

**Jahrestagung in Zürich  
09. - 13. September 2024**

**ETH Zürich, Campus Zentrum, Gebäude ETA/ETF/ETZ**

**Réunion annuelle à Zürich  
9 - 13 septembre 2024**

**Programmübersicht  
Aperçu du programme**

**in Zusammenarbeit mit - en collaboration avec**

## Programmübersicht - Aperçu du programme

Das vollständige Programm mit den Abstracts erscheint demnächst und wird auf der Konferenzwebseite und der SPG Webseite ([www.sps.ch](http://www.sps.ch)) publiziert.

Hinweise:

- Je Beitrag ist nur der präsentierende Autor aufgeführt.
- Die Postersitzung findet am Dienstag von 18:30 - 20:00 (mit Apéro) sowie am Mittwoch von 12:15 - 14:00 (mit Lunch Buffet) statt.
- (p) = Plenarsprecher, (i) = eingeladene Sprecher

Das Programm am Montag 09. September ist von der Konferenzgebühr ausgenommen. Eine Anmeldung ist nur für die anderen Tage erforderlich.

### Special: Physics funding in Switzerland

Monday, 09.09.2024, Room ETA F 5

Time	ID	OFFICIAL CONFERENCE OPENING
10:20		Welcome note Joël Mesot
		PHYSICS FUNDING IN SWITZERLAND Chair: Johan Chang, Universität Zürich
10:30	1	Funding Instruments within the Swiss National Science Foundation (SNF) Bernd Gotsmann and <i>Stephan Cludius-Brandt (i)</i>
10:55	2	Funding Instruments within the European Research Council (ERC) Jennifer McClung (i)
11:10	3	Industry-oriented Funding Instruments: Innosuisse Christoph Falk (i)
11:25	4	Discussion
12:00		END; Lunch
13:00		General Assemblies of SPS * and SSPh **
14:00		Buffer Time

\* SPS: Room ETZ E 6; \*\* SSPh: Room ETZ E 8

### Public Symposium:

Louis de Broglie: 100 years of wave / particle dualism & Public Lecture

Monday, 09.09.2024, Room ETA F 5

Time	ID	LOUIS DE BROGLIE: 100 YEARS OF WAVE / PARTICLE DUALISM Chair: Teresa Montaruli, Université de Genève
14:30	6	Matter and Light: Louis de Broglie and our current understanding of physics Friedrich-Karl Thielemann (p)
		Chair: Johan Chang, Universität Zürich
15:15	7	Waves of Quantum Matter Tilman Esslinger (p)
16:00		Coffee Break

Le programme final complet avec les résumés paraîtra prochainement et sera également publié sur le site de la conférence et de la SSP ([www.sps.ch](http://www.sps.ch)).

Indications:

- seul le nom de l'auteur présentant la contribution a été indiqué.
- la session poster a lieu le mardi de 18:30 à 20:00 (avec apéro) ainsi que le mercredi de 12:15 à 14:00 (avec buffet de midi).
- (p) = orateur de la session plénière, (i) = orateur invité

Le programme du lundi 9 septembre est exempt des frais de la conférence. Il est seulement nécessaire de s'inscrire pour les autres journées.

Time	ID	Chair: Michel Calame, Empa & Universität Basel
16:30	8	Wave-particle duality in atom interferometers: precision measurements at the quantum limit Philipp Treutlein (p)
		Chair: Christof Fatterger
17:15	9	Single electron imaging vs. coherent electron beam diffraction: Optimization of image contrast in cryo-electron microscopy Henning Stahlberg (p)
18:00		END, Break
		PUBLIC LECTURE Chair: Lukas Gallmann, ETH Zürich
18:30	10	The route to attosecond pulses Anne l'Huillier (p)
19:45		END

### Plenary Session

Tuesday, 10.09.2024, Room ETA F 5

Time	ID	PLENARY SESSION I Chair: Philippe Jetzer, Universität Zürich
09:00	11	Physics of the early universe and the intensity frontier of particle physics Mikhail Shaposhnikov (p)
09:45		Award Ceremony
10:30		Coffee Break
		Chair: Thomas Christen, Hitachi Energy
11:00	12	Hyperbolic lattices: from table-top simulators to non-Abelian band theory Patrick Lenggenhager (i)
		Chair: Thomas Christen, Hitachi Energy
11:30	13	Collective Advantages in Finite-Time Thermodynamics Alberto Rolandi (i)
		WOMEN IN PHYSICS CAREER SYMPOSIUM Chair: Tobias Golling Université de Genève
12:00	14	Introduction
12:15	15	Keynote: Petra Rudolf (p)
13:00		Lunch
14:00		Topical Sessions

Time	ID	<b>PUBLIC SPECIAL: 70<sup>TH</sup> ANNIVERSARY OF CERN</b> <i>Chair: Hans Peter Beck, Universität Bern</i>
18:30	16	<b>CERN: Past, Present, and Future</b> <i>Günther Dissertori (p)</i>
		<i>Moderation: Florencia Canelli, Universität Zürich</i>
19:10	17	<b>Panel Discussion</b>  <i>Fabiola Gianotti, CERN Director General</i> <i>Michael Gerber, SERI, Ambassador, Director General International Programmes &amp; Organisations</i> <i>Günther Dissertori, ETH Zürich, Rector, past Swiss CERN Council delegate</i> <i>Ben Kilminster, Universität Zürich, CHIPP Chair</i>
19:45		<b>Postersession with Apéro Riche</b>  <i>including a special set of posters related to the 70<sup>th</sup> Anniversary of CERN</i>
21:30		<b>END</b>

**Wednesday, 11.09.2024, Room ETA F 5**

Time	ID	<b>PLENARY SESSION II</b> <i>Chair: Christof Fattinger</i>
09:00	18	<b>Structural Biology and Interaction Analysis in Drug Discovery</b> <i>Matthias E. Lauer (p)</i>
		<i>Chair: Rachel Grange, ETH Zürich</i>
09:45	19	<b>Quantum Science with Superconducting Circuits</b> <i>Andreas Wallraff (p)</i>
10:30		<b>Coffee Break</b>
		<i>Chair: Valeria Bragaglia, IBM Rueschlikon</i>
11:00	20	<b>Neuromorphic Intelligence: spiking neural network and on-line learning circuits for brain-inspired technologies</b> <i>Giacomo Indiveri (p)</i>
		<i>Chair: Tomáš Bzdusek Universität Zürich</i>
11:45	21	<b>New challenges in quantum magnetism</b> <i>Frédéric Mila (i)</i>
		<i>Chair: Andreas Müller, Université de Genève</i>
12:15	22	<b>Physics and Education - A Journey into Plasma Physics</b> <i>Dirk Hegemann (p)</i>
13:00		<b>Postersession with Lunchbuffet</b>
14:30		<b>Topical Sessions</b>
19:30		

**Thursday, 12.09.2024, Room ETA F 5**

Time	ID	<b>PLENARY SESSION III</b> <i>Chair: Leonid Rivkin, PSI Villigen</i>
09:00	23	<b>Attosecond Pulses from X-ray Free-electron Lasers: Status and Outlook</b> <i>Sven Reiche (p)</i>
		<i>Chair: Philippe Jetzer, Universität Zürich</i>
09:45	24	<b>Questions in Theoretical Cosmology</b> <i>Leonardo Senatore (p)</i>
10:30		<b>Poster Award Session</b>
10:45		<b>Coffee Break</b>
		<i>Chair: Jean-Philippe Brantut, EPFL</i>
11:15	25	<b>Hybrid III-V/Silicon photonics</b> <i>Kirsten Moselund (p)</i>

