

SPG - Jahrestagung in Zürich, 21. - 22. Juni 2012

Réunion de la SSP à Zürich, 21 - 22 juin 2012

Programmübersicht - Résumé du programme

Das vollständige Programm wird allen Teilnehmern am Tagungssekretariat abgegeben sowie auf der SPG-Webseite publiziert.

Hinweise:

- Je Beitrag wird nur der präsentierende Autor aufgeführt.
- Die Postersitzung ist am Donnerstag von 18:30 - ca. 20:00 (mit Apéro) sowie am Freitag von 12:00 - 13:30 (mit Lunchbuffet)
- (p) = Plenarsprecher, (i) = eingeladener Sprecher

Le programme final complet sera distribué aux participants au stand du secrétariat de la conférence et sera publié sur le site de la SSP.

Indications:

- seul le nom de l'auteur présentant la contribution a été indiqué.
- la session poster a lieu le jeudo de 18.30 à env. 20.00 (avec apéro) ainsi que le vendredi de 12:00 à 13:30 (avec buffet de midi)
- (p) = orateur de la session plénière, (i) = orateur invité

Plenary Session

Thursday, 21.06.2012, HPH G 1

| Time | ID | PLENARY SESSION I Chair: Christophe Rossel, IBM Rüschlikon |
|-------|----|--|
| 08:55 | | Welcome note of the SPS President |
| 09:00 | 1 | From the QHE to Topological Insulators and on to Cosmic Magnetic Fields - a Unified Perspective Jürg Fröhlich, ETH Zürich (p) |
| 09:40 | 2 | Quantum physics in one dimension Thierry Giamarchi, Uni Genève (p) |
| 10:20 | | Coffee Break |
| | | Chair: Gervais Chapuis, EPFL |
| 10:50 | 3 | From Laue's discovery and the Braggs' key to the world of atoms to service crystallography Dieter Schwarzenbach, EPFL (p) |
| 11:30 | | Award Ceremony |
| 11:50 | | SPS General Assembly |
| 12:30 | | Lunch |
| 13:30 | | Topical Sessions |
| 18:30 | | Postersession and Apéro |
| 20:15 | | Grillparty |

Thursday, 21.06.2012, HPH G 1

| Time | ID | PUBLIC LECTURE Chair: Martin Pohl, Uni Genève |
|-------|----|---|
| 19:00 | 11 | Space-borne Cosmic Ray Detectors Samuel C. C. Ting, CERN & MIT (p) |
| 20:15 | | END |

Friday, 22.06.2012, HPH G 1

| Time | ID | PLENARY SESSION II Chair: Andreas Schopper, CERN |
|-------|----|---|
| 09:00 | 4 | Nanomechanical Resonators - coherent control of nanomechanical motion Jörg Peter Kotthaus, LMU München (p) |
| 09:40 | 5 | Charge, Spin And Structural Dynamics of molecular systems: ultrafast optical and X-ray studies Majed Chergui, EPFL (p) |
| 10:20 | | Coffee Break |
| 11:00 | | Topical Sessions |
| 12:00 | | Postersession (continued), Lunchbuffet |
| 13:30 | | Topical Sessions |

Friday, 22.06.2012, HPH G 2

| Time | ID | PUBLIC TUTORIAL OF NCCR MUST AND ETH FAST Chair: Ursula Keller, ETH Zürich |
|-------|----|---|
| 12:15 | 12 | Ultrafast Biology Gebhard F. X. Schertler, ETH Zürich & PSI Villigen (p) |
| 13:00 | | END |

Special: Careers for Physicists

This session is organised in conjunction with the Physikalische Gesellschaft Zürich (PGZ).

Thursday, 21.06.2012, HPH G 2

| Time | ID | CAREERS FOR PHYSICISTS Chair: Kai Hencken, ABB Baden |
|-------|----|---|
| 13:30 | 31 | Sensirion: High-Tech Sensors from the Zürichsee Marc von Waldkirch (i) |
| 14:00 | 32 | Physicists in research administration Florian Weissbach (i) |
| 14:30 | 33 | Theoretical Physics in Industrial Corporate Research Thomas Christen (i) |
| 15:00 | 34 | Mesa Imaging: Seeing the world in three dimensions Thierry Oggier (i) |
| 15:30 | | END, Coffee Break |
| 18:30 | | Postersession and Apéro |

Special: Teacher's Afternoon: "Nanophysik am Gymnasium"

Friday, 22.06.2012, HCI D 2

| Time | ID | "NANOPHYSIK AM GYMNASIUM" Chair: Tibor Gyalog, Uni Basel |
|-------|----|---|
| 14:30 | 41 | Nano 4 schools - Erfahrungsbericht über 9 Jahre Nano für Schulen Martin Vonlanthen (i) |
| 14:50 | 42 | Der Nanotruck in Deutschland - Eine Erfolgsstory Andreas Jungbluth (i) |
| 15:10 | 43 | Swiss nano Cube - Plattform für Wissen & Bildung zu Nanotechnologien Robert Rekece (i) |
| 15:30 | | Coffee Break |

| Time | ID | Chair: Tibor Gyalog, Uni Basel |
|-------|----|--|
| 16:00 | 44 | Graetzelzellen für die Schule Thilo Glatzel (i) |
| 16:20 | 45 | Nanomedizin – Eine Debatte über Technologiefolgen Meret Hornstein (i) |
| 16:40 | 46 | Nano-Experimentier-Systeme für die Schule Andreas Vaterlaus (i) |
| 17:00 | 47 | War Benjamin Franklin der erste Nanophysiker? Danilo Pescia |
| 17:20 | | END |

Special:**A. 100 Years of Diffraction: Historical highlights and a look into the next 100 years**

This session is organised by the Swiss Society for Crystallography (SGK).
Part I is jointly organised with the SPS History of Physics section.

Thursday, 21.06.2012, HCI J 6

| Time | ID | I. 100 YEARS OF DIFFRACTION Chair: Jan Lacki, Uni Genève Anthony Linden, Uni Zürich |
|-------|----|--|
| 11:50 | | SGK General Assembly |
| 12:30 | | Lunch |
| 13:30 | 51 | The two Braggs A. Michael Glazer (i) |
| 14:00 | 52 | Max von Laue: the physicist and the upright man Jost Lemmerich (i) |
| 14:30 | 53 | The origins and development of macromolecular crystallography Larry Falvello (i) |
| 15:00 | 54 | Johannes Martin Bijvoet (1892-1980) and absolute structure Ton Spek (i) |
| 15:30 | | Coffee Break |
| | | II. THE NEXT 100 YEARS Chair: Michael Wörle, ETH Zürich |
| 16:00 | 61 | Novel structural studies with an X-ray Free Electron Laser Bruce Patterson (i) |
| 16:25 | 62 | Investigating disorder as a matter of routine - the next steps Thomas Weber (i) |
| 16:50 | 63 | The Materials Science Beamline upgrade Philip Willmott (i) |
| 17:15 | 64 | High Resolution X-Ray Diffraction applications for microsystems Antonia Neels |
| 17:30 | 65 | Powder Charge Flipping – input parameter optimization and solution evaluation Dubravka Šišak |
| 17:45 | 66 | Intercluster compounds for nanosized materials Fabienne Gschwind |
| 18:00 | 67 | News from the spallation neutron source SINQ: Diffraction Jürg Schefer |
| 18:15 | 68 | Density functional calculations of polysynthetic Brazil twinning in alpha-quartz Hans Grimmer |
| 18:30 | | Poster prize and closing remarks |
| 18:35 | | END, Postersession and Apéro |
| 20:15 | | Grillparty |

| ID | 100 YEARS OF DIFFRACTION POSTER | |
|----|---|--|
| 71 | A moment in time: 100 years of X-Ray diffraction versus 100 days of PHOTON 100 CMOS detector Eric Hovestreydt | |
| 72 | Ab-initio crystal structure prediction. Metal borohydrides Riccarda Caputo | |
| 73 | Pressure modulated proton-phonon coupling and its relevance to ceramic fuel cell proton conductors Qianli Chen | |
| 74 | Mixed-metal precursors for mixed-metal oxides Claire-Lise Chanez | |
| 75 | New penta-coordinate iron(III) aryloxide as initiators for ring-opening polymerization Yvens Chérémont | |
| 76 | Light-induced low-spin structure of the bistable [Fe(bbtr) ₃](BF ₄) ₂ compound Laure Guenee | |
| 77 | Magnetic ground state and 2D behavior in the pseudo-Kagomè layered system Cu ₃ Bi(SeO ₃) ₂ O ₂ Br Oksana Zaharko | |
| 78 | XRD investigations on PZT layers for actuator systems Olha Sereda | |
| 79 | Novel trimetallic borohydrides Pascal Schouwink | |
| 80 | TIPSI hybrid spectrometer at the European Spallation Neutron Source ESS: Probing multiple length scales in one instrument Nadir Aliouane | |
| 81 | Neutron diffraction and Oxygen Isotope Back Exchange studies in La _{2-x} Sr _x CuO _{4±δ} (x = 0, 0.05, 0.15) crystals as a function of temperature Ravi Sura | |
| 82 | Our fascination with crystals and crystallography – a 7500 year timeline Rangana Warshamanage | |

