

International Workshop on

Nonlinear Dynamics of Acoustic Modes in Finite Lattices: Localization, Equipartition, Transport

December 06 - 08, 2006

Scientific coordination:

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Nonequipartition, localization in normal mode space, metastability, weak stochasticity and strong stochasticity thresholds - the Fermi- Pasta-Ulam problem in a nutshell - have been studied for more than 50 years. Celebrated related topics like KAM, exponential stability, chaos and solitons, are accompanied by recent progress in numerical simulations, symmetry analysis and periodic orbit theory. Consequences of these developments are far reaching, since the predictions concern control of energy locking and energy flow among normal modes in nonlinear finite systems, as well as rigorous results for corresponding excitations in infinite systems. Topics of immediate relevance include anomalous heat conductivity, the interplay between disorder and nonlinearity, and the broad spectrum of physics of small systems - nanoparticles, BEC in optical lattices, finite Josephson networks, electronic transport through molecules and various nanodevices, to name a few.

The focus workshop will bring together researchers who work in the related fields of localization, periodic orbit theory and the physics of small systems. Talks and posters will lead to stimulating discussions with a schedule that is designed to leave ample time for this purpose.

Invited participants include:

S. Aubry (Gif-sur-Yvette)	G. Benettin (Padova)	T. Bountis (Patras)
L. Bunimovich (Atlanta)	G. Casati (Como)	L. Casetti (Milano)
G.M. Chechin (Rostov na Donu)	J. De Luca (São Carlos)	W. Dreyer (Berlin)
S. Farantos (Heraklion)	L. Galgani (Milano)	B. Hu (Hongkong)
G. James (Toulouse)	O.I. Kanakov (Nizhni Novgorod)	S. Lepri (Florence)
B. Li (Singapore)	K. Mishagin (Nizhni Novgorod)	S. Paleari (Milano)
T. Penati (Milano)	A. Politi (Florence)	A. Ponno (Padova)
B. Rink (London)	P. Rosenau (Tel Aviv)	S. Ruffo (Florence)
V. Shalfeev (Nizhni Novgorod)	A.J. Sievers (Ithaca)	A. Ustinov (Erlangen)

Applications for participation and poster contributions are welcome and should be made by using the application form on the workshop web page (please see URL below). The number of attendees is limited. The **registration fee** for the workshop is **100 €** and should be paid by all participants. Costs for accommodation and meals will be covered by the Max Planck Institute. Limited funding is available to partially cover travel expenses. Please note that childcare is available upon request.

Deadline for registration is November 3, 2006.



For further information please contact:
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