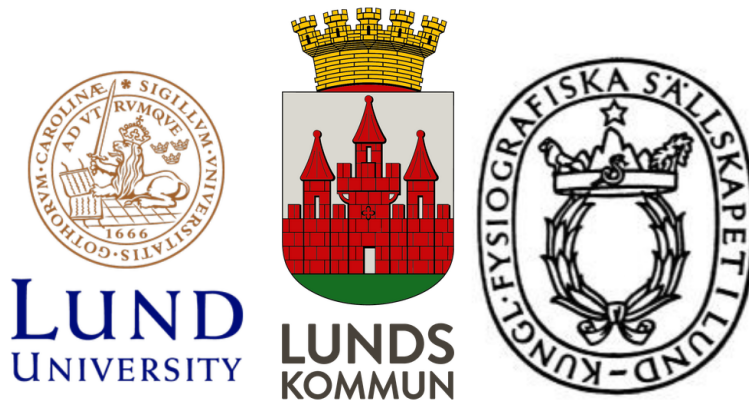


Fysikdagarna 2022

Wednesday, 15 June 2022 - Friday, 17 June 2022

Programme



Wednesday, 15 June 2022

Sektionen för elementarpartikel och astropartikelfysik: AF Borgen: Nya Fest (09:00 - 12:00)

time	title	presenter
09:00	Particle days: Welcome and Introduction	
09:15	ATLAS experiment: Overview of activities at KTH	OHM, Christian
09:30	Search for a supersymmetric long-lived particle at the ATLAS experiment	BACKMAN, Karl Filip
09:45	Search for Higgs-like scalar particles in the $\gamma\gamma$ final state with the ATLAS experiment.	ANDREAN, Stefio Yosse
10:00	Break (30 minutes)	
10:30	Effective Field Theory interpretations of Higgs boson pair production searches in ATLAS	DIMITRIADI, Christina
10:45	Status and Prospects of Light Dark Matter eXperiment	POTTGEN, Ruth
11:00	The SMARTHEP International Training Network	DOGLIONI, Caterina
11:15	Differentiable Programming for High-Energy Physics	SIMPSON, Nathan Daniel
11:30	IPPOG/outreach	STRANDBERG, Jonas STRANDBERG, Sara
11:45	High-School/outreach	STRID, Kristian

Undervisningssektionen (Gymnasie): Visit to ESS (12:30 - 20:00)

-Conveners: Susanne Tegler

time	title	presenter
12:30	Registrering och kaffe	
13:00	Introduktion ESS	
13:15	Föreläsning "Experiment med neutroner vid ESS"	
14:00	Föreläsning "Strålkällan vid ESS"	
14:45	Säkerhetsinformation inför rundtur	
15:00	Fika	
15:15	Ta på skyddskläder (grupp 2)	
15:30	Workshop (grupp 1) Rundtur på ESS (grupp 2)	
16:30	Ta på alternativt ta av skyddskläder	
16:45	Rundtur på ESS (grupp 1) Workshop (grupp 2)	
17:45	Ta av skyddskläder och avslutning på ESS	
18:30	Gymnasielärarträff med buffé på Fysicum	

Parallel session: The default times are 13:00-17:00 (12:30 - 17:00)

Sektionen för kärnfysik: AF Borgen, Kerstins rum (12:30 - 17:00)

-Conveners: Joakim Cederkall

time	title	presenter
12:30	Isospin-symmetry breaking in nuclei and applications	SMIRNOVA, Nadezda

13:00	Recent results from the R3B experiment	JEDELE, Andrea
13:30	Bayesian inference and predictions in the few-nucleon sector	SVENSSON, Isak
13:50	Posterior predictive distributions of nucleon-deuteron scattering observables	MILLER, Sean
14:10	Mirror Symmetry and Proton Emission in the Upper fp Shell	HRABAR, Yuliia
14:30	Stories from inside a magnet: solenoidal spectrometers	KAWECKA, Anna
14:50	Coffee (25 minutes)	
15:15	The potential of multi-strange physics with PANDA at FAIR	PAPENBROCK, Michael
15:40	Femto-science: Electromagnetic transition form factors of the nucleon	AN, Di
16:00	The Structure of Something Strange	THORÉN, Viktor
16:20	Exploring the HADES Feb22 pp Run	RIEGER, Jana
16:40	Physics Opportunities from the $pp \rightarrow K \Lambda \Lambda$ Reaction Channel at HADES	BOHMAN, Malin

