
Session 3P1

Recent Advances in Optical Trapping and Binding

Wednesday PM, March 29, 2006; Room: Ballroom A

Organized by Tomasz M. Grzegorzcyk and Jean-Marc Fournier

Chaired by Tomasz M. Grzegorzcyk and Jean-Marc Fournier

- 13:00 Comparison of Methods for the Calculation of Radiation Pressure on Dielectric and Magnetic Particles**
B. A. Kemp, T. M. Grzegorzcyk, J. A. Kong,
- 13:20 Optical Binding of Small Particles**
J. Ng, Z. F. Lin, P. Sheng, C. T. Chan,
- 13:40 Advanced Studies in Optical Binding**
K. Dholakia, N. K. Metzger, E. M. Wright,
- 14:00 Simulating the Optical Force and Torque on Metallic Nano-particles**
C. Rockstuhl,
- 14:20 Trapping of Microscopic Particles in Specially Designed Optical Fields**
S. Bernet, M. Ritsch-Marte,
- 14:40 Polarization Effects in Optically Bound Particle Arrays**
C. D. Mellor, C. D. Bain,
- 15:00 Coffee Break**
- 15:20 Optical Binding in Air**
M. Guillon,
- 15:40 Optical Waveguide Manipulation of Micro- and Nano-spheres**
J. S. Wilkinson, O. G. Hellesø, J. P. Hole, K. Grujic,
- 16:00 Towards Efficient Modelling of Optical Micromanipulation of Complex Structures**
T. A. Nieminen, V. L. Y. Loke, A. M. Brańczyk, N. R. Heckenberg, H. Rubinsztein-Dunlop,
- 16:20 Optical Microfluidics**
J.-P. Delville, R. Wunenburger, C. Baroud,
- 16:40 Light-mediated Particle Interactions in a Laser Trap**
G. L. Lippi, S. Barland, M. Colombet, J. Farmer, R. Kaiser, J.-M. Fournier,
- 17:00 Non-lorentzian Electromagnetic Resonances**
V. A. Markel,
- 17:20 Exact Calculations of Optical Forces and Optical Binding in Single and Multiple Beam Optical Traps**
O. Moine, B. Stout,
- 17:40 Shaping Electromagnetic Fields for Optical Trapping and Binding**
J.-M. Fournier, P. Jacquot, J. Rohner, R.-P. Salathé,
- 18:00 Theory and Modeling of Optical Forces within a Collection of Mie Scatterers**
T. M. Grzegorzcyk, B. A. Kemp, J. A. Kong,