Time	ID	<i>Chair: Sahand Jamal Rahi, EPFL</i>
12:00	26	<b>How do single bacterial cells think?</b> <i>Erik van Nimwegen (p)</i>
12:45		<b>Lunch</b>
14:00		<b>Topical Sessions</b>
19:00		<b>Transfer to Dinner</b>
19:30		<b>Conference Dinner</b>

**Friday, 13.09.2024, Room ETA F 5**

Time	ID	<b>ENERGY AND SUSTAINABILITY: RESEARCH NEEDS FOR A SUSTAINABLE ENERGY TRANSITION</b> <i>Chair: Thomas Christen, Hitachi Energy</i>
09:00	31	<b>The Future of the Electrical Energy System: from Rotating Masses to Power Electronic</b> <i>Gabriela Hug (p)</i>
09:30	32	<b>The Swiss Energy Transition to NetZero</b> <i>Thomas J. Schmidt (p)</i>
10:00	33	<b>From Materials to Devices: The importance of physics in material science &amp; technology for sustainable energy application</b> <i>Lorenz Herrmann (p)</i>
10:30		<b>Coffee Break</b>
		<i>Chair: Tomoko Muranaka, EPFL</i>
11:00	34	<b>CERN's strategy for an environmentally responsible research</b> <i>Sonja Kleiner (p)</i>
11:30	35	<b>A sustainable future in High-Energy physics</b> <i>Patrick Koppenburg (p)</i>
		<i>Moderation: Hugo Zbinden, Université de Genève</i>
12:00	36	<b>Panel Discussion</b>
12:30		<b>End; Lunch</b>
13:30		<b>Topical Sessions</b>
16:00		<b>CONFERENCE END</b>

**Women in Physics Career Symposium**

THIS EVENT IS SUPPORTED BY  
UNIVERSITÄT ZÜRICH, PSI VILGIGEN, SPS, SCNAT,  
AND UNIVERSITÉ DE GENÈVE.

**Tuesday, 10.09.2024, Room ETZ E 6**

Time	ID	<b>WOMEN IN PHYSICS CAREER SYMPOSIUM</b> <i>Chair: Tobias Golling Université de Genève</i>
14:00	41	Career Talk 1: <b>Laura Bégon-Lours</b>
14:30	42	Career Talk 2: <b>Anna Fontcuberta i Morral</b>
15:00	43	<i>Mentors and Mentees introduce themselves</i>
16:00		<b>Coffee Break</b>
16:30	44	<i>Mentor - Mentee Meetups</i>
17:30	45	Career Talk 3: <b>Janine Haase</b>
18:00	46	Career Talk 4: <b>Ilaria Zardo</b>
18:30		<b>END; CERN 70</b>
19:45		<b>Postersession with Apéro</b>

## Startups: The role of physics and physicists in developing a product ?

Wednesday, 11.09.2024, Room ETZ E 6

Time	ID	STARTUPS: THE ROLE OF PHYSICS AND PHYSICISTS IN DEVELOPING A PRODUCT ? Chair: Gian Salis, IBM Rüşchlikon, Valeria Bragaglia, IBM Rüşchlikon
14:30	51	From Lab to Startup: The Journey of condensZero Denys Sutter (i)
14:50	52	Axelera AI: Technology Deep Dive Riduan Khaddam Aljameh (i)
15:10	53	BTO-enhanced silicon photonics – PICs for communication and switching based on the Pockels effect Thomas Kornher (i)
15:30	54	Luxtelligence: Illuminating faster datacenters with ferroelectrics Mohammad Bereyhi (i)
15:50	55	From concept to market: the role of a scientist at Polariton Technologies Youri Popoff (i)
16:10	56	Intellectual Property (IP) as an important asset for your Start-up Catalin Cris (i)
16:30		<b>Coffee Break</b>
17:00	57	Building great products from fundamental research Mathieu Munsch (i)
17:20	58	Membrane-less Redox Flow Batteries using Liquid/Liquid Interfaces Federico Paratore (i)
17:40	59	Navigating the Conservative Chip Industry: Strategies for Introducing Disruptive Technologies Manu Nair (i)
18:00	60	Making dirt shine - contamination analysis for semiconductor manufacturing Philip Eib (i)
18:20		<b>END</b>

## History and Philosophy of Physics

Wednesday, 11.09.2024, Room ETZ E 7

Time	ID	HISTORY AND PHILOSOPHY OF PHYSICS Chair: Claus Beisbart, Universität Bern; NN
14:30	71	Philosophical Implications of Quantum Gravity Baptiste Le Bihan (i)
15:00	72	Quantum mechanics in a course on "Higher algebra": Wolfgang Pauli, Emil Artin, and the representation theory of semi-simple systems Peter Ullrich (i)
15:30	73	Dichroic Light Polarizers from Tourmaline to Polaroid and Bernotar Filters Jean-François Loude
16:00	74	Can machine learning models provide an understanding of physical systems? Claus Beisbart
16:30		<b>END; Coffee Break</b>

## Physics education and communication: Good practice examples within the Swiss Physics Community

Friday, 13.09.2024, Room ETZ E 8

Time	ID	PHYSICS EDUCATION AND COMMUNICATION: GOOD PRACTICE EXAMPLES WITHIN THE SWISS PHYSICS COMMUNITY Chair: Andreas Müller, Université de Genève
13:30	91A 91B	A Course on General Relativity and Cosmology for High School Students Alice Gasparini A hands-on test module in schools on astrophysics and computer science Matthieu Heller, Sebastien Murphy
14:00	92	Physics in Advent Gernot Scheerer
14:20	93A 93B	Physics and Sustainability at School and at University Peter Kreuzer, Tomoko Muranaka
14:40	94	International Physicists' Tournament and International Young Physicists' Tournament Samuel Byland, Mathieu Suter
15:00	95	Youth@STEM4SF Barbora Gulejova
15:20	96	Discussion
15:45		<b>END</b>

## KOND

Tuesday, 10.09.2024, Room ETZ E 7

Time	ID	KOND I: COUPLED DEGREES OF FREEDOM Chair: Thomas Greber, Universität Zürich
14:00	101	Coupled magnetism and ferroelectricity in magnetic high entropy oxide Roxana Capu
14:15	102	Terahertz electric-field-driven dynamical multiferroicity in SrTiO <sub>3</sub> Martina Basini
14:30	103	Phonon-Polariton Nonlinearities in Ferroelectric LiNbO <sub>3</sub> Rossella Acampora
14:45	104	Strong enhancement of superconductivity in fractal lattices Askar Iliasov
15:00	105	Decoupled static and dynamical charge correlations in La <sub>2-x</sub> Sr <sub>x</sub> CuO <sub>4</sub> Leonardo Martinelli
15:15	106	Investigation of the phase transition driven by ultrashort laser pulses in the charge-density-wave material K <sub>0.3</sub> MoO <sub>3</sub> Rafael T. Winkler
15:30	107	Resonant Ultrasound Spectroscopy Study of the Vortex Lattice Phase Diagram of Niobium Xuan Dang Dang
15:45	108	Tuning the Electronic Properties of Two-Dimensional Lepidocrocite Titanium Dioxide-Based Heterojunctions Kati Asikainen
16:00		<b>Coffee Break</b>
18:30		<b>CERN 70</b>
19:45		<b>Postersession with Apéro</b>