B. History of Physics

Thursday, 21.06.2012, HCI D 2

| Time | ID | HISTORY OF PHYSICS Chair: Bernhard Braunecker |
|-------|----|---|
| 14:30 | 91 | The method of Victor F. Hess, or how the residual leaking away of electric charge, a tenacious 'shelf warmer', opened up new fascinating fields of physical knowledge Peter Schuster (i) |
| 15:00 | 92 | From thunderstorms to cosmic rays: Albert Gockel's investigations in atmospheric physics Jan Lacki |
| 15:30 | | Coffee Break |
| | | Chair: Peter M. Schuster, Victor F. Hess Society |
| 16:00 | 93 | The origins and fate of technical physics in Lausanne: the creation of the Ecole Spéciale. Régis Catinaud |
| 16:30 | 94 | Who discovered the Proca equation? Lanczos, Proca, de Broglie and the development of relativistic quantum theory in the 30' Adrien Vila-Valls |

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| 17:00 | 95 | Density-functional-theory strategy to solve approximately a quantum many-body problem: main ideas over the last 50 years and their reflection in terminology <i>Tomasz Wesolowski</i> |
| 17:30 | 96 | Political Decisions with deep Scientific Consequences <i>Araceli Sanchez Varela</i> |
| 18:00 | 97 | A key to success for an instrument maker: Collaboration with a scientist. The case of Haag-Streit (established 1858) and Heinrich Wild (1833-1902). <i>Jean-François Loude</i> |
| 18:30 | | END, Postersession and Apéro |
| 20:15 | | Grillparty |

1 Magnetism at Interfaces

Thursday, 21.06.2012, HCI J 7

| Time | ID | MOLECULES AND CLUSTER <i>Chair: Armin Kleibert, PSI Villigen</i> |
|-------|-----|---|
| 13:30 | 101 | Magnetic exchange coupling at the metal-organic molecule/substrate interface: Insights from first-principles calculations <i>Peter Oppeneer (i)</i> |
| 14:00 | 102 | Investigating the interplay of geometry and magnetism in spin shuttle molecules on surfaces <i>Thomas Greber (i)</i> |
| 14:30 | 103 | Novel magnetochemical effects induced by axial ligands in on-surface planar molecular spin systems <i>Christian Wäckerlin</i> |
| 14:45 | 104 | Magnetism of Fe nanocluster superlattices on $\text{Al}_2\text{O}_3/\text{Ni}_3\text{Al}$ (111) <i>Luca Gragnaniello</i> |
| 15:00 | 105 | Towards spintronics with Erbium single-ion molecular magnets <i>Jan Dreiser</i> |
| 15:15 | 106 | High anisotropies for bimetallic Co-core Fe-shell islands on Au(11,12,12) <i>Sergio Vlaic</i> |
| 15:30 | | Coffee Break |
| | | MAGNETIC AND ULTRAFAST INTERFACES <i>Chair: Cinthia Piamonteze, PSI Villigen</i> |
| 16:00 | 111 | Superconductivity, magneto-transport and electronic structure of the interfacial $\text{LaAlO}_3/\text{SrTiO}_3$ electron gas <i>Jean-Marc Triscone (i)</i> |
| 16:30 | 112 | Interfacial magnetic couplings at LaSrMnO_3 interfaces <i>Carlos Vaz</i> |
| 16:45 | 113 | The Nature of Magnetic Ordering in Magnetically Doped Topological Insulator $\text{Bi}_{2-x}\text{Fe}_x\text{Se}_3$ - From Bulk to Surface <i>Zaher Salman</i> |
| 17:00 | 114 | Strain-driven magnetization in epitaxial multiferroic composite heterostructures mapped with x-rays and neutrons <i>Rajesh Chopedekar</i> |
| 17:15 | 115 | Altering STO/vacuum interface electronic states depositing polar LAO epitaxial film: Angle Resolved Photoemission Spectroscopy study <i>Milan Radovic</i> |

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| 17:30 | 116 | Search for spontaneous magnetism below the surface of (110)-oriented YBCO superconducting films using LE- μ SR <i>Hassan Saadaoui</i> |
| 17:45 | 117 | Ultrafast Enhancement of Ferromagnetism via Photoexcited Carriers in EuO <i>Masakazu Matsubara</i> |
| 18:00 | 118 | Coherent control of femtosecond magnetization dynamics by a strong THz pulse <i>Christoph Hauri</i> |
| 18:15 | 119 | Ultrafast magnetism seen by time and spin resolved photoemission at FLASH <i>Andreas Fognini</i> |
| 18:30 | | Postersession and Apéro |
| 20:15 | | Grillparty |

Friday, 22.06.2012, HCI J 7

| Time | ID | NANOWIRES AND NANOPARTICLES <i>Chair: Carlos Vaz, PSI Villigen</i> |
|-------|-----|---|
| 11:00 | 121 | Static and dynamic properties of Single-Chain Magnets with broad domain walls <i>Alessandro Vindigni</i> |
| 11:15 | 122 | Thermal fluctuations and domain walls in ultra-thin magnetic nanowires <i>Thomas Michaelis</i> |
| 11:30 | 123 | Searching for magnetic structural excitations at the nano-scale <i>Peter Derlet</i> |
| 11:45 | 124 | Domain Walls in Structured Ferromagnetic Nanowires <i>Vahe Tshitoyan</i> |
| 12:00 | 125 | Temperature-dependent magnetization of individual iron nanoparticles studied with X-ray Photoemission electron microscopy <i>Ana Balan</i> |
| 12:15 | | END, Postersession (continued), Lunchbuffet |

| ID | MAGNETISM AT INTERFACES POSTER |
|-----|---|
| 131 | Use of a Landau-Heisenberg Hamiltonian in modelling the FeRh System <i>Peter Derlet</i> |
| 132 | Magnetization dynamics of GdFeCo nanostructures revealed with PEEM <i>Souliman el Moussaoui</i> |
| 133 | Coupled vortex pairs in magnetic multilayer elements <i>Christoph Quitmann</i> |
| 134 | Ground state ordering of artificial spin ice <i>Alan Farhan</i> |
| 135 | Domain pattern breakup in mesoscopic structures studied with x-ray microscopy <i>Stephanie Stevenson</i> |
| 136 | Ultrafast laser induced spin reorientation in the Co/SmFeO ₃ heterostructure <i>Armin Kleibert</i> |
| 137 | Studying the interfacial magnetism of $\text{LaNiO}_3/\text{LaMnO}_3$ superlattices with x-ray magnetic circular dichroism <i>Cinthia Piamonteze</i> |
| 138 | Size-dependent magnetic properties of individual iron nanoparticles studied at room temperature <i>Ana Balan</i> |
| 139 | Luminescence-based scanning x-ray transmission microscopy <i>Carlos Vaz</i> |

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| 140 | Enhancement of spin fluctuations of TbPc ₂ single molecule magnets in thin films <i>Andrea Hofmann</i> |
| 141 | Electric field control of magnetism in epitaxial Pd thin films <i>Jakoba Heidler</i> |
| 142 | Radiation-induced elemental magnetic changes in Fe-Cr alloys using XMCD technique <i>Andi Idhil</i> |
| 143 | Impurity Band Responsible for Ferromagnetism in Magnetic Semiconductor (Ga,Mn)As <i>Masaki Kobayashi</i> |
| 144 | Digging up Bulk Band Dispersion behind Passivation Layer <i>Masaki Kobayashi</i> |
| 145 | Three-Dimensional Fermi Surface of Iron-Pnictide Superconductor BKFA <i>Masaki Kobayashi</i> |

2 Applied Physics
+
Atomic Physics and Quantum Optics

NOTE:
THE ATOMIC PHYSICS AND QUANTUM OPTICS SESSION
CONTAINS ONLY POSTER PRESENTATIONS.