Sektionen för elementarpartikel och astropartikelfysik: AF Borgen: Nya Fest (13:00 - 17:05)

-Conveners: David Silvermyr; Rikkert Frederix

time	title	presenter
13:00	Phase Transition and Gravitational Wave of Strongly Coupled Dark Sectors	WANG, Zhi Wei
13:15	The electroweak phase transition and Effective Field Theory	ENBERG, Rikard
13:30	New methods for studying the Electroweak phase transition	EKSTEDT, Andreas
13:45	Fingerprints of freeze-in dark matter in an early matter-dominated era	BANERJEE, Avik
14:00	Phase transitions: A source of cosmic-frontier phenomenology	CAMARGO-MOLINA, Eliel
14:15	CDF II W-mass anomaly faces first-order electroweak phase transition	PASECHNIK, Roman
14:30	A fermionic portal to a non-abelian dark sector	PANIZZU, Luca
14:45	Speeding up SM Amplitude Calculations with Chirality Flow	LIFSON, Andrew
15:00	Break (30 minutes)	
15:30	Status of the Light Dark Matter KAW project	EMKEN, Timon
15:45	The SHIFT project: status and prospects	BERGEAAS KUUTMANN, Elin
16:00	Searching for Vector Dark Matter at Beam Dump Experiments	GRAY, Taylor
16:15	General Dark Matter Electron Interactions in Detector Materials	URDSHALS, Einar
16:30	RECFA/CERN	FERRARI, Arnaud MILSTEAD, David Anthony
16:45	IUPAP	PASECHNIK, Roman PASECHNIK, Roman
17:00	News from ACCU (slides only, no presentation)	GONZALEZ SUAREZ, Rebeca

Sektionen för Gravitation: AF Borgen, VD-rummet (13:00 - 17:00)

-Conveners: Håkan Andreasson

time	title	presenter
13:00	Roger Penroses insatser för relativitetsteori	BENGTSSON, Ingemar
14:00	Roterande rumtider i allmän relativitetsteori	BRADLEY, Michael
15:00	Fika (30 minutes)	

15:30	Gravitational collapse and cosmic censorship for the Einstein-Vlasov system	ANDREASSON, Håkan
16:15	Some aspects of black hole stability	BÄCKDAHL, Thomas

Sektionen för atom-, molekyl- och optisk fysik: AF Borgen: Gustafscenen (13:00 - 17:10)

time	title	presenter
13:00	Welcome and short introduction to AMO physics in Lund and Sweden	DAHLSTRÖM, Jan Marcus
13:15	Cooling dynamics of nitrogen-containing PAH cations (PANHS)	INDRAJITH, Suvasthika
13:40	Quantum computing in rare-earth-ion-doped crystals	KINOS, Adam
14:05	Ultrafast nanophotonics: from all-optical control of exciton dynamics towards plasmon-tailored nano-chemistry	MACCAFERRI, Nicolò
14:30	Atomic astrophysics for Galactic evolution	BURHEIM, Madeleine
14:40	Understanding Dynamic Calculations of Anharmonic Infrared Spectra	ANDERSSON, Åke
14:50	On the interplay of fluorescence, dissipation, and molecular dissociation for a model diatomic molecule in a quantum optical cavity	GOPALAKRISHNA, Megha
15:00	Coffee break (30 minutes)	
15:30	Shooting X-rays at the nitrogen molecule like it's 2022	KJELLSSON, Ludvig
15:55	Exploring crystallisation in "no man's land"	LADD PARADA, Marjorie
16:20	Relativistic laser-electron acceleration from nanotargets	DE ANDRES GONZALEZ, Aitor
16:30	A Levitating Droplet as a Toy Atom	TELLO MARMOLEJO, Javier
16:40	fs-recombination in Fe-based solar cells limits the performance	LINDH, Linnea
16:50	Multiconfigurational effects in an iron-nitrosyl (FeNO) complex.	COATES, Michael
17:00	A Green's function method for the two-dimensional frustrated spin-1/2 Heisenberg magnetic lattice	ZHAO, Zhen