## Thursday, 12.09.2024, Room ETZ E 7

Time	ID	<b>KOND II: ADVANCES IN METHODOLOGY</b> Chair: Daniel Mazzone, PSI Villigen
14:00	111	Characterization of high-purity nickel single crystals by mechanical spectroscopy Anna Nastruzzi
14:15	112	Imaging heat transport in suspended diamond nanostructures with integrated spin defects thermometers Valentin Goblot
14:30	113	Electronic Viscous Flow in Hexagonal Boron Nitride Encapsulated Graphene FETs Wenhao Huang
14:45	114	Laser induced structural dynamics in colloidal gold nanoparticles Changji Pan
15:00	115	Ultrafast EBIC: A new technique for semiconductor device characterization with ps time resolution Joel Rehmman
15:15	116	Growth by pulsed laser deposition of SrVO <sub>3</sub> thin films for optical applications Tancredi Thai Angeloni
15:30	117	Increasing the dynamical range of a scanning tunneling microscope Ajla Karic
15:45	118	Analytical redefinition of the adsorbate-induced surface response of a metal Aleksandra Siklitskaya
16:00		
16:30		<b>Coffee Break</b>
19:00		<b>Transfer to Dinner</b>
19:30		<b>Conference Dinner</b>

## Friday, 13.09.2024, Room ETZ E 7

Time	ID	<b>KOND III: MANY-BODY SYSTEMS</b> Chair: Aline Ramires, PSI Villigen
	<del>121</del>	⇒ moved to talk 13
13:30	122	Magnetostriction measurements of quantum spin ice candidates at ultra-low temperatures Ilaria Villa
13:45	123	Quantum Phase Transitions with a Lee-Yang Method and Many-Body Algorithms Pascal Vecsei
14:00	124	Hybrid Tree Tensor Networks for quantum simulation Julian Schuhmacher
14:15	125	Benchmarking digital quantum simulations and optimization above hundreds of qubits using quantum critical dynamics Alexander Miessen
14:30	126	Fractional Topological Insulators in Twisted Transition Metal Dichalcogenides Glenn Wagner
14:45	127	Ferromagnetic quantum critical point protected by nonsymmorphic symmetry in a dense Kondo metal CeSi <sub>1.97</sub> Soohyeon Shin
15:00		<b>END</b>

ID	<b>KOND POSTER</b>
141	The three-dimensional multiferroic domain structure of hexagonal manganites Aaron Merlin Müller
142	Identification of Defect-Sensitive Raman Modes in 9-Ar-om-Wide Armchair Graphene Nanoribbons Ángel Labordet
143	Symmetry broken phases of field biased Bernal bilayer graphene Enrique Aguilar-Mendez

## Magnetic fields for materials research

THIS SESSION IS SUPPORTED BY THE EU PROJECT ISABEL.  
([HTTPS://EMFL.EU/ISABEL/H2020-PROJECT/](https://emfl.eu/isabel/h2020-project/))

## Thursday, 12.09.2024, Room ETZ E 8

Time	ID	<b>MAGNETIC FIELDS FOR MATERIALS RESEARCH</b> Chair: Stefano Gariglio, Université de Genève
17:00	181	Instrumentation and experimental techniques for high magnetic field research at the European Magnetic Field Laboratory Steffen Krämer (i)
17:30	182	Engineering Phase Competition Between Stripe Order and Superconductivity in La <sub>1.88</sub> Sr <sub>0.12</sub> CuO <sub>4</sub> Julia Küspert (i)
18:00	183	Influence of Oxygen Source on the High Magnetic Field Behavior of Nb <sub>3</sub> Sn Wires Manufactured via Internal Oxidation Gianmarco Bovone (i)
18:30		<b>END</b>
19:00		<b>Transfer to Dinner</b>
19:30		<b>Conference Dinner</b>

## Applied Physics

## Wednesday, 11.09.2024, Room ETF C 1

Time	ID	<b>APPLIED PHYSICS I: PHYSICS APPLIED TO MEDICINE</b> Chair: Leonid Rivkin, PSI Villigen
17:00	201	Advanced X-ray imaging: from the nanoscale at synchrotrons to clinical applications in hospitals Marco Stampanoni (i)
17:30	202	Isotopes for diagnostics and therapy of cancer Roger Schibli (i)
18:00	203	Proton therapy developments at PSI Anthony Lomax (i)
18:30	204	FLASH therapy David Meer
18:45	<del>205</del>	cancelled
19:00	206	In-vivo range verification of proton therapy treatment with the PETITION PET scanner Keegan McNamara
19:15	207	PETITION PET scanner for biological adaptation of the proton treatment plan Shubhangi Makkar
19:30	208	POSICS a handable gamma-camera for radio-guided surgery Cyril Alispach

19:45	209	Advantages and drawbacks of a back-scattering Mueller polarimetric setup comparing with surface imaging one <i>Vladislav Stefanov</i>
20:00		<b>END</b>

**Thursday, 12.09.2024, Room ETZ E 7**

Time	ID	APPLIED PHYSICS II: APPLIED PHYSICS & PLASMA PHYSICS (COMBINED SESSION) Chair: Laurie Porte, EPFL
17:00	211	Analysis of natural disruptions on JET with JOREK <i>Lili Edes</i>
17:15	212	MHD simulations of runaway electron avalanche in ITER mitigated disruptions <i>Chizhou Wang</i>
17:30	213	Kinetic simulations of the magnetized plasma-wall boundary layer in fusion devices <i>Nicole Vadot</i>
17:45	214	Turbulence-inclusive Modelling of Electron-Cyclotron Wave-Plasma Dynamics in Tokamaks <i>Ewout Devlaminck</i>
18:00	215	Sub-micrometric hollow channels in bulk fused silica <i>Pasquale Barbato</i>
18:15	216	Detection of land mines and unexploded ordnance <i>Yves Marc Acremann</i>
18:30		<b>END</b>
19:00		<b>Transfer to Dinner</b>
19:30		<b>Conference Dinner</b>

ID	APPLIED PHYSICS POSTER
231	Calibration of reflection and back-scattering Mueller Polarimetric setups <i>Bhanu Pratap Singh</i>

## Accelerator Science and Technology

**Friday, 13.09.2024, Room ETZ E 6**

Time	ID	ACCELERATOR SCIENCE AND TECHNOLOGY Chair: Mike Seidel, PSI Villigen
13:30	281	High Field Magnet Roadmap at PSI/CHART <i>Douglas Martins Araujo</i>
13:45	282	NI magnet projects at PSI <i>Jaap Kosse</i>
14:00	283	Optimization and Shimming of a High Temperature Superconducting Bulk Undulator <i>Carlos Gafa</i>
14:15	284	Energy-efficient FCC-ee operation via HTS nested magnets <i>Jaap Kosse</i>
14:30	285	Lattice correction and polarization estimation for the Future Circular Collider e <sup>+</sup> e <sup>-</sup> <i>Yi Wu</i>
14:45	286	Controlling the electron beam energy at SwissFEL <i>Evan Ericson</i>
15:00	287	High Gradient Photoguns for a Potential Upgrade to the SwissFEL <i>Thomas Geoffrey Lucas</i>