Friday, 22.06.2012, HCI J 6

| Time | ID | APPLIED PHYSICS I <i>Chair: Ivo Furno, CRPP-EPFL</i> |
|-------|-----|---|
| 11:00 | 201 | Vector Spherical Harmonics for active magnetic field compensation <i>Grzegorz Wyszynski</i> |
| 11:15 | 202 | Handling wide dynamic PMT signals with high precision in ground-based gamma-ray detectors <i>Arno Gadola</i> |
| 11:30 | 203 | A new internal field mapping device for the nEDM experiment <i>Dieter Ries</i> |
| 11:45 | 204 | High brilliance electron beam extraction from metallic microstructured photocathode <i>Ardana Fernando</i> |
| 12:00 | | Postersession (continued), Lunchbuffet |
| | | APPLIED PHYSICS II <i>Chair: NN</i> |
| 13:30 | 211 | Cocaine Detection in Saliva with Attenuated Total Reflection (ATR) Spectroscopy <i>Kerstin Hans</i> |
| 13:45 | 212 | Sensitive detection of cocaine in a liquid solvent with a quantum cascade laser <i>Michele Gianella</i> |
| 14:00 | 213 | Mid-infrared fiber-coupled photoacoustic sensor for the detection of glucose in biological samples <i>Jonas Kottmann</i> |
| 14:15 | 214 | Tracking of Murine Cardiac Stem Cells by Harmonic Nanoparticles <i>Thibaud Magouroux</i> |
| 14:30 | 215 | Analysis of Human Tone-Burst-Evoked Otoacoustic Emissions <i>Reinhart Frosch</i> |
| 14:45 | 216 | High power SESAM modelocked thin disk lasers: access to sub-100 fs pulses and first CEO beat frequency detection <i>Cinia Schriber</i> |

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|-------|-----|---|
| 15:00 | 217 | Enhancing the Performance of Solid State Organic Solar Cells by Self-assembled Monolayer Technique <i>Ali Kemal Havare</i> |
| 15:15 | 218 | Wave Propagation in Elastic and Thermoelastic Materials <i>Mario Leindl</i> |
| 15:30 | | Coffee Break |
| | | APPLIED PHYSICS III <i>Chair: NN</i> |
| 16:00 | 221 | Highly efficient Cu(In,Ga)Se ₂ solar cells grown on flexible polymer films <i>Adrian Chirilă (i)</i> |
| 16:30 | 222 | Dynamic nuclear polarization at moderate magnetic fields and temperature using photo-excited triplet states of aromatic molecules <i>Tim Rolf Eichhorn</i> |
| 16:45 | 223 | Dynamical study of electron pump based on self-assembled quantum dots <i>Giancarlo Cerulo</i> |
| 17:00 | 224 | DAST/SiO ₂ multilayer structure for efficient generation of 6 THz single-cycle pulses via cascaded optical rectification <i>Andrey Stepanov</i> |
| 17:15 | 225 | Laser induced magnetization reversal in GdFeCo nanostructures <i>Michele Buzzi</i> |
| 17:30 | 226 | Electrochemical deposition of photoconductive silicon based films using organic solvents <i>Agata Krywko-Cendrowska</i> |
| 17:45 | | END |

| ID | APPLIED PHYSICS POSTER |
|-----|--|
| 241 | Optical position feedback and closed loop control for electrostatically driven MOEMS mirrors <i>Andreas Tortschanoff</i> |
| 242 | Structural and piezoelectric investigation of BaTiO ₃ thin films on Si <i>Marilyne Sousa</i> |
| 243 | Strain effects on the properties of III-V MOSFETs <i>Pirmin Weigele</i> |
| 244 | Physical properties of ZnSe/SnO ₂ /glass films: Annealing (Ar atmosphere) temperature effects <i>Hulya Metin</i> |
| 245 | Structural and Electrical properties of Inkjet Printed CdS Thin Films <i>Hulya Metin</i> |
| 246 | Characterization of Inkjet Printed CdTe Thin Film <i>Hulya Metin</i> |
| 247 | Electrical Properties and Crystallographic Properties of Ternary Ho ₂ O ₃ and Eu ₂ O ₃ Doped Bi ₂ O ₃ Polymorphs <i>Hulya Metin</i> |
| 248 | Electrical Properties And Crystallographic Characterisation of (Bi ₂ O ₃) _{1-x-y} (Ho ₂ O ₃) _x and (Tm ₂ O ₃) _y System <i>Hulya Metin</i> |
| 249 | Surface morphology and Thermoluminescence of CBD grown ZnSe Films <i>Selma Erat</i> |
| 250 | Scattered light fluorescence microscopy in three dimensions <i>Giulia Ghielmetti</i> |
| 251 | Sensitivity of RADFETs with various gate oxide thicknesses <i>Goran Ristic</i> |

| ID | ATOMIC PHYSICS AND QUANTUM OPTICS POSTER |
|-----|---|
| 281 | Spectral properties of mid-infrared quantum cascade lasers <i>Lionel Tombez</i> |
| 282 | Simple approximate relation between laser frequency noise and linewidth: experimental validation <i>Nikola Bucalovic</i> |
| 283 | External cavity tuning of broadband QCLs at 3.3 μm and 8 μm <i>Sabine Riedi</i> |
| 284 | Ground state Hanle effect based on atomic alignment: theory and experiment. <i>Evelina Breschi</i> |
| 285 | Study of phase gradients in the Swiss continuous atomic fountain frequency standard <i>Laurent Devenoges</i> |
| 286 | Femtosecond gigahertz diode-pumped solid-state laser for frequency comb generation <i>Alexander Klenner</i> |
| 287 | Ultrafast optically pumped VECSELS and MIXSELS <i>Mario Mangold</i> |
| 288 | Mid-IR Broadband Quantum Cascade Laser Frequency-Comb <i>Andreas Hugi</i> |
| 289 | Single-cycle high-power THz pulses above 1 MV/cm <i>Carlo Vicario</i> |

3 Nuclear, Particle- and Astrophysics

Thursday, 21.06.2012, HCI J 3

| Time | ID | TASK I: NEUTRINOS, ASTROPARTICLE PHYSICS Chair: Martin Pohl, Uni Genève |
|-------|-----|--|
| 13:30 | 301 | Sterile neutrinos: dark matter, baryogenesis, magnetic fields and more... <i>Oleg Ruchayskiy</i> |
| 13:45 | 302 | Dark Matter search with the XENON100 experiment <i>Marc Schumann</i> |
| 14:00 | 303 | The Argon Dark Matter Experiment <i>Ursina Degunda</i> |
| 14:15 | 304 | Measurements of the low-energy response of liquid xenon <i>Aaron Manalaysay</i> |
| 14:30 | 305 | Towards a large underground liquid argon observatory for neutrino physics and proton decay <i>Alessandro Curioni</i> |
| 14:45 | 306 | Calibration of the AMS-02 Silicon Tracker <i>Pierre Saouter</i> |
| 15:00 | 307 | POLAR: a Gamma-Ray Burst Polarimeter in Space <i>Silvio Orsi</i> |
| 15:15 | 308 | The FACT telescope - overview and status <i>Patrick Vogler</i> |
| 15:30 | | Coffee Break |
| | | TASK II: PSI PHYSICS I AND LHC PHYSICS I Chair: Klaus Kirch, ETH Zürich |
| 16:00 | 311 | New and final results of the MuCap experiment <i>Claude Petitjean</i> |
| 16:30 | 312 | Measurement of the Positive Pion Lifetime, τ_{π^+} , with the FAST Detector at the Paul Scherrer Institute <i>Gaetano Barone</i> |
| 16:45 | 313 | Muonium emission into vacuum from mesoporous thin films at cryogenic temperatures <i>Kim Siang Khaw</i> |

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|-------|-----|---|
| 17:00 | 314 | Radiation hard studies of diamond strip trackers <i>Felix Bachmair</i> |
| 17:15 | 315 | Search for the Higgs boson in the diphoton decay channel at CMS <i>Marco Peruzzi</i> |
| 17:30 | 316 | Measurements of the electron and muon inclusive cross-sections in proton-proton collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector <i>Maria Clemencia Mora Herrera</i> |
| 17:45 | 317 | HammerCloud: distributed computing monitoring for ATLAS and LHC experiments <i>Gianfranco Sciacca</i> |
| 18:00 | 318 | Search for supersymmetry in hadronic final states with MT2 with the CMS detector <i>Hannsjörg Weber</i> |
| 18:15 | 319 | Angular correlation between B-hadrons produced in association with a Z boson at the CMS experiment <i>Carlotta Favaro</i> |
| 18:30 | | Postersession and Apéro |
| 20:15 | | Grillparty |

Friday, 22.06.2012, HCI J 3

| Time | ID | TASK III: LHC PHYSICS II Chair: Teresa Montaruli, Uni Genève |
|-------|-----|---|
| 11:00 | 321 | Search for the Standard Model Higgs Boson decaying to Bottom Quarks <i>Pierluigi Bortignon</i> |
| 11:15 | 322 | New Optical receiver modules for the insertable B-Layer at the ATLAS project. <i>Basil Schneider</i> |
| 11:30 | 323 | Improvements in the search for a Higgs boson decaying into bottom quarks <i>Philipp Eller</i> |
| 11:45 | 324 | B-baryon studies at the CMS Experiment <i>Mirena Ivova</i> |
| 12:00 | | Postersession (continued), Lunchbuffet |
| | | TASK IV: LHC PHYSICS III Chair: Antonio Ereditato, Uni Bern |
| 13:30 | 331 | Search for Supersymmetry in Events with a Z Boson, Jets and Missing Energy <i>Marco - Andrea Buchmann</i> |
| 13:45 | 332 | Searches for the 4 th Generation top-like Quark <i>Snezana Nektarijevic</i> |
| 14:00 | 333 | Top analysis from the bottom: Jet performance issues in top quark measurements by the ATLAS experiment at the LHC. <i>Caterina Doglioni</i> |
| 14:15 | 334 | Jet angular resolution <i>Francesco Guescini</i> |
| 14:30 | 335 | Measurement of the Zero-Crossing Point of the forward - backward Asymmetry of $B^0 \rightarrow K^{*0} \mu^+ \mu^-$ <i>Marco Tresch</i> |
| 14:45 | 336 | Measurement of lifetime difference $\Delta\Gamma_s$ in the decay $B_s^0 \rightarrow (J/\psi)\phi \rightarrow (\mu^+ \mu^-) K^+ K^-$ <i>Barbara Millan Mejias</i> |
| 15:00 | 337 | A data driven QCD-multijet background estimate for top physics with the ATLAS detector <i>Kilian Rosbach</i> |
| 15:15 | 338 | New searches for magnetic monopoles <i>Philippe Mermoud</i> |
| 15:30 | | Coffee Break |

