

International Workshop on

Fluctuation-Induced Forces in Condensed Matter

11 - 15 October 2010

Scientific coordination

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Trieste, Italy

Organisation

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Fluctuation-induced and effective forces play an important role in controlling the structure, the dynamics, and the phase behavior of soft and condensed matter, ranging from colloidal suspensions to liquid crystals, complex fluids, and wetting films. These forces typically act at the sub-micrometer scale and arise from spatially confining various media in which there are pronounced quantum or thermal fluctuations. Recent theoretical and experimental investigations demonstrate that such forces can provide versatile tools for controlling and manipulating the behavior of systems at small scales. The workshop will promote an active and lively discussion of recent theoretical and experimental advances in understanding the various manifestations of effective and fluctuation-induced forces, with particular emphasis on unifying concepts and possible technological and interdisciplinary applications. Formulating perspectives for future developments will be strongly encouraged.

Topics include:

- fluctuation-induced forces in colloidal suspensions
- solvation forces and critical Casimir forces in simple and complex fluids
- charge fluctuations in soft matter
- van-der-Waals forces, wetting phenomena
- entropic forces and fluctuations at interfaces
- geometry-dependence and dynamics of fluctuation-induced forces
- experimental, analytical, and numerical techniques for studying fluctuation-induced forces
- harnessing forces at the sub-micrometer scale

Invited speakers

D. Aarts (UK)
M. Ballauff (Germany)
C. Bechinger (Germany)
F. Caupin (France)
D. Dantchev (Bulgaria)
D. Dean (France)
H. Diamant (Israel)
H.W. Diehl (Germany)
E. Eisenriegler (Germany)
E. Eiser (UK)
T. Emig (France)

R. Evans FRS (UK)
A. Feiler (Sweden)
J.-B. Fournier (France)
H. Gies (Germany)
R. Golestanian (UK)
F. Jülicher (Germany)
M. Kardar (USA)
A. Maciołek (Germany)
U. Marini Bettolo Marconi (Italy)
I. Muševič (Slovenia)
M. Napiórkowski (Poland)

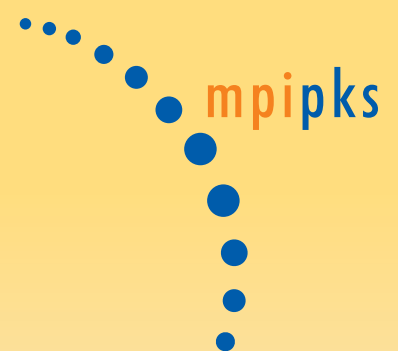
B. Ocko (USA)
M. Oettel (Germany)
P. Pincus (USA)
D. Pine (USA)
R. Podgornik (Slovenia)
M. Popescu (Australia)
R. Roth (Germany)
H. Tanaka (Japan)
Y. Tsori (Israel)
G. Wegdam (Netherlands)
R. Zandi (USA)

Applications 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 applications is 30 June 2010.



For further information please contact:
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