

ESF-FWF Conference in Partnership with LFUI

## Trends in Optical Micromanipulation

Universitätszentrum Obergurgl (Ötz Valley, near Innsbruck) | Austria

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[www.esf.org/conferences/07220](http://www.esf.org/conferences/07220)

1	<b>Magnus ANDERSSON</b>	<i>Monte Carlo simulation of the unfolding and refolding mechanics of P pili</i>
2	<b>Nils ARNEBORG</b>	<i>Interactive optical trapping shows that confinement is a determinant of growth in a mixed yeast culture</i>
3	<b>Janos ASBOTH</b>	<i>Dynamical instability of an optically bound system due to unbalanced pumping</i>
4	<b>Oscar BJÖRNHAM</b>	<i>Strength of the Helicobacter pylori BabA-Lewis b bond explored with dynamic force spectroscopy</i>
5	<b>Ferdinando BORGHESE</b>	<i>Stability of the rotational motion of nonspherical particles driven by electromagnetic torque.</i>
6	<b>Vladimir BYKOV</b>	<i>Light Amplification in Systems of Nanotubes</i>
7	<b>Tomas CIZMAR</b>	<i>Optical tracking of spherical micro-objects in spatially periodic interference fields</i>
8	<b>Dan COJOC &amp; Benjamin DOLLET</b>	<i>A STUDY OF BUBBLE-BUBBLE INTERACTIONS CONTROLLED BY OPTICAL MICROMANIPULATION</i>
9	<b>Dan COJOC &amp; Marlies OVERVELDE</b>	<i>3D Optical Micromanipulation of Ultrasound Contrast Agents: bubble-wall interactions</i>
10	<b>Johannes COURTIAL</b>	<i>Holographic shaping of evanescent-wave optical traps</i>
11	<b>Jeppe Seidelin DAM</b>	<i>Computer-controlled automated alignment of GPC-based 3D optical micromanipulator with counterpropagating beams.</i>
12	<b>Anna Chiara DE LUCA &amp; Giulia RUSCIANO</b>	<i>Phase-sensitive detection in Raman tweezers.</i>
13	<b>Anna Chiara DE LUCA</b>	<i>Detection of cytoskeleton depolymerization in a single cell</i>
14	<b>Roberto DI LEONARDO</b>	<i>Parametric Excitation of Optically Trapped Aerosols</i>
15	<b>Emma ERIKSSON</b>	<i>Optical tweezers combined with microfluidics for single cell studies</i>
16	<b>Michael GÖGLER</b>	<i>Investigation and Manipulation of the Cell Membrane Dynamics via an Optical Tweezers Technique</i>
17	<b>Mattias GOKSÖR</b>	<i>Activities at the Centre for Biophysical Imaging, Göteborg University and Chalmers Biocentre.</i>
18	<b>Annette GRANALI</b>	<i>Optical tweezers in combination with micro-fluidics and fluorescence imaging in systems biology</i>
19	<b>Nathaniel HERMOSA</b>	<i>Helico-Conical Optical Beams and their limits for Nondiffraction and Self-Reconstruction</i>