| Time | ID | TASK V: LHC PHYSICS IV AND PSI PHYSICS II <i>Chair: Giuseppe Iacobucci, Uni Genève</i> |
|-------|-----|---|
| 16:00 | 341 | Search for a neutron electric dipole moment at PSI <i>Jochen Krempel</i> |
| 16:15 | 342 | Systematic effects in the nEDM experiment at PSI <i>Johannes Zenner</i> |
| 16:30 | 343 | Improvements of the Hg cohabiting magnetometer for the nEDM experiment at PSI <i>Martin Fertl</i> |
| 16:45 | 344 | Results of the active compensation of the magnetic field surrounding the nEDM apparatus at PSI <i>Beatrice Franke</i> |
| 17:00 | 345 | Simultaneous Heavy Flavor and Top (SHyFT) Cross Section Measurement <i>Lukas Bäni</i> |
| 17:15 | 346 | Performance validation of the CMS digital readout chip with x-rays for the Phase I Pixel Upgrade <i>Marco Rossini</i> |
| 17:30 | 347 | Search for the Rare Decays $B_s^0 \rightarrow \mu^+ \mu^-$ and $B^0 \rightarrow \mu^+ \mu^-$ at LHCb <i>Christian Elsasser</i> |
| 17:45 | 348 | Search for (Higgs-like) bosons decaying into long-lived exotic particles <i>Julien Rouvinet</i> |
| 18:00 | 349 | Tagged time-dependent angular analysis of $B_s^0 \rightarrow J/\psi \phi$ decays at LHCb <i>Frédéric Dupertuis</i> |
| 18:15 | 350 | b-baryon results at LHCb <i>Raphael Märki</i> |
| 18:30 | | END |

| ID | NUCLEAR, PARTICLE- AND ASTROPHYSICS POSTER |
|-----|--|
| 361 | LOFT - the Large Observatory for X-ray Timing <i>Enrico Bozzo</i> |
| 362 | The search for neutrinoless double beta decay with the GERDA experiment <i>Giovanni Benato</i> |
| 363 | Search for Physics Beyond the Standard Model in Events with equally charged Leptons <i>Marc Dünser</i> |
| 364 | Qualification procedures of the CMS digital readout chip for the Pixel Upgrade Phase I <i>Philipp Eller</i> cancelled |
| 365 | Longitudinal spatial compression of a slow muon beam <i>Yu Bao</i> |
| 366 | Optical cesium magnetometers for the PSI neutron electric dipole moment experiment <i>Malgorzata Kasprzak</i> |
| 367 | Search for Supersymmetry in multilepton final states <i>Tobias Kruker</i> cancelled |
| 368 | Measurement of Pion and Kaon production cross sections with NA61/SHINE for T2K <i>Silvestro di Luise</i> |
| 369 | Parametric r-process studies in supernova shocks <i>Marius Eichler</i> |
| 370 | Die Grundzüge der Weltpotentialtheorie <i>Peter Wolff</i> |
| 371 | Das Lehrplakat zur Weltpotentialtheorie (WPT) <i>Peter Wolff</i> |
| 372 | Towards extraction of a slow μ^+ beam from a helium target into vacuum <i>Katarina Kwuida-Manthey</i> |

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| 373 | Search for a light Higgs boson in the 2l+2tau final state with the CMS experiment <i>Mauro Verzetti</i> |
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4 Theoretical Physics

Thursday, 21.06.2012, HCI J 4

| Time | ID | THEORETICAL PHYSICS I <i>Chair: G. M. Graf, ETH Zürich</i> |
|-------|-----|---|
| 13:30 | 401 | Electron waiting time distributions in electrical conductors <i>Markus Büttiker (i)</i> |
| 14:00 | 402 | Gravitational wave detection from space <i>Philippe Jetzer (i)</i> |
| 14:30 | | |
| 15:30 | | Coffee Break |
| | | THEORETICAL PHYSICS II <i>Chair: G. M. Graf, ETH Zürich</i> |
| 16:00 | 403 | A new algorithm to compute one-loop scattering amplitudes <i>Fabio Cascioli</i> |
| 16:15 | 404 | Application of the Symbol Formalism to the Computation of Scattering Amplitudes in Quantum Field Theory <i>Erich Weihs</i> |
| 16:30 | 405 | Polycrystalline Shape Memory Alloys: Constitutive Modelling by the BSM (Block-Spin-Method) <i>Eduard Oberaigner</i> |
| 16:45 | 406 | One-dimensional fermionic systems beyond Luttinger liquid theory <i>Thomas Schmidt</i> |
| 17:00 | 407 | Stability of topological quantum computing schemes to bit-flip and measurement errors <i>Ruben S. Andrist</i> |
| 17:15 | 408 | Euclid and the quest for the Dark Energy <i>Martin Kunz</i> |
| 17:30 | | |
| 18:30 | | Postersession and Apéro |
| 20:15 | | Grillparty |

Friday, 22.06.2012, HCI J 4

| Time | ID | THEORETICAL PHYSICS III <i>Chair: G. M. Graf, ETH Zürich</i> |
|-------|-----|---|
| 11:00 | 411 | The quantum marginal problem <i>Matthias Christandl (i)</i> |
| 11:30 | 412 | What can we learn from the cosmological matter distribution? <i>Ruth Durrer (i)</i> |
| 12:00 | | Postersession (continued), Lunchbuffet |
| | | THEORETICAL PHYSICS IV <i>Chair: G. M. Graf, ETH Zürich</i> |
| 13:30 | 413 | Cavity optomechanics in the single-photon strong-coupling regime <i>Andreas Nunnenkamp (i)</i> |
| 14:00 | 414 | Controlling electronic interactions by light <i>Philipp Werner (i)</i> |

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|-------|-----|---|
| 14:30 | 415 | Hybridization of wave functions in one-dimensional Anderson localization <i>Dmitri Ivanov (i)</i> |
| 15:00 | | |
| 15:30 | | Coffee Break |
| | | THEORETICAL PHYSICS V <i>Chair: G. M. Graf, ETH Zürich</i> |
| 16:00 | 416 | Dynamics of the rotated Dicke model <i>Michael Tomka</i> |
| 16:15 | 417 | Bethe Ansatz and Ordinary Differential Equation Correspondence for Degenerate Gaudin Models <i>Omar El Araby</i> |
| 16:30 | 418 | Eigenvector statistics in a perturbed weakly-confined random matrix ensemble <i>Matous Ringel</i> |
| 16:45 | 419 | Symbolic Computation in Lagrangian Mechanics <i>Mario Leindl</i> |
| 17:00 | | END |

5 NCCR MaNEP

Thursday, 21.06.2012, HPH G 1

| Time | ID | MaNEP I <i>Chair: Dirk van der Marel, Uni Genève</i> |
|-------|-----|--|
| 13:30 | 501 | Competition between charge order and superconductivity in $\text{YBa}_2\text{Cu}_3\text{O}_y$ <i>Marc-Henri Julien (i)</i> |
| 14:00 | 502 | Scanning Tunneling Spectroscopy on $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ revisited <i>Jens Bruér</i> |
| 14:15 | 503 | Magnetic-field tuned anisotropy in superconducting $\text{Rb}_x\text{Fe}_{2-y}\text{Se}_2$ <i>Saskia Bosma</i> |
| 14:30 | 504 | Universal scaling collapse of the dynamic relaxation rate in underdoped high T_c cuprates <i>Seyed Iman Mirzaei</i> |
| 14:45 | 505 | Structural and Magnetic Properties of the Parent Compound $\text{T}'\text{-La}_2\text{CuO}_4$ of Electron-Doped Cuprates <i>Gwendolyne Pascua</i> |
| 15:00 | 506 | Field effect experiments on cuprates and related materials <i>Guy Dubuis</i> |
| 15:15 | 507 | Prospects for improving the superconducting properties of MgB_2 and Nb_3Sn wires <i>Carmine Senatore</i> |
| 15:30 | | Coffee Break |
| | | MaNEP II <i>Chair: Christoph Renner, Uni Genève</i> |
| 16:00 | 511 | From surface to interface physics: High-energy photoemission spectroscopy of oxide heterostructures <i>Ralph Claessen (i)</i> |
| 16:30 | 512 | Theory of High-Temperature Multiferroicity in CuO <i>Naemi Leo</i> |
| 16:45 | 513 | Radio-frequency spectroscopy of a weakly attractive Fermi gas <i>Christophe Berthod</i> |
| 17:00 | 514 | Multiscaling analysis of ferroelectric domain wall roughness <i>Jill Guyonnet</i> |