Undervisningssektionen (Physics Education Research): Fysikum, Sal D (L315) (13:15 - 14:15)

-Conveners: Urban Eriksson

time	title	presenter
13:15	Teaching with open research data: experiences from five years of exploration-driven lab exercises in subatomic physics for undergraduate students	OHM, Christian
13:45	Linking Programming to Representations	SVENSSON, Kim

Plenary session: Poster session, AF Borgen Athen (17:00 - 19:00)

Thursday, 16 June 2022

Welcome, AF Norgen, Stora salen (5) (08:30 - 08:35)

LINXS intro (10) (08:35 - 08:45)

- Presenter: BLACKBURN, Elizabeth

MAX IV (30+10) (08:45 - 09:25)

- Presenter: MOLLOY, Stephen

ESS (30+10) (09:25 - 10:05)

- Presenter: SCHREYER, Andreas

Fika (10:05 - 10:30)

LINXS 1 (20+10) (10:30 - 11:00)

- Presenter: BECH, Martin

LINXS 2 (20+10) (11:00 - 11:30)

- Presenter: BLOMBERG, Sara

Antihydrogen and the ALPHA and GBAR experiments (20+10) (11:30 - 12:00)

- Presenter: JONSELL, Svante

Lunch (included) (12:00 - 12:45)

Welcome to Lund (Mayor of the City of Lund) (12:45 - 12:50)

- Presenter: HELMFRID, Mats

FAIR and strong interaction matter in the universe (35+10) (12:50 - 13:35)

- Presenter: SCHWENK, Achim

Investigative Science Learning Environment (ISLE): When learning physics mirrors doing physics (45+10) (13:35 - 14:30)

- Presenter: ETKINA, Eugenia

Fika (14:30 - 14:50)

CERN, LHC and the Higgs (35+10) (14:50 - 15:35)

- Presenter: STRANDBERG, Sara

Challenges for women's careers in physics (45+10) (15:35 - 16:30)

- Presenters: ERAN JONA, Meytal; NIR, Yosef

Conference dinner (included). AF Borgen Stora salen. After dinner: Troels Petersen: The modelling of Covid-19 (18:30 - 22:00)

Friday, 17 June 2022

Undervisningssektionen (Gymnasie) (09:00 - 12:00)

time	title	presenter
09:00	Föreläsning "Magneter och människor – MR i forskning och medicin" (Fysicum K404)	MARKENROTH BLOCH, Karin
09:01	Workshop "Investigative Science Learning Environment and student learning of energy" med fika (Fysicum L421), fully booked	ETKINA, Eugenia PLANINSIC, Gorazd
10:00	Fika (20 minutes)	
10:20	Föreläsning "Joniserande strålning i medicinens tjänst för diagnostik och terapi" (Fysicum K404)	LJUNGBERG, Michael

Sektionen för elementarpartikel och astropartikelfysik: Institutionen för astronomi och teoretisk fysik, Lundmarkssalen (09:00 - 11:50)

time	title	presenter
09:00	The ESSnuSB Experiment - Conceptual Design and Physics Potential	EKELÖF, Tord
09:15	Latest Results from the IceCube Neutrino Observatory	FINLEY, Chad
09:30	Probing X-ray bright blazars as sources of high-energy astrophysical neutrinos with IceCube	SHARMA, Ankur
09:45	Detection horizon of neutrinos from core-collapse supernovae using high energy neutrinos	VALTONEN-MATTILA, Nora
10:00	Break (30 minutes)	
10:30	New opportunities with IceCube-Gen2	O'SULLIVAN, Erin
10:45	Pulsars do not produce sharp spectral features in the cosmic-ray positron flux	JOHN, Isabelle
11:00	HIBEAM at the ESS - status and plans	MEIROSE, Bernhard
11:15	ALICE activities in Lund	OHLSON, Alice

Parallel session: Parallel sessions (09:00 - 12:00)

Plenary session: SFS annual meeting, Fysikum, Sal A (L317) (10:30 - 12:00)

Parallel session: Visit to ESS (Please mail susanne.tegler@gmail.com before Thursday 12:00 if you would like to come.

Maximum 12 participants.) (13:00 - 15:00)