri	L. Giannessi <u>Nonlinear dynamics in free electron lasers</u>
10.30	Coffee	
11.00	Chair: K. Rypdal	D. Fanelli <u>Collective and microscopic dynamics in mean-field Hamiltonian models</u>
11.45	Chair: K. Rypdal	G. Consolini <u>Complexity in the Earth's magnetospheric dynamics and plasmas</u>
12.30	Lunch	
14.00	Chair: A.A. Tuccillo	G. Spizzo <u>Nonlocal transport in the Reversed Field Pinch</u>
14.45	Chair: A.A. Tuccillo	O.E. Garcia <u>Flow structures and transport in fluids and magnetized plasmas</u>
15.30	Close	