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| 17:15 | 515 | Fermi Surface Dependence of the Charge Transport and Thermoelectric Effect in Two-Dimensional Metals <i>Jonathan M. Buhmann</i> |
| 17:30 | 516 | Magnetotransport properties of $\text{LaAlO}_3/\text{SrTiO}_3$ interfaces <i>Alexandre Fête</i> |
| 17:45 | 517 | Exchange Bias in LaNiO_3 -based heterostructures <i>Pavlo Zubko</i> |
| 18:00 | 518 | Correlated transition metal oxides for thermoelectrics <i>Sascha Populoh</i> |
| 18:15 | 519 | Tunable conductivity threshold at polar oxide interfaces: implications for understanding its origin <i>Mathilde L. Reinle-Schmitt</i> |
| 18:30 | | Postersession and Apéro |
| 20:15 | | Grillparty |

Friday, 22.06.2012, HPH G 1

| Time | ID | MaNEP III <i>Chair: Alberto Morpurgo, Uni Genève</i> |
|-------|-----|---|
| 11:00 | 521 | Magnetoplasmons and Faraday rotation in graphene <i>A. B. Kuzmenko (i)</i> |
| 11:30 | 522 | Engineering Dirac points with ultracold fermions in a tunable optical lattice <i>Daniel Greif</i> |
| 11:45 | 523 | Transport through graphene on SrTiO_3 <i>Nuno Couto</i> |
| 12:00 | | Postersession (continued), Lunchbuffet |
| | | MaNEP IV <i>Chair: Frédéric Mila, EPFL</i> |
| 13:30 | 531 | Studying the physics of disordered bosons with disordered magnetic insulators <i>Tommaso Roscilde (i)</i> |
| 14:00 | 532 | Observation of a quantum critical point in the heavy fermion antiferromagnet CeRhSi_3 <i>Nikola Egetenmeyer</i> |
| 14:15 | 533 | Antiferromagnetic spin-S chains with exactly dimerized ground states <i>Frédéric Michaud</i> |
| 14:30 | 534 | Diagrammatic Monte Carlo for the Hubbard model <i>Jan Gukelberger</i> |
| 14:45 | 535 | Static and dynamic properties of a strong-leg spin ladder <i>David Schmidiger</i> |
| 15:00 | 536 | Zero field splitting in the two-dimensional quantum spin liquid PHCC <i>Maximilian Goldmann</i> |
| 15:15 | 537 | Controlled flux penetration in platelet superconductors <i>Roland Willa</i> |
| 15:30 | | Coffee Break |
| | | MaNEP V <i>Chair: Andrey Zheludev, ETH Zürich</i> |
| 16:00 | 541 | Spin-Orbital Separation in a Cuprate Spin Chain and Studies of Fe-based Superconductors with Resonant Inelastic X-ray Scattering <i>Thorsten Schmitt (i)</i> |
| 16:30 | 542 | Mapping of electron-hole excitations in a charge density wave system with Resonant Inelastic X-ray Scattering <i>Claude Monney</i> |

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| 16:45 | 543 | Magnetism and orbital physics of the Mott insulator LuVO_3 <i>Markos Skoulatos</i> |
| 17:00 | 544 | Imprinting magnetic information in manganites with X-rays <i>Marios Garganourakis</i> |
| 17:15 | | END |

| ID | MANEP POSTER | |
|------|---|--|
| 5001 | Soft x-ray photoemission measurements on $\text{LaAlO}_3/\text{SrTiO}_3$ and $(\text{LaAlO}_3)_x(\text{SrTiO}_3)_{1-x}/\text{SrTiO}_3$ heterostructures <i>Claudia Cancellieri</i> | |
| 5002 | Bond disorder in $\text{Cu}(\text{quinoxaline})\text{X}_2$, $\text{X} = \text{Cl}, \text{Br}$ <i>Wolfram E. A. Lorenz</i> | |
| 5003 | Asymmetric Josephson effect at the interface of non-centrosymmetric superconductors <i>Ludwig Klam</i> | |
| 5004 | Electron-hole instability in TiSe_2 <i>Gael Monney</i> | |
| 5005 | μSR investigation of magnetism and magnetoelectric coupling in Cu_2OSeO_3 <i>Aleander Maisuradze</i> | |
| 5006 | Multiscaling analysis of intrinsic domain walls in epitaxial BiFeO_3 thin films <i>Benedikt Ziegler</i> | |
| 5007 | Phase diagram of epitaxial BiFeO_3 - LaFeO_3 Superlattices <i>Gijsbert Rispens</i> | |
| 5008 | Multiplet calculations and X-ray spectra simulations in low symmetry compounds. <i>Anne-Christine Uldry</i> | |
| 5009 | Field driven ordering in a frustrated spin ladder with bond randomness <i>Erik Wulf</i> | |
| 5010 | Thermoelectric effect in one-dimensional metallic systems - a model study on the impact of disorder and phonons <i>Daniel Müller</i> | |
| 5011 | Graphene on Ruthenium: Four hills <i>Irakli Kalichava</i> | |
| 5012 | Nanoscale PFM imaging of intrinsic domains in PbTiO_3 ultrathin films. <i>Céline Lichtensteiger</i> | |
| 5013 | Pressure dependence of optical excitations in tetragonal Sr_2VO_4 <i>Michael Tran</i> | |
| 5014 | Doping and temperature dependence of STS spectra in $\text{Bi}_2\text{Sr}_2\text{Ca}_1\text{Cu}_2\text{O}_{8+\delta}$ <i>Thomas B. Amundsen</i> | |
| 5015 | Scanning tunnelling microscopy/spectroscopy study of $\text{La}_{2/3}\text{Ca}_{1/3}\text{MnO}_3$ thin films <i>Zoran Ristic</i> | |
| 5016 | First direct observation of the Van Hove Singularity in the tunnelling spectra of cuprates <i>Alexandre Piriou</i> | |
| 5017 | Effect of bond disorder on weakly-coupled spin-1/2 antiferromagnetic Heisenberg chains <i>Matthias Thede</i> | |
| 5018 | CVD graphene: effects of the environment and annealing on its doping level and the charge carriers mobility <i>Christophe Caillier</i> | |
| 5019 | Nearest-neighbor spin correlations and doublon production rate by lattice modulation for spin-1/2 fermionic atoms <i>Akiyuki Tokuno</i> | |
| 5020 | New experimental setup for thermal conductivity measurements: stability against quench in industrial Nb_3Sn wires fabricated by various techniques <i>Marco Bonura</i> | |

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| 5021 | Temperature and time scaling of the peak-effect vortex configuration in $\text{FeTe}_{0.7}\text{Se}_{0.3}$ <i>Marco Bonura</i> |
| 5022 | Physical properties of TiSe_2 crystals grown by vapour transport technique. <i>Alberto Ubal dini</i> |
| 5023 | Bulk insulating states in the $\text{Bi}_2(\text{Se}_{1-x}\text{Te}_x)_3$ solid solution. <i>Alberto Ubal dini</i> |
| 5024 | Optical properties of $\text{Bi}_2\text{Te}_2\text{Se}$ <i>Ana Akrap</i> |
| 5025 | Interactions between carbon nanotubes and epitaxial $\text{Pb}(\text{Zr}_{0.2}\text{Ti}_{0.8})\text{O}_3$ thin films <i>Cédric Blaser</i> |
| 5026 | Humidity Sensing Properties of Different Bismuth Phosphate Types <i>Min Sheng</i> |
| 5027 | Optical Measurements of Neodymium and Samarium Nickelates <i>Julien Ruppen</i> |
| 5028 | Structural study of LaNiO_3 heterostructures at the metal-insulator transition <i>Steven J. Leake</i> |
| 5029 | Effect of phase separation and vacancy order on the superconducting and magnetic properties of $\text{Rb}_x\text{Fe}_{2-y}\text{Se}_2$ <i>Steven Weyeneth</i> |
| 5030 | The effect of nitrogen incorporation on the thermoelectric properties of EuTiO_3 and $\text{EuTi}_{0.98}\text{Nb}_{0.02}\text{O}_3$ <i>Leyre Sagarna</i> |
| 5031 | Semiclassical theory of the 1/2 magnetization plateau of the J_1 - J_2 model on the square lattice <i>Tommaso Coletta</i> |
| 5032 | Infrared Spectroscopy on Gated Tri-layer Graphene <i>Nicolas Ubrig</i> |
| 5033 | Hysteresis in the temperature dependent electronic structure of NdNiO_3 : A photoemission study <i>Zuzana Vydrova</i> |
| 5034 | Mixed crystals from the quantum magnets $\text{Ba}_3\text{Cr}_2\text{O}_8$ and $\text{Sr}_3\text{Cr}_2\text{O}_8$ <i>Henrik Grundmann</i> |
| 5035 | Influence of different synthesis methods on thermoelectric properties of $\text{Ti}_{0.33}\text{Zr}_{0.33}\text{Hf}_{0.33}\text{NiSn}$ half-Heusler compound with emphasis on thermal conductivity measurements <i>Krzysztof Galazka</i> |
| 5036 | Self-consistent structure of a domain wall in Sr_2RuO_4 <i>Adrien Bouhon</i> |
| 5037 | Realization of a thermal LC-circuit <i>Olaf Bossen</i> |
| 5038 | Competition between columnar and plaquette order in the fully frustrated transverse field Ising model on the square lattice. <i>Sandro Wenzel</i> |
| 5039 | Hybridization gap and anisotropic far-infrared optical conductivity of URu_2Si_2 <i>Julien Levallois</i> |
| 5040 | The influence of defects in the quasi-2D CDW compound 1T-TiSe_2 <i>Clément Didiot</i> |
| 5041 | A Thermoelectric Study on the Electron Gas at the $\text{LaAlO}_3/\text{SrTiO}_3$ Interface <i>Danfeng Li</i> |
| 5042 | Disorder in a quasi-two-dimensional quantum spin liquid <i>Dan Huvonen</i> |
| 5043 | Resonant inelastic x-ray scattering on a quasi-one-dimensional multiferroic cuprate: probing the local magnetic correlations <i>Claude Monney</i> |