15:15	288	Development and Optimization of a Field-Emission based Electron Gun for Low Energy Electron Cooling at ELENA <i>Elisabeth-Sena Welker</i>
15:30	289	Beam dynamics studies of performance reach of future ion species in the CERN accelerator complex <i>Elias Walter Waagaard</i>
15:45	290	Muon Collider Feasibility Studies: Collective effects and muon cooling <i>Joséphine Marie Bénédicte Potdevin</i>
16:00		<b>END</b>

## Nuclear, Particle and Astrophysics (TASK)

THIS SESSION HAS BEEN ORGANISED IN COLLABORATION WITH  
**CHIPP.**

**Tuesday, 10.09.2024, Room ETA F 5**

Time	ID	TASK I: DETECTOR AND PERFORMANCE I Chair: Ben Kilminster, Universität Zürich
14:00	301	Tests and results of the power components of the ATLAS Inner Tracker detector readout system. <i>Lucas Mollier</i>
14:15	302	Performance tests of the ATLAS Inner Tracker Pixel detector opto-electrical conversion system <i>Marianna Glazewska</i>
14:30	303	Data transmission tests of the ATLAS Inner Tracker Detector opto-electrical conversion system. <i>Una Helena Alberti</i>
14:45	304	Timing measurement ASIC using LGAD for possible HL-LHC upgrade <i>Abderrahmane Ghimouz</i>
15:00	305	Radiation hardness and annealing, strategies for space application of silicon photomultiplier technologies on a quasi-polar LEO orbit <i>Shideh Davarpanah</i>
15:15	306	CMS ECAL on-detector readout electronics radiation tests <i>Nico Härringer</i>
15:30	307	TEPX Detector for the CMS Inner Tracker Upgrade: Module Production Status and Plans <i>Amrutha Samalan</i>
15:45	308	MONOLITH - picosecond capability in a high granularity monolithic silicon pixel detector <i>Matteo Milanese</i>
16:00		<b>Coffee Break</b>
		TASK II: DETECTOR AND PERFORMANCE II Chair: Marcelle Soares-Santos, Universität Zürich
16:30	311	Production and Qualification of the Vertex Detector for the Mu3e Detector <i>Thomas Christian Senger</i>
16:45	312	Construction and Commissioning Status Report on Mu3e Experiment <i>Yifeng Wang</i>
17:00	313	Cryogenic Characterization of Neutron-Irradiated SiPMs <i>Esteban Curras Rivera</i>
17:15	314	The Outer Detector of the LUX ZEPLIN dark matter direct detection experiment <i>Harvey Birch</i>
17:30	315	Outer Detector Energy Calibration of the LUX-ZEPLIN Experiment <i>Miguel Hernandez</i>

17:45	316	Results from low temperature wafer-wafer bonded pad-diodes for particle detection <i>Johannes Martin Wüthrich</i>
18:00		
18:30		<b>CERN 70</b>
19:45		<b>Postersession with Apéro</b>

**Wednesday, 11.09.2024, Room ETA F 5**

Time	ID	<b>TASK III: LOW ENERGY I</b> <i>Chair: Luis Miguel Garcia Martin, EPF Lausanne</i>
14:30	321	The n2EDM experiment - A search for new physics at the precision frontier <i>Wenting Chen</i>
14:45	322	An Active Magnetic Shield for the n2EDM Experiment - Simulation and Optimization <i>Sergey Ermakov</i>
15:00	323	An efficient spin transport system for ultracold neutrons in the n2EDM experiment <i>Gian Luca Caratsch</i>
15:15	324	A high-sensitivity Cesium magnetometer array for the n2EDM experiment <i>Victoria Kletzl</i>
15:30	325	The muEDM experiment at PSI <i>David Höhl</i>
15:45	326	Preliminary Results for the Injection Studies at Low Magnetic Fields for the muEDM Experiment <i>Diego A. Sanz-Becerra</i>
16:00	327	Muonic Atom Spectroscopy of $^{238}\text{U}$ <i>Anastasia Doinaki</i>
16:15		
16:30		<b>Coffee Break</b>
		<b>TASK IV: LOW ENERGY II</b> <i>Chair: Klaus Kirch, PSI Villigen &amp; ETH Zürich</i>
17:00	331	Measurement of the X17 anomaly with the MEG II detector <i>Giovanni Dal Maso</i>
17:15	332	Results of the neutron to mirror-neutron oscillations at PSI <i>Nathalie Ziehl</i>
17:30	333	High-Resolution Spectroscopy of Muonic Lithium - First Steps and Prospects of the QUARTET Experiment <i>Katharina von Schoeler</i>
17:45	334	Radiative corrections and Monte Carlo tools for low-energy $e^+e^-$ experiments <i>Sophie Kollatzsch</i>
18:00	335	Probing neutrinoless double beta decay with LEG-END <i>Aravind Remesan Sreekala</i>
18:15		

**Wednesday, 11.09.2024, Room ETZ E 7**

Time	ID	<b>TASK V: PHYSICS AT LHCb</b> <i>Chair: Paolo Crivelli, ETH Zürich</i>
17:00	341	Heavy flavour spectroscopy at LHCb <i>Daniel Charles Craik</i>
17:15	342	Measurement of the branching ratio of $B^+ \rightarrow K^+ \pi^+ \pi^- \mu^+ \mu^-$ at LHCb <i>Anni Kauniskangas</i>
17:30	343	Search for the $B_s^0 \rightarrow \mu^+ \mu^- \gamma$ decay with photon conversions <i>Raphael van Laak</i>

17:45	344	Measurement of $\text{BR}(B_s \rightarrow K_s K_s)$ with Run 2 LHCb data <i>Kerim Guseinov</i>
18:00	345	Search for $K^0 \rightarrow \pi^+ \pi^- \mu^+ \mu^-$ decays with the Run II LHCb data <i>Luis Miguel Garcia Martin</i>
18:15	346	Search for violation of leptonic universality in Semileptonic Hyperon Decays in LHCb <i>Alexandre Brea Rodriguez</i>
18:30	347	Search for the $B_{(c)}^+ \rightarrow \tau^+ \nu_\tau$ decay at LHCb <i>Rita de Sousa Ataíde da Silva</i>
18:45	348	Search for axion-like particles at LHCb <i>Pasquale Andreola</i>
19:00	349	BDF/SHIP at the SPS ECN3 high-intensity beam facility <i>Martina Ferrillo</i>
19:15		

**Thursday, 12.09.2024, Room ETA F 5**

Time	ID	<b>TASK VI: MACHINE LEARNING</b> <i>Chair: Alexandre Brea Rodriguez, EPFL</i>
14:00	351	Machine Learning Methods for Top Reconstruction using the ATLAS Experiment <i>Daniele Dal Santo</i>
14:15	352	Anomaly detection techniques for ATLAS calorimeter data quality monitoring <i>Vilius Čepaitis</i>
14:30	353	Pileup for physics: building a novel hadronic physics dataset <i>Carlos Moreno Martinez</i>
14:45	354	Mitigating experimental challenges in using pileup for physics <i>Mario Alves Cardoso</i>
15:00	355	Extracting the jet energy resolution from pileup collisions <i>Antti Pirttikoski</i>
15:15	356	Machine Learning in $b \rightarrow s$ II <i>Jason Aebischer</i>
15:30	357	Leveraging transformers and RL to identify key b-hadron backgrounds <i>Guillermo Hijano Mendizabal</i>
15:45	358	Towards an AI-based trigger system for the next-generation of imaging atmospheric Cherenkov telescope cameras <i>Tjark Miener</i>
16:00	359	Deep Learning-Based Data Processing in Large-Sized Telescopes of the Cherenkov Telescope Array: FPGA Implementation <i>Carlos Abellan Beteta</i>
16:15	360	Neutrino interaction classification in SND@LHC based on Graph Neural Network <i>Zhibin Yang</i>
16:30		<b>Coffee Break</b>
		<b>TASK VII: NEW PHYSICS SEARCHES AT CERN</b> <i>Chair: Daniel Craik, Universität Zürich</i>
17:00	361	Search for Axion-Like Particles in Photonic Final States with the FASER Detector at the LHC <i>Noshin Tarannum</i>
17:15	362	LHC Neutrinos at FASERnu and Neutrino Energy Reconstruction Methods <i>Jeremy Atkinson</i>
17:30	363	Exploring the hadronic landscapes, a novel search in multijet Events at the ATLAS Experiment <i>Pantelis Kontaxakis</i>