20	<b>Nathan HODAS</b>	<i>The Kinetics of DNA Hybridization Within Microreactors.</i>
21	<b>Francesca IANNI</b>	<i>Computed-generated holograms for optical trap arrays.</i>
22	<b>Ales IGLIC</b>	<i>Intercellular transport involving carrier vesicles directed along membrane nanotubes</i>
23	<b>Alexander JESACHER &amp; Christian MAURER</b>	<i>Biomedical Applications of Spatial Light Modulators</i>
24	<b>Philip JONES</b>	<i>Parameterising forces on optically trapped microbubbles</i>
25	<b>Vitezslav KARASEK</b>	<i>One dimensional self-arrangement of microobjects via optical binding,</i>
26	<b>Stephen KEEN</b>	<i>Multi-particle hydrodynamic couplings in optical tweezers</i>
27	<b>Philipp KUKURA</b>	<i>Detection and tracking of nonfluorescent nano-objects</i>
28	<b>Jonathan LEACH</b>	<i>Force measurements and position detection using high speed video microscopy.</i>
29	<b>Guan Bo LIAO</b>	<i>THE INFLUENCE OF REISHI POLYSACCHARIDES ON THE INTERACTION OF LIPOPOLYSACCHARIDE WITH CD14 MEMBRANE RECEPTORS ON MACROPHAGE MEASURED BY OPTICAL TWEEZERS</i>
30	<b>Carlo LIBERALE</b>	<i>Innovative Structure of Single-Fiber Optical-Tweezer</i>
31	<b>Maruša LOKAR</b>	<i>The effect of pro and anti – coagulant substances on budding phospholipid vesicles</i>
32	<b>Vincent LOKE</b>	<i>Incorporating the T-matrix with the discrete dipole approximation method and exploiting geometrical symmetry.</i>
33	<b>Michael MACDONALD</b>	<i>Fractionation of colloidal microparticles with acousto-optically generated potential energy landscapes</i>
34	<b>Robert MAIWALD</b>	<i>A new geometry for <math>4\pi</math> microscopy</i>
35	<b>Onofrio MARAGO</b>	<i>Optical Trapping of Carbon Nanotubes</i>
36	<b>Estela MARTIN-BADOSA &amp; Encarnación PLEGUEZUELOS AGUILERA</b>	<i>REAL-TIME RECONFIGURABLE HOLOGRAPHIC OPTICAL TWEEZERS</i>
37	<b>David MCGLOIN</b>	<i>Optical manipulation of aerosols using dual beam traps and infrared wavelengths</i>
38	<b>Kevin MCHALE</b>	<i>Tracking individual fluorescent particles in three dimensions via real-time feedback control</i>
39	<b>Fabrice MERENDA</b>	<i>Micro-Optics Tweezers,</i>
40	<b>Helena MERESMAN</b>	<i>Towards a New Analytical Instrument for Single Particle Sampling and Characterization</i>
41	<b>Jaroslav MYSLIWIEC</b>	<i>Optically addressed spatial light modulator for digital holograms reconstruction</i>
42	<b>Monica NADASAN</b>	<i>Applications of the holographic optical tweezers in nanotechnology</i>
43	<b>Davide NORMANNO</b>	<i>Optical angular momentum: Spin absorption, windmill, and magneto-optic effects.</i>
44	<b>Simon PARKIN</b>	<i>Microrheology using Rotating Optical Tweezers</i>
45	<b>Janez PAVLIC</b>	<i>Interaction of like-charged membrane surfaces mediated by spherical nanoparticles. Effect of membrane surface charge density</i>
46	<b>Giuseppe PESCE</b>	<i>Mechanical properties of living staphylococcus oocytes</i>
47	<b>Teuta PILIZOTA</b>	<i>A programmable optical angle clamp for rotary molecular motors</i>
48	<b>Igor POBERAJ</b>	<i>Microrheology of complex colloids with magneto-optic tweezers</i>

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50	<b>Laurence PRUVOST</b>	<i>Investigation on the use of Spatial Light Modulators for Atom Optics</i>
51	<b>Mette Bredmose RASMUSSEN</b>	<i>The impact of optical trapping on bacterial cells</i>
52	<b>Marcel REUTER</b>	<i>Manipulating bacterial nucleoids</i>
53	<b>Maurizio RIGHINI</b>	<i>2-D plasmons-based trapping at a patterned gold surface</i>
54	<b>Johann ROHNER</b>	<i>Variation of trapping strength in interference fringes</i>
55	<b>S. Nader S. REIHANI</b>	<i>Compensation of spherical aberrations - improving of axial optical trapping strength</i>
56	<b>Rosalba SAIJA</b>	<i>Optical trapping of non-spherical particles</i>
57	<b>Martin SILER</b>	<i>Brownian surfer and swimmer in periodic potential landscape</i>
58	<b>Sergiy SIMONOV</b>	<i>Peculiarities of transporting, confinement and compression of charged and dipole particles beams and fluxes in nondiffracting photonic crystals</i>
59	<b>Anna SOBOLEWSKA</b>	<i>DIFFERENT LASER TECHNIQUES FOR MICROSTRUCTURE FABRICATION IN AZOPOLYMER FILMS</i>
60	<b>Laura Carroll THOMSON</b>	<i>Generalised self-reconstructing light beams and how to shape them</i>
61	<b>Jasna URBANIJA</b>	<i>Attractive interaction between phospholipid membranes mediated by rod-like macromolecules</i>
62	<b>Peter VAN OOSTRUM</b>	<i>An exploration of applications of optical tweezers in colloid research</i>
63	<b>Esther VERMOLEN</b>	<i>Creating templates for nucleation and growth of colloidal (photonic) crystals</i>
64	<b>Karen VOLKE-SEPÚLVEDA</b>	<i>Transfer of angular momentum from Bessel vector vortices to optically trapped microparticles</i>
65	<b>Giorgio VOLPE</b>	<i>Brownian motion of a spinning particle</i>
66	<b>Giovanni VOLPE</b>	<i>Detection of cytoskeleton depolymerization in a single cell</i>
67	<b>Anders WALLIN</b>	<i>Feedback Controlled Optical Tweezers</i>
68	<b>Michael WARBER</b>	<i>New concepts for holographic optical tweezers</i>
69	<b>Daphne WEIHS</b>	<i>Micromechanics and microstructure of living cells: techniques and biomedical applications</i>
70	<b>Rikard WELLANDER</b>	<i>Probing the interaction at membrane contact sites in plant cells using optical tweezers</i>