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| 5044 | Critical current of Nb ₃ Sn wires under quasi-hydrostatic radial pressure <i>Giorgio Mondonico</i> |
| 5045 | Phase diagram of the EuFe ₂ As ₂ system with respect to chemical and hydrostatic pressure <i>Zurab Guguchia</i> |
| 5046 | On Electronic Properties and Superconductivity of Strained High T _c Films <i>Nathaniel Wooding</i> |
| 5047 | Effects of bond disorder in the quantum spin ladder (C ₅ H ₁₂ N) ₂ CuBr _{4(1-x)} Cl _{4x} <i>Simon Ward</i> |
| 5048 | Nanoscale studies of electrical conduction in ferroelectric domain walls with insulator coated carbon nanotube tips <i>Yuliya Lisunova</i> |
| 5049 | Influence of the Internal Polarizability on the Charge Transport Properties in N-Type Organic Single Crystal Field-Effect Transistors <i>Nikolas Minder</i> |
| 5050 | Control of the magnetic volume fraction in Co-doped TiO ₂ films via oxygen vacancies <i>Hassan Saadaoui</i> |
| 5051 | Structural and electrical properties of BaTiO ₃ thin-film capacitors <i>Stephanie Fernandez-Pena</i> |
| 5052 | One-dimensional nanolines and single atom chains on Si(001) <i>François Bianco</i> |
| 5053 | Frustration and disorder in a 1D spin ladder at high magnetic fields <i>Toni Shiroka</i> |
| 5054 | Tuning superconductivity and magnetism in Fe _y Se _{1-x} Te _x <i>Markus Bendele</i> |
| 5055 | Superconductivity Driven Imbalance of the Magnetic Domain Population in CeCoIn₅ Simon Gerber <i>cancelled</i> |
| 5056 | Ultrafast X-Ray Nanowire Single-Photon Detectors and Their Energy-Dependent Response <i>Kevin Inderbitzin</i> |
| 5057 | Magnetic phase transitions in PbB _x B' _{1-x} O ₃ (B = Fe, and B' = Nb, Ta) <i>Shravani Chillal</i> |
| 5058 | Differences in Chiral Expression: Racemic and Enantiopure Heptahelicenes on Various Metal Surfaces <i>Johannes Seibel</i> |
| 5059 | The Luttinger liquid theory of molybdenum purple bronze <i>Piotr Chudzinski</i> |
| 5060 | Temperature-Dependence of Detection Efficiency in NbN and TaN SNSPD <i>Andreas Engel</i> |
| 5061 | Electronic Properties of Single-Crystal Organic Charge-Transfer Interfaces probed using Schottky-Gated Heterostructures <i>Ignacio Gutierrez Lezama</i> |
| 5062 | Crossover from Coulomb blockade to quantum-Hall effect in suspended graphene nanoribbon <i>DongKeun Ki</i> |
| 5063 | Doping dependence of the pseudogap phase in La-based cuprates <i>Christian Matt</i> |
| 5064 | Soft-X-Ray ARPES: From Three-Dimensional Materials to Heterostructures <i>Vladimir N. Strocov</i> |
| 5065 | Conduction at domain walls in insulating Pb(Zr _{0.2} Ti _{0.8})O ₃ <i>Iaroslav Gaponenko</i> |

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| 5066 | Fluctuations of one-dimensional interface in the directed polymer formulation: role of a finite interface width <i>Elisabeth Agoritsas</i> |
| 5067 | Local study of the electronic and structural properties of colloidal semiconductor nanocrystals <i>Maria Longobardi</i> |
| 5068 | Pressure dependence of the penetration depth in CeCoIn ₅ studied by muon spin rotation <i>Ludovic Howald</i> |
| 5069 | Hexagonal InMnO ₃ - An Outsider Among The Family Of Multiferroic Hexagonal Manganites <i>Martin Lilienblum</i> |

6 NCCR Nano

I. NANOMECHANICS

Thursday, 21.06.2012, HCI G 3

| Time | ID | NANOMECHANICS Chair: Martino Poggio, Uni Basel |
|-------|-----|---|
| 13:30 | 601 | Coherent coupling of light and mechanical motion <i>Ewold Verhagen (i)</i> |
| 14:00 | 602 | Stable "ring-like" Ag clusters on Si(111)-(7×7): voltage dependency study of the scanning tunneling microscopy apparent topography <i>Nicolas Mariotti</i> |
| 14:15 | 603 | Detection of cantilever thermal motion and feedback cooling using a quantum point contact <i>Michele Montinaro</i> |
| 14:30 | 604 | Entering the nonlinear regime with mechanical resonators made from nanotubes and graphene <i>Alexander Eichler (i)</i> |
| 15:00 | 605 | The Lateral Resolution of the near-tip scanning electron microscopy. <i>Danilo Pescia</i> |
| 15:15 | 606 | Prospects and challenges for atomic force microscopy in molecular structure recognition <i>Bruno Schuler</i> |
| 15:30 | | Coffee Break |
| 16:00 | 607 | Non-contact friction measurements by means of Atomic Force Microscopy (AFM) operated in pendulum geometry <i>Marcin Kisiel (i)</i> |
| 16:30 | 608 | NanoXAS - Combining Scanning Probe and X-Ray Microscopy for Nanoanalytics <i>Nicolas Pilet</i> |
| 16:45 | | END |
| 18:30 | | Postersession and Apéro |
| 20:15 | | Grillparty |

II. NANOPHOTONICS & VARIA

Thursday, 21.06.2012, HCI G 7

| Time | ID | NANOPHOTONICS I Chair: Olivier J. F. Martin, EPFL |
|-------|-----|---|
| 13:30 | 621 | Towards time-resolved 3D imaging and probing with Photonic Force Microspectroscopy <i>Sylvia Jeney (i)</i> |
| 14:00 | 622 | Study of the Optical Transport within Plasmonic Nano- and Sub Nano-metric Junctions <i>Banafsheh Abasahl</i> |

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|-------|-----|---|
| 14:15 | 623 | Nanoscale Chemical Analysis by Tip-Enhanced Raman Spectroscopy: Recent Developments and Applications <i>Thomas Schmid (i)</i> |
| 14:45 | 624 | Gold Photoluminescence in Nanoscale Antennas <i>Toni Fröhlich</i> |
| 15:00 | 625 | 3-Dimensional Computational Nano-Optics - With a Focus on Fabricated Structures <i>Benedikt Oswald (i)</i> |
| 15:30 | | Coffee Break |
| | | VARIOUS NANOTOPICS <i>Chair: Michel Calame, Uni Basel</i> |
| 16:00 | 631 | Imaging the charge distribution within a single molecule <i>Fabian Mohn (i)</i> |
| 16:30 | 632 | Chemical sensing with silicon nanowire field-effect transistors <i>Ralph Stoop</i> |
| 16:45 | 633 | Combining SFM & ToF-SIMS: a new route to access chemical information at the nanoscale <i>Laetitia Bernard</i> |
| 17:00 | 634 | Progress in electron beam generation for Near Field-Emission Scanning Electron Microscopy <i>Danilo Andrea Zanin</i> |
| 17:15 | 635 | New Developments in Near Field-Emission Scanning Electron Microscopy <i>Lorenzo G. De Pietro</i> |
| 17:30 | 636 | Electrostatic characterization of Near Field-Emission Scanning Electron Microscopy <i>Hugo Cabrera</i> |
| 17:45 | 637 | Resonances arising from hydrodynamic memory - The Color of Brownian motion <i>Matthias Grimm</i> |
| 18:00 | 638 | Graphane formation and patterning by pure hydrogen low temperature plasma exposure <i>Baran Eren</i> |
| 18:15 | | |
| 18:30 | | Postersession and Apéro |