17:45	364	Search for Top Squark Pair Production with zero Lepton Final States using ATLAS Run 3 Data <i>Meinrad Moritz Schefer</i>
18:00	365	Growing Evidence for a Higgs Triplet at the LHC <i>Sumit Banik</i>
18:15	366	New Higgses at the Electroweak Scale <i>Guglielmo Coloretti</i>
18:30	367	Recent results from the NA62 experiment at CERN SPS <i>Xiafei Chang</i>
18:45	368	⇒ moved to talk 349
19:00		Transfer to Dinner
19:30		Conference Dinner

Friday, 13.09.2024, Room ETA F 5

Time	ID	<b>TASK VIII: ASTROPARTICLE PHYSICS AND DARK MATTER</b> <i>Chair: Teresa Montaruli, Université de Genève</i>
13:30	371	Search for gamma-ray spectral lines from dark-matter annihilation with the DAMPE satellite <i>Jennifer Maria Frieden</i>
13:45	372	MiniFIT, The Small-Scale Version of the HERD Tracking System, From Design to Performance <i>Chiara Perrina</i>
14:00	373	Terzina Telescope: Pioneering the Detection of Cherenkov Light from Extensive Air Showers in Space <i>Martina D'Arco</i>
14:15	374	A comprehensive study of muons detected by the Large-Sized Telescope during its commission phase. <i>Vadym Voitsekhovskiy</i>
14:30	375	The next generation cameras for the Large-Sized Telescopes of the Cherenkov Telescope Array Observatory <i>Leonid Burmistrov</i>
14:45	376	Testing gravity through the distortion of time <i>Sveva Castello</i>
15:00	377	Latest results from the XENONnT dark matter experiment <i>Paloma Cimental Chávez</i>
15:15	378	XLZD: The Future of Direct Dark Matter Detection <i>Maximinio Adrover</i>
15:30		END

ID	<b>TASK POSTER</b>
381	Towards Precision X-Ray Spectroscopy of Muonic low-Z Atoms Using Metallic Magnetic Calorimeters <i>Aziza Zendour</i>
382	Detector system to study early-to-late stability of the muEDM experiment <i>Chavdar Dutsov</i>
383	Initial Results From the Michigan Xenon Experiment (MiX) <i>Erin Barillier</i>
384	Electric and magnetic field studies towards muon storage in the search for a muon electric dipole moment <i>Timothy Hume</i>
385	Precision 3D monitoring of the LHCb SciFi tracker alignment using BCAMs <i>Dimitrios Kaminaris</i>
386	SST-1M Telescopes, Preliminary Results and Deep Learning Event Reconstruction with CTLearn <i>Bastien Lacave</i>
387	cancelled

388	An external array of remote magnetometers for the n2EDM experiment <i>Philipp Wagner</i>
389	Generate parton-level events from reconstructed events with Conditional Normalizing Flows <i>Adrian-Antonio Petre</i>
390	Production and characterization of the Cesium magnetometer cells for the n2EDM experiment <i>Lea Segner</i>

## Atomic Physics and Quantum Optics

Thursday, 12.09.2024, Room ETF E 1

Time	ID	<b>ATOMIC PHYSICS AND QUANTUM OPTICS I</b> <i>Chair: Jean-Philippe Brantut, EPFL</i>
14:00	401	Language models for the simulation of quantum many-body <i>Juan Carasquilla (i)</i>
14:30	402	Einstein-Podolsky-Rosen experiment with two Bose-Einstein condensates <i>Paolo Colciaghi (i)</i>
15:00	403	Quantum synchronization through the interference blockade <i>Tobias Kehrer</i>
15:15	404	Quantum backflow within circular geometry <i>Arseni Goussev</i>
15:30	405	Universal entropy transport far from equilibrium across the BCS-BEC crossover <i>Meng-Zi Huang</i>
15:45	406	Nonreciprocal synchronization of active quantum spins <i>Tobias Nadolny</i>
16:00	407	Towards a two-qubit gate with grid states encoded in the motion of a trapped ion <i>Florence Berterottière</i>
16:15	408	On-chip time-bin-entangled quantum state generation and tomography for optical quantum communication <i>Giovanni Finco</i>
16:30		Coffee Break
		<b>ATOMIC PHYSICS AND QUANTUM OPTICS II</b> <i>Chair: NN</i>
17:00	411	Quantum technologies for trapped molecular ions <i>Stefan Willitsch (i)</i>
17:30	412	Metrology of highly excited states of the hydrogen atom <i>Simon Scheidegger (i)</i>
18:00	413	Progress towards multi-particle entanglement generation and manipulation in an optical tweezer array of $^{171}\text{Yb}$ nuclear-spin qubits <i>Alexander Baumgärtner</i>
18:15	414	A cavity-microscope for micrometer-scale control of atom-photon interactions <i>Michael Alexander Eichenberger</i>
18:30	415	Exploiting frequency metrology fiber networks for earthquake sensing <i>Dominik Husmann</i>
18:45	416	Bragg-spectroscopy of a dissipation-induced instability in an atom-cavity system <i>Gabriele Natale</i>
19:00		Transfer to Dinner
19:30		Conference Dinner



ID	ATOMIC PHYSICS AND QUANTUM OPTICS POSTER
431	Towards laser cooling of negative molecular ions <i>Matthias Germann</i>
432	Counter-propagating spontaneous parametric down-conversion source <i>Jost Kellner</i>

## Gravitational Waves

Wednesday, 11.09.2024, Room ETZ E 8

Time	ID	GRAVITATIONAL WAVES I <i>Chair: Steven Schramm, Université de Genève</i>
14:30	451	Observational Prospects of Self-Interacting Scalar Ultralight Boson Clouds with Next-Generation Gravitational-Wave Detectors <i>Spencer Collaviti</i>
14:45	452	Fast identification of GW signals at the future Einstein Telescope <i>Sarah Baimukhametova</i>
15:00	453	Bright siren cosmology with the Einstein Telescope <i>Niccolò Muttoni</i>
15:15	454	Mass transfer stability shaping the merging BBH mass distribution <i>Max Briel</i>
15:30	455	Coupling elastic media to gravitational waves: an effective field theory approach <i>Thomas Moreau</i>
15:45	456	Using anisotropies in the distribution of GW sources as a cosmological probe <i>Martin Pijenburg</i>
16:00	457	Global Fit of LISA Data with Galactic Binaries and Massive Black Hole Binaries <i>Stefan Strub</i>
16:15	458	Astrophysical imprints on the LISA data stream from Massive Black Hole Binaries <i>Mudit Garg</i>
16:30		<b>Coffee Break</b>
		GRAVITATIONAL WAVES II <i>Chair: Philippe Jetzer, Universität Zürich</i>
17:00	461	LISA Parameter Estimation with Time Domain Waveforms <i>Cecilio Garcia Quiros</i>
17:15	462	Detection and Mitigation of Glitches in LISA Data: A Machine Learning Approach <i>Niklas Houba</i>
17:30	463	Wave optics lensing of gravitational waves in the LISA band <i>Martin Pijenburg</i>
17:45	464	Waveforms in the Post-Minkowskian Expansion <i>Lara Bohnenblust</i>
18:00	465	Data-Driven Analysis of Gravitational-Wave Source Progenitors Using Flow Matching <i>Nodens Koren</i>
18:15	466	Towards Gravitational Wave Multi-Source Parameter Inference <i>Janis Fluri</i>
18:30		<b>END</b>