Friday, 22.06.2012, HCI G 7

| Time | ID | NANOPHOTONICS II <i>Chair: Olivier J. F. Martin, EPFL</i> |
|-------|-----|--|
| 13:30 | 641 | Plasmonic Promises: Single Molecule Sensing, Electrochemistry, Nanowire Electronics, Strain Visualization, and Interferometry <i>Janos Vörös (i)</i> |
| 14:00 | 642 | Periodic nanogap arrays for surface enhanced spectroscopy: modeling and performance <i>Thomas Siegfried</i> |
| 14:15 | 643 | Targeting cells with gold nanoparticles <i>Sara Peeters (i)</i> |
| 14:45 | 644 | Electron emission from optically excited metallic nanotips <i>Anna Mustonen</i> |
| 15:00 | 645 | Charge Transport and Light Propagation Modeling in Organic Semiconductor Devices <i>Beat Ruhstaller (i)</i> |
| 15:30 | | END, Coffee Break |

III. NANOBIOPHYSICS

Friday, 22.06.2012, HCI J 7

| Time | ID | NANOBIOPHYSICS <i>Chair: Georg E. Fantner, EPFL</i> |
|-------|-----|--|
| 13:30 | 661 | Nanophotonics and Nanoelectronics Tools for Single Molecule Biophysics <i>Aleksandra Radenovic (i)</i> |
| 14:00 | 662 | Investigating Skin Cancer with Nanomechanical Biosensors <i>François Huber</i> |
| 14:15 | 663 | Optimization of DNA hybridization efficiency by pH-driven nanomechanical bending <i>Jiayun Zhang</i> |
| 14:30 | 664 | Study of DNA relaxation on mica using AFM with further automatic tracing <i>Andrey Mikhaylov</i> |
| 14:45 | 665 | Direct Visualization of Lipid Membrane Dynamics Using High-Speed Atomic Force Microscopy (HS-AFM) <i>Jonathan D. Adams</i> |
| 15:00 | 666 | Microfabricated Membrane Surface Stress Sensors for Medical Breath Testing <i>Hans Peter Lang</i> |
| 15:15 | | END |
| 15:30 | | Coffee Break |

| ID | NANO POSTER | |
|-----|---|----------------------------|
| 671 | Optomechanical Coupling of Ultracold Atoms and a Membrane Oscillator | <i>Maria Korppi</i> |
| 672 | Friction anisotropy investigations: Measurements on the anisotropic surface of an organic layer compound crystal | <i>Gregor Fessler</i> |
| 673 | Near Field-Emission Scanning Electron Microscopy | <i>Peter Thalmann</i> |
| 674 | Electron Beam Properties of Large Double Gate Field Emitter Arrays with an Optimized Collimation Gate Electrode Geometry | <i>Patrick Helfenstein</i> |
| 675 | Fabrication and characterization of tunable plasmonic nanostructures for biosensing | <i>Olivier Scholder</i> |
| 676 | Study of biomolecular interactions using photonic crystal surface waves (PC SW) optical sensor. | <i>Tatyana Karakouz</i> |

7 NCCR MUST

Friday, 22.06.2012, HPH G 2

| Time | ID | MUST I <i>Chair: Lukas Gallmann, ETH Zürich</i> |
|-------|-----|---|
| 11:00 | 701 | Probing electronic valence shell dynamics in molecules <i>Hans Jakob Wörner (i)</i> |
| 11:30 | 702 | Electron ionization times measured with the attoclock <i>Robert Boge</i> |
| 11:45 | 703 | Attosecond Time-Gated Absorption and Emission <i>Jens Herrmann</i> |

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| 12:00 | | Postersession (continued), Lunchbuffet Public Tutorial see p. 1 |
| | | MUST II <i>Chair: Thomas Feurer, Uni Bern</i> |
| 13:30 | 711 | Optimal Dynamic Discrimination of Free Amino Acids and Small Peptides <i>Jean-Pierre Wolf</i> |
| 13:45 | 712 | Dynamic probe concept for studying aggregation of organic dye molecules at liquid/liquid interfaces by femtosecond second harmonic generation technique <i>Marina Fedoseeva</i> |
| 14:00 | 713 | Breaking Down the Problem to Understand the Photophysics of Conjugated Polymers <i>Natalie Banerji</i> |
| 14:15 | 714 | Investigation of low frequency vibrations using dispersed femtosecond – DFWM <i>Gregor Knopp</i> |
| 14:30 | 715 | Multidimensional IR spectroscopy of water <i>Peter Hamm (i)</i> |
| 15:00 | 716 | Measuring nonadiabaticity of molecular quantum dynamics with quantum fidelity and with its efficient semiclassical approximation <i>Tomáš Zimmerman</i> |
| 15:15 | 717 | Perturbative Treatment of the Up-Conversion Detection of Pulse-shaped Entangled Photons and Applications <i>Christof Bernhard</i> |
| 15:30 | | Coffee Break |
| | | MUST III <i>Chair: Jürg Osterwalder, Uni Zürich</i> |
| 16:00 | 721 | High-harmonic generation from oriented OCS molecules <i>Peter Kraus</i> |
| 16:15 | 722 | A double-sided time-resolved VMI setup with high temporal resolution <i>Yuzhu Liu</i> |
| 16:30 | 723 | Femtosecond dynamics of atomic structure in solids <i>Steven L. Johnson (i)</i> |
| | | <i>Chair: Paul Beaud, PSI Villigen</i> |
| 17:00 | 724 | Femtosecond Transient Diffuse Reflectance for Dye-Sensitized Solar Cells <i>Elham Ghadiri</i> |
| 17:15 | 725 | π-Conjugated Donor-Acceptor Systems as Metal-Free Sensitizers for Dye-Sensitized Solar Cell Applications <i>Mateusz Wielopolski</i> |
| 17:30 | 726 | Probing interfacial electron transfer dynamics in the attosecond time domain <i>Luca Castiglioni</i> |
| 17:45 | 727 | Atomic motion of a coherent phonon observed in a charge and orbitally ordered manganite <i>Andrin Caviezel</i> |
| 18:00 | 728 | Electron dynamics in a quasi-1-dimensional topological metal: Bi(114) <i>Matthias Hengsberger</i> |
| 18:15 | 729 | Laser induced coherent structural dynamics of the Heusler alloy Ni₂MnGa <i>Simon O Mariager</i> |
| 18:30 | 730 | Non-retarded pairing interaction in a high-T_c cuprate from coherent charge fluctuation spectroscopy <i>Fabrizio Carbone (i)</i> |
| 19:00 | | END |

| ID | MUST POSTER |
|-----|---|
| 741 | Direct High Harmonics Pulse Shaping in the XUV <i>Jean-Pierre Wolf</i> |
| 742 | High-Power Mid-infrared Femtosecond Laser Source Based On Parametric Transfer <i>C. Heese</i> |
| 743 | Stereochemistry of C4 dicarboxylic acids on Cu(110) <i>Chrysanthi Karageorgaki</i> |
| 744 | Beating the efficiency of both quantum and classical simulations with semiclassics <i>Cesare Mollica</i> |
| 745 | Confocal fs-CARS measurement of nano-particles in epidirection <i>Gregor Knopp</i> |
| 746 | Probing the longitudinal momentum spread of the electron wave packet at the exit point <i>Alexandra Landsman</i> |
| 747 | Accelerating the calculation of time-resolved electronic spectra with the cellular dephasing representation <i>Miroslav Šulc</i> |
| 748 | Towards femtosecond dynamics in multiferroics <i>Steven L. Johnson</i> |
| 749 | Photon echo measurements using a frequency doubled cavity dumped femtosecond oscillator <i>Vesna Markovic</i> |
| 750 | A Combined NIR Transient-Absorption Optical Pump-THz Probe Spectroscopy Study on Charge Carrier Generation Dynamics in Solid State Dye Sensitized Solar Cells <i>Jan Brauer</i> |
| 751 | Investigation of chemical surface treatment on the charge carrier dynamics in solid-state Dye-Sensitized Solar Cells <i>Arianna Marchioro</i> |
| 752 | Photoinduced Processes of Small Molecule Organic Photovoltaics <i>Jelissa De Jonghe</i> |
| 753 | Photoelectron Diffraction on SnPc/Ag(111) <i>Michael Greif</i> |
| 754 | Effects of the finite length of the pump laser pulse in nonadiabatic quantum dynamics simulations of ultrafast time-resolved spectroscopy <i>Aurélien Patoz</i> |
| 755 | Accelerating calculations of ultrafast time-resolved electronic spectra with various high order split-operator algorithms <i>Marius Wehrle</i> |
| 756 | High-harmonic spectroscopy of isoelectronic molecules: electronic structure and multielectron effects <i>Alisa Rupenyana-Vasileva</i> |
| 757 | Actively Stabilized Attosecond Interferometer <i>Martin Huppert</i> |
| 758 | Ultrafast time-resolved photoelectron spectroscopy of solvated systems <i>Inga Jordan</i> |
| 759 | Versatile velocity-map-imaging spectrometer for strong-field and attosecond experiments <i>Samuel Walt</i> |
| 760 | Versatile Non Collinear Four-Wave Mixing Set-Up Fully Based on Femtosecond Pulse Shaping for Coherent Electronic Spectroscopy <i>Franziska Frei</i> |
| 761 | Field Enhancement in THz nano-structures <i>Fabian Brunner</i> |
| 762 | Femtosecond surface second harmonic generation microscopy to probe adsorbed layers at interfaces <i>Delphine Schaming</i> |

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|-----|--|
| 763 | Time resolved surface second harmonic generation and electron transfer reactions at liquid-liquid interfaces <i>Astrid Olaya</i> |
| 764 | Time-resolved X-ray absorption studies on charge carrier dynamics in aqueous TiO ₂ nanoparticles <i>Mercedes H. Rittmann-Frank</i> |
| 765 | Probing the structural dynamics of hemoproteins in solution by time-resolved x-ray absorption spectroscopy <i>Masha Silatani</i> |
| 766 | THz-IR Mode Coupling in Chemisorbed CO on Pt <i>Anastasija Ichsanow</i> |
| 767 | UV Two-Dimensional Spectroscopy for Biological Systems <i>Gerald Auböck</i> |
| 768 | to be confirmed |

8 NCCR QSIT

Friday, 22.06.2012, HCI G 3

| Time | ID | QSIT I <i>Chair: Richard Warburton, Uni Basel</i> |
|-------|-----|--|
| 11:00 | 801 | Torque Magnetometry of Individual Ni Nanotubes <i>Dennis P. Weber</i> |
| 11:15 | 802 | Characterization of nano-scale electrical contacts using dynamical Coulomb blockade <i>Konrad H. Müller</i> |
| 11:30 | 803 | Scanning gate experiments on graphene nanoribbons <i>Nikola Pascher</i> |
| 11:45 | 804 | All Electrical Control and Slowing of Microwaves using Circuit Nano-electromechanics <i>Xiaoqing Zhou</i> |
| 12:00 | | Postersession (continued), Lunchbuffet |
| | | QSIT II <i>Chair: Klaus Ensslin, ETH Zürich</i> |
| 13:30 | 811 | Graphene Quantum Dots <i>Johannes Güttinger (i)</i> |
| 14:00 | 812 | Rectification of thermal fluctuations in a chaotic cavity heat engine <i>Björn Sothmann</i> |
| 14:15 | 813 | Fiber-cavity spectroscopy of quantum wells and charge-controlled quantum dots <i>Javier Miguel-Sanchez</i> |
| 14:30 | 814 | Supplying cluster states for one-way quantum computing <i>Daniel Becker</i> |
| 14:45 | 815 | Multilevel transport in a three-terminal graphene quantum dot <i>Pauline Simonet</i> |
| 15:00 | 816 | Quantum Hall effect in Graphene with superconducting electrodes <i>Peter Rickhaus</i> |
| 15:15 | 817 | Quantum Metrology with a Scanning Probe Atom Interferometer <i>Caspar Ockeloen</i> |
| 15:30 | | Coffee Break |

| Time | ID | QSIT III <i>Chair: Matthias Christandl, ETH Zürich</i> |
|-------|-----|--|
| 16:00 | 821 | Dark state spectroscopy of a single hole spin <i>Julien Houel (i)</i> |
| 16:30 | 822 | Exploring cavity-mediated long-range interactions in a dilute quantum gas <i>Renate Landig</i> |
| 16:45 | 823 | Density functional theory for static and dynamic properties of atomic quantum gases <i>Iliia Zintchenko</i> |
| 17:00 | 824 | Quantum state tomography of 1000 bosons: reduced density matrices <i>Michael Walter</i> |
| 17:15 | 825 | Ultrastrong Coupling of the Cyclotron Transition of a 2D Electron Gas to a THz Metamaterial <i>Curdin Maissen</i> |
| 17:30 | | END |

| ID | QSIT POSTER |
|-----|--|
| 841 | Electronic transport in ultra-clean carbon nanotube quantum dots <i>Stefan Nau</i> |
| 842 | Quantum dots in the quantum Hall regime <i>Stephan Baer</i> |
| 843 | Progress toward nanoscale magnetic resonance with a "magnet-on-cantilever" force microscope <i>Phani Peddibhotla</i> |
| 844 | Tunnel barriers for spin injection into graphene <i>Matthias Bräuning</i> |
| 845 | A hybrid on-chip opto-nanomechanical transducer for ultra-sensitive force measurements <i>Emanuel Gavartin cancelled</i> |
| 846 | Probing charge noise in a semiconductor with laser spectroscopy on a single quantum dot <i>Andreas Kuhlmann</i> |
| 847 | <i>cancelled</i> |
| 848 | Cold collisions in an ion - atom hybrid trap <i>Felix Hall</i> |
| 849 | Design and development of a surface electrode ion trap for sympathetically cooled molecular ions <i>Arezo Mokhberi</i> |
| 850 | Density Matrix Renormalization Group for Optical Lattices <i>Michele Dolfi</i> |
| 851 | In search of operational quantities for characterizing large quantum systems <i>Normand Beaudry</i> |
| 852 | On the Optimality of Work Extraction in Small Thermodynamical Systems <i>Philippe Faist</i> |
| 853 | Ultra-high mobility 2DEGs to observe the 5/2-state <i>Christian Reichl</i> |

9 Earth, Atmosphere and Environmental Physics

Thursday, 21.06.2012, HCI D 8

| Time | ID | I: ATMOSPHERE AND GEOPHYSICS <i>Chair: Stéphane Goyette, Uni Genève</i> |
|-------|-----|--|
| 13:45 | 901 | Ionising radiation in the Environment <i>Christophe Murith (i)</i> |
| 14:15 | 902 | Influence of Galactic Cosmic Rays on the atmospheric composition and temperature <i>Marco Calisto</i> |
| 14:30 | 903 | Laser-induced aerosol generation in air <i>Massimo Petrarca</i> |
| 14:45 | 904 | Wind gusts parametrization methods for winter storms in Switzerland with the Canadian Regional Climate Model <i>Charles-Antoine Kuszli</i> |
| 15:00 | 905 | A Study of Interface Effects Between Porous and Double Porous Media <i>Eduard Oberaigner</i> |
| 15:15 | 906 | Fiber bundle models for granular shearing and acoustic emissions during landslide initiation <i>Denis Cohen</i> |
| 15:30 | | Coffee Break |

| Time | ID | II: RESOURCES (GEOLOGY, MATERIALS, BIOFUELS, ENERGY & LCA) <i>Chair: Antoine Pochelon, EPFL-CRPP</i> |
|-------|-----|---|
| 16:00 | 911 | Deep structure of the Swiss Plateau from seismic-wave sounding: a new 3D seismic model of the Swiss Molasse Basin <i>François Marillier (i)</i> |
| 16:30 | 912 | Scarce metals - Applications, supply risks and need for action <i>Patrick A. Wäger (i)</i> |
| 17:00 | 913 | Roundtable on Sustainable Biofuels: Ensuring Biofuels Deliver on their Promises <i>Sebastien Haye (i)</i> |
| 17:30 | 914 | Energy resources, energy choices and life cycle assessment <i>Andrew Simons (i)</i> |
| 18:00 | | END |
| 18:30 | | Postersession and Apéro |
| 20:15 | | Grillparty |

Aussteller - Expositants

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|---|--|
| Agilent Technologies, CH-4052 Basel www.agilent.com | NanoScan AG, CH-8600 Dübendorf www.nanoscan.ch |
| attocube systems AG, DE-80539 München www.attocube.com | Oxford Cryosystems Ltd, UK-Long Hanborough, OX29 8LN www.oxcryo.com |
| Bruker AXS GmbH, DE-76187 Karlsruhe www.bruker.com | Schäfer-Tec AG, CH-3422 Kirchberg BE www.schaefer-tec.com |
| DECTRIS Ltd, CH-5400 Baden www.dectris.com | SENTECH GmbH, DE-82152 Kraling www.sentech-sales.de |
| Dyneos AG, CH-8307 Effretikon www.dyneos.ch | Stoe & Cie GmbH, DE-64295 Darmstadt www.stoe.com |
| EPL (Europhysics Letters) www.epljournal.org | Swiss Vacuum Technologies S.A., CH-2022 Bevaix www.swissvacuum.com |
| GMP SA, CH-1020 Renens www.gmp.ch | TECO René Koch, CH-1807 Blonay www.teco-rene-koch.com |
| Hidden Analytical Ltd., UK-Warrington, WA5 7UN www.hiddenanalytical.com | VG Scienta, UK-Hastings, East Sussex, TN38 9NN www.vgscienta.com |
| HORIBA Jobin Yvon GmbH, DE-64625 Bensheim www.horiba.com/de/scientific | VACOM GmbH, DE-07749 Jena www.vacom.de |
| Hositrad Deutschland Vacuum Technology, DE-93047 Regensburg www.hositrad.com | Zurich Instruments, CH-8005 Zürich www.zhinst.com |
| MaTeck GmbH, DE-52428 Jülich www.mateck.de | |