ID	GRAVITATIONAL WAVES POSTER
481	Supermassive Stars in proto-globular clusters: Investigating Runaway Collisions and Mass Loss <i>Tassos Fragos</i>

482	Low Latency Merger Time Prediction of Massive Black Hole Binaries of LISA Data with Neural Posterior Estimation <i>Stefan Strub</i>
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## Electron and photon spectroscopies of quantum materials

Wednesday, 11.09.2024, Room ETF E 1

Time	ID	ELECTRON AND PHOTON SPECTROSCOPIES OF QUANTUM MATERIALS I <i>Chair: Luc Patthey, PSI Villigen</i>
14:30	501	Fast and furious: the fate of quasiparticles at high temperature <i>Anna Tamai (i)</i>
15:00	502	Interfacial electron-phonon coupling at a WS <sub>2</sub> /hBN interface <i>Gianmarco Gatti</i>
15:15	503	Electronic band structure of strained germanium: bridging theory with direct experimental evidence <i>Enrico Della Valle</i>
15:30	504	New Developments in Deflector Analyzer Technology for ARPES <i>Saumya Mukherjee</i>
15:45	505	Doping and temperature dependence evolution of the electronic properties of electron-doped Sr <sub>2</sub> IrO <sub>4</sub> seen by ARPES <i>Yann Alexanian</i>
16:00	506	Unveiling the Electronic Properties of α-SnTe: From Ferroelectric Distortion to Unexpected Topological Surface State <i>Frédéric Chassot</i>
16:15	507	Characterization of Excitons for bulk Black Phosphorus <i>Juan F. P. Mosquera</i>
16:30		<b>Coffee Break</b>
		ELECTRON AND PHOTON SPECTROSCOPIES OF QUANTUM MATERIALS II <i>Chair: Claude Monney, Université de Fribourg</i>
17:00	511	Exciton dynamics in two-dimensional quantum materials in space and time <i>Stefan Mathias (i)</i>
17:30	512	The Balance Between Independent and Correlated Electron Dynamics in Transition Metals <i>Erik de Vos</i>
17:45	513	Anomalous magnetic excitations in the half-filled TI-based cuprate <i>Izabela Bialo (i)</i>
18:15	514	Exploring Low-Energy Excitations and Magnetic Dichroism in Resonant Inelastic X-ray Scattering of the Ferromagnetic van der Waals Material VI <sub>3</sub> <i>Yuan Wei</i>
18:30	515	Spin-orbital correlations in the van der Waals magnet CrPS <sub>4</sub> revealed by resonant inelastic X-ray scattering <i>Zhijia Zhang</i>
18:45	516	Altermagnetism at manganite/cuprate interface <i>Yurii Pashkevich</i>
19:00	517	Charge order fluctuations in a stripe-ordered cuprate superconductor <i>Xunyang Hong</i>
19:15		<b>END</b>

ID	ELECTRON AND PHOTON SPECTROSCOPIES OF QUANTUM MATERIALS POSTER
531	Quantum Material Dynamics Under Pressure <i>Zia Macdermid</i>
532	Probing mono- and few-layer 1T-TaSe <sub>2</sub> with ARPES <i>Salony Mandloi</i>
533	Electronic structure of encapsulated mono-, bi- and trilayer Td-MoTe <sub>2</sub> <i>Julia Issing</i>
534	Integrated Synchrotron X-ray and Raman Techniques for the Determination of the Fill Factor and Thickness of III-V Semiconductor Nanowire Layers grown on a Substrate <i>Dimitrios Sapalidis</i>

## Spintronics and Magnetism at the Nanoscale

Tuesday, 10.09.2024, Room ETZ E 8

Time	ID	SPINTRONICS AND MAGNETISM AT THE NANOSCALE I Chair: Jeffrey A. Brock, ETH Zürich & PSI Villigen
14:00	601	Orbital spin-offs <i>Pietro Gambardella (i)</i>
14:30	602	Phase Transitions and Magnetic Order in a Ruby Lattice Artificial Spin Ice <i>Luca Berchiolla</i>
14:45	603	Reversal time of a magnetic Cobalt nanoparticle with defects <i>Hugo Bocquet</i>
15:00	604	Micro- and nanomagnet stray field investigation for manipulation of spin qubits <i>Michele Aldeghi</i>
15:15	605	Observation of Ultrashort Spin Voltage and -Accumulation <i>Francisco Carrion Ruiz</i>
15:30	606	The magnetoelectric deflection effect <i>Samuel Harrison Moody</i>
15:45		
16:00		Coffee Break
		SPINTRONICS AND MAGNETISM AT THE NANOSCALE II Chair: Lauren Riddiford, ETH Zürich & PSI Villigen
16:30	611	Investigation of oxide heterostructures and 2D van der Waals materials through x-ray dichroism <i>Cinthia Piamonteze (i)</i>
17:00	612	Scanning SQUID-on-tip microscopy of 2D and chiral magnetism <i>Martino Poggio (i)</i>
17:30	613	Observation of gating-induced conformational changes of CeTi@C <sub>80</sub> on graphene by x-ray absorption spectroscopy <i>Wei Chuang Lee</i>
17:45	614	Ultrafast soft X-ray magnetic holography at Swiss-FEL <i>Boris Sorokin</i>
18:00	615	Integration of a near-field coupling device with scanning probes for Nitrogen-Vacancy magnetic imaging <i>Jodok Happacher</i>
18:15		Get to know the Swiss Magnetics IEEE chapter
18:30		CERN 70
19:45		Postersession with Apéro

Thursday, 12.09.2024, Room ETZ E 8

Time	ID	SPINTRONICS AND MAGNETISM AT THE NANOSCALE III Chair: Jeffrey A. Brock, ETH Zürich & PSI Villigen
14:00	621	2D Magnetic Materials <i>Alberto Morpurgo (i)</i>
	<del>622</del>	cancelled
14:30	623	Anomalous magnetic domain pattern in kagome semimetal Co <sub>3</sub> Sn <sub>2</sub> S <sub>2</sub> <i>Hengli Duan</i>
14:45	624	Nature of 2D XY antiferromagnetism in van der Waals monolayer <i>Dmitry Lebedev</i>
15:00	625	Single-Molecule Magnetism and Room Temperature Ferromagnetic Crystals of Tb <sub>3</sub> N@C <sub>80</sub> <i>Lebin Yu</i>
	<del>626</del>	cancelled
15:15		END
16:30		Coffee Break
19:00		Transfer to Dinner
19:30		Conference Dinner

ID	SPINTRONICS AND MAGNETISM AT THE NANOSCALE POSTER
641	Variation in Domain Wall Properties in Ferrimagnetic Thin Films <i>Laura van Schie</i>
642	Thermally superactive artificial kagome spin ice structures <i>Stéphane Nils Nilsson</i>
643	Intra-atomic exchange and adsorption sites of Ln atoms on NaCl thin films <i>Serni Toda Cosi</i>
644	Magnetically actuated angular dependent metasurfaces <i>Nestor Miguel Valdez Garduno</i>
645	Ordering and Thermalization of an Artificial Spin Ice based on the aperiodic Einstein Tiling <i>Tianyue Wang</i>

## Neutron Science

THIS SESSION HAS BEEN ORGANISED IN COLLABORATION WITH THE SWISS NEUTRON SCIENCE SOCIETY.

Tuesday, 10.09.2024, Room ETF E 1

Time	ID	NEUTRON SCIENCE I Chair: Fanni Juranyi, PSI Villigen
14:00	701	Quantitative imaging and understanding of water dynamics and flow in soil and roots <i>Andrea Carminati (i)</i>
	<del>702</del>	cancelled
14:30	703	Exploring Microfluidic-Small Angle Neutron Scattering for Soft Matter Physics <i>Viviane Lütz Bueno</i>
	<del>704</del>	cancelled
14:45	705	Texture analysis capabilities at the neutron strain diffractometer POLDI at PSI <i>Florencia Malamud</i>
15:00	706	AMPLIFY - A Novel Neutron Instrument for Surface Scattering <i>Artur Gregor Glavic</i>

15:15	707	Effect of Softness and Charges on the Volume Phase Transition of Colloidal Microgels and Macro-gels studied via SANS <i>Boyang Zhou (i)</i>
15:45		
16:00		<b>Coffee Break</b>
		<b>NEUTRON SCIENCE II</b> <i>Chair: Romain Franck Sibille, PSI Villigen</i>
16:30	711	Determination of skyrmion-hosting transition metal-oxide Hamiltonian with predictive guidance from ab-initio quantum chemistry <i>Daniel Mazzone (i)</i>
17:00	712	Dipolar-octupolar correlations in Ce <sub>2</sub> Hf <sub>2</sub> O <sub>7</sub> quantum spin ice candidate <i>Victor Porée</i>
17:15	713	The spiral magnetic order in YBaCuFeO <sub>5</sub> single crystals <i>Arnau Romaguera-Camps</i>
17:30	714	Extreme Quantum Fluctuations of the Heisenberg Antiferromagnet on the Honeycomb Lattice <i>Jose Abraham Hernandez Sanchez</i>
	<del>715</del>	<del>cancelled</del>
17:45	716	A High Visibility Grating Deflectometer for the Measurement of the Neutron Electric Charge <i>Marc Persoz</i>
18:00		<b>END</b>
18:30		<b>CERN 70</b>
19:45		<b>Postersession with Apéro</b>

ID	NEUTRON SCIENCE POSTER	
731	Characterisation of high-energy neutron fields at the Swiss spallation neutron source (SINQ) using a Bonner sphere spectrometer <i>Daniel Zeitz</i>	

## Photon Science

THIS SESSION HAS BEEN ORGANISED IN COLLABORATION WITH THE SWISS SOCIETY FOR PHOTON SCIENCE.

Friday, 13.09.2024, Room ETF E 1

Time	ID	PHOTON SCIENCE <i>Chair: Lukas Gallmann, ETH Zürich</i>
13:30	801	Hard X-ray scattering in the millikelvin domain at the SwissFEL Crystallina-Quantum endstation <i>Jakub Vonka</i>
13:45	802	Imaging Ultrafast Electronic Domain Fluctuations in a Nonequilibrium X-Ray Speckle Visibility Experiment <i>Nelson Nientsu Hua</i>
14:00	803	Two-Color Diffractive Imaging of Helium Nanodroplets <i>Linos Hecht</i>
14:15	804	Coherent diffraction imaging with micrometer-sized liquid helium droplets <i>Katharina Kolatzki</i>
14:30	805	Combined electron and ion spectroscopy of atomic and molecular clusters <i>Frederic Ussling</i>
14:45	806	High average power SESAM modelocked laser oscillator exceeding 500 W <i>Moritz Seidel</i>

15:00	807	Single-cavity dual-comb lasers and applications <i>Benjamin Willenberg</i>
15:15	808	Shot-Noise Limited Dual-Comb Supercontinuum Source <i>Alexander M. Heidt</i>
15:30	809	High-sensitivity cross-comb spectroscopy enabled by a single-cavity dual-comb optical parametric oscillator <i>Carolin Bauer</i>
15:45	810	SWIR optically pumped semiconductor lasers <i>Marco Gaulke</i>
16:00		<b>END</b>

ID	PHOTON SCIENCE POSTER	
821	Enhancement of single-shot THz detection using a small bias detection scheme <i>Seyyed Jabbar Mousavi</i>	
822	Small footprint integrated optical parametric oscillator with a Fabry-Perot resonator <i>Alessandra Sabatti</i>	
823	Integrated lithium niobate on insulator high purity spontaneous parametric downconversion source <i>Tristan Kuttner</i>	

## Biophysics and Soft Matter

THIS SESSION HAS BEEN ORGANISED IN COLLABORATION WITH THE SWISS SOFT DAYS AND LIFE SCIENCES SWITZERLAND (LS<sup>2</sup>).

Tuesday, 10.09.2024, Room ETF C 1

Time	ID	BIOPHYSICS AND SOFT MATTER I: NEW CONCEPTS AND METHODS <i>Chair: Christof Fattinger</i>
14:00	901	Introduction: The new focus of contributions to Biophysics and Soft Matter @ SPS <i>Christof Fattinger</i>
14:05	902	A physicist's approach to neuroscience <i>Janos Vörös (i)</i>
14:30	903	Nanopore microscopy for single-cell protein profiling <i>Morteza Aramesh</i>
14:45	904	Orienting fluorophores for highly efficient plasmonic nanoantennas <i>Karol Kołataj</i>
15:00	905	Acoustic metamaterials for biomedical applications: measuring temperature with ultrasounds <i>Lucrezia Maini (i)</i>
15:30	906	The SLS upgrade and its impact on structural biology and drug discovery <i>Phil Willmott (i)</i>
16:00		<b>Coffee Break</b>
		<b>BIOPHYSICS AND SOFT MATTER II: MATERIALS PREPARATIONS AND INVESTIGATIONS <i>Chair: Christof Aegerter, Universität Zürich</i></b>
16:30	911	Water in soft confinement of lipidic mesophase <i>Yang Yao (i)</i>
17:00	912	The cryoWriter – a controlled, automated cryo-EM preparation tool <i>Luca Rima</i>
17:15	913	Elucidating the ubiquitin-proline interaction by NMR <i>Cécilia Siri</i>

17:30	914	<b>Large-Scale Ordered Block Copolymer Gyroid Films by Solvent Evaporation Annealing</b> <i>René Iseli</i>
17:45	915	<b>Understanding oleophobicity through plasma polymer substitutes for PFAS</b> <i>Astrid Southam</i>
18:00	916	<b>Structural Colors from Amyloid-Based Liquid Crystals</b> <i>Tonghui Jin</i>
18:15	917	<b>Infrared spectroscopy at the nanoscale –AFM-IR of soft materials</b> <i>Michele Griffa</i>
18:30		<b>CERN 70</b>
19:45		<b>Postersession with Apéro</b>

**Wednesday, 11.09.2024, Room ETF C 1**

Time	ID	<b>BIOPHYSICS AND SOFT MATTER III: FROM MOLECULES AND CELLS TO MEDICINES</b> <i>Chair: Lucio Isa, ETH Zürich</i>
14:30	921	<b>Engineering tissues with architected scaffolds</b> <i>Marcy Zenobi-Wong (i)</i>
	922	<i>cancelled</i>
15:00	923	<b>Ligand identification with DNA-encoded chemical libraries</b> <i>Christoph Dumelin</i>
15:15	924	<b>Focal Molography: From Fundamentals to DNA-Encoded Library Screenings and Membrane Protein Target Characterization</b> <i>Andreas Frutiger</i>
15:45	925	<b>Improving oral vaccine efficacy through the study of antibody–bacterial glycan interactions and gut dynamics</b> <i>Milad Radiom</i>
16:00	926	<b>Advanced Instrumentation Enables Structure-based Drug Discovery on Challenging Membrane Protein Targets</b> <i>Michael Hennig (i)</i>
16:30		<b>Coffee Break</b>

**Thursday, 12.09.2024, Room ETF C 1**

Time	ID	<b>BIOPHYSICS AND SOFT MATTER IV: PHYSICS OF BIOLOGICAL SYSTEMS I</b> <i>Chair: Sahand Jamal Rahi, EPFL</i>
14:00	931	<b>Biophysical models for molecular motors in vivo</b> <i>Jörg Stelling (i)</i>
14:30	932	<b>Cell-cycle coupled evolution of dynamic, multi-state and computational protein functionalities</b> <i>Vojislav Gligorovski</i>
14:45	933	<b>Patterning, waves and synchronization in arrays of active filaments</b> <i>Guillermina Ramirez-San-Juan (i)</i>
15:15	934	<b>A nuclear jamming transition in embryonic tissues</b> <i>Sangwoo Kim (i)</i>
15:45	935	<b>Agent-based model for active nematics of cellular tissues</b> <i>Mathieu Dedenon</i>
16:00	936	<b>Mitochondrial Pearling Distributes mtDNA Nucleoids</b> <i>Juan Cruz Landoni</i>
16:15	937	<b>Characterizing protein interactions and dynamics in transcription factor condensates in early embryonic Zebrafish</b> <i>Eleonora Perego</i>
16:30		<b>Coffee Break</b>

Time	ID	<b>BIOPHYSICS AND SOFT MATTER V: PHYSICS OF BIOLOGICAL SYSTEMS II</b> <i>Chair: Sahand Jamal Rahi, EPFL</i>
17:00	941	<b>Event-driven acquisition for content-enriched microscopy</b> <i>Willi Leopold Stepp</i>
17:15	942	<b>Probing the role of hydrodynamic interactions in metachronal wave formation in dense ciliary arrays</b> <i>Katerina M. Kourkoulou</i>
17:30	943	<b>Symmetry breaking and number control at the onset of centriole duplication</b> <i>Friso Douma</i>
17:45	944	<b>In situ stoichiometry and organization of human respiratory chain super-complexes</b> <i>Matthew Domenic Lycas</i>
18:00	945	<b>Resection of DNA in response to permanent DSBs in <i>S.cerevisiae</i></b> <i>Marco Labagnara</i>
18:15	946	<b>Amino Acids Effect on Protein-Protein Interactions</b> <i>Pamina Martina Winkler</i>
18:30	947	<b>Spatial organisation of the cell's metabolic engine</b> <i>Kathrin Laxhuber</i>
18:45	948	<b>Elucidating Distinct Effects of Branching Processes on Mitochondrial Networks</b> <i>Sheda Ben Nejma</i>
19:00		<b>END; Transfer to Dinner</b>
19:30		<b>Conference Dinner</b>

**Thursday, 12.09.2024, Room ETZ E 6**

Time	ID	<b>BIOPHYSICS AND SOFT MATTER VI: PHYSICS OF BIOLOGICAL SYSTEMS III</b> <i>Chair: Christof Fattinger</i>
17:00	951	<b>Maximum likelihood estimation of moments in molecular density optical nanoscopy</b> <i>Santiago Nicolas Rodriguez Alvarez</i>
17:15	952	<b>Connecting cilia organization to collective cilia dynamics in Paramecium</b> <i>Daphne Laan</i>
17:30	953	<b>Deciphering mechanisms of symmetry breaking in <i>C. elegans</i> embryos</b> <i>Ella Müller</i>
17:45	954	<b>Crowding induced phase separation in the yeast proteome</b> <i>Guido Narduzzi</i>
18:00	955	<b>Chronobiology of DNA Damage Checkpoint Override</b> <i>Lorenzo Scutteri</i>
18:15	956	<b>Stabilizing effect of small molecules on colloidal and protein dispersions</b> <i>Ting Mao</i>
18:30	957	<b>Impact of spatial structure on bacterial resistance evolution</b> <i>Cecilia Fruet</i>
18:45	958	<b>Structure and function of intermitochondrial junctions in primary human T cells</b> <i>Christian Zimmerli</i>
19:00		<b>END; Transfer to Dinner</b>
19:30		<b>Conference Dinner</b>

ID	<b>BIOPHYSICS AND SOFT MATTER POSTER</b>
971	<b>Photosynthetic vs Photovoltaic Efficiency of <i>Limnospira indica</i>, Perspective Cyanobacteria Strain for Space Mission Live Support Systems.</b> <i>Nikolay Ryzhkov</i>

972	<b>Focal Molography - a new biophysical method</b> <i>Philipp Cedro</i>
973	<b>Investigating the homochirality of Jousselini beetles through polarization-resolved Hyperspectral Imaging</b> <i>Peyman Soltani</i>

### Further Meetings

TIME	ROOM	MEETING
Monday, 09.09., 08:30	ETZ E 6	SPS Board Meeting (Non-Public)
Monday, 09.09., 13:00	ETZ E 6	SPS General Assembly
Monday, 09.09., 13:00	ETZ E 8	SSPh General Assembly
Wednesday, 11.09., 11:00	ETZ E 8	GW-learn Sinergia meeting
Thursday 12.09., 15:00	ETZ E 6	SPS DEI Commission Meeting

### Aussteller - Exposants

**Bruker Switzerland AG**  
CH-8117 Fällanden  
[www.bruker.com](http://www.bruker.com)

**COMSOL Multiphysics GmbH**  
CH-8005 Zürich  
[www.comsol.com](http://www.comsol.com)

**Dyneos AG**  
CH-8307 Effretikon  
[www.dyneos.ch](http://www.dyneos.ch)

**Eidg. Institut für Geistiges Eigentum**  
CH-3003 Bern  
[www.ige.ch](http://www.ige.ch)

**Keyence International NV/SA**  
BE-2800 Mechelen  
[www.keyence.eu](http://www.keyence.eu)

**lino Biotech AG**  
CH-8134 Adliswil  
[www.lino-biotech.com](http://www.lino-biotech.com)

**Lumibird SA**  
FR-91140 Villejust  
[www.lumibird.com](http://www.lumibird.com)

**Quantum Design AG**  
CH-1723 Marly  
<https://qd-europe.com/ch/>

**SPECS Surface Nano Analysis GmbH**  
DE-13355 Berlin  
[www.specs.com](http://www.specs.com)

**teltec systems AG**  
CH-5620 Bremgarten  
[www.teltec.ch](http://www.teltec.ch)