

Zimányi School 2018

3 Dec 2018, 09:00 → 7 Dec 2018, 18:00 Europe/Budapest
Bldg 3, Council room (Wigner Research Center for Physics)

Description

ZIMÁNYI SCHOOL'18



Janos Kass: Cantata Profana

18. ZIMÁNYI SCHOOL

WINTER WORKSHOP ON
HEAVY ION PHYSICS

Dec. 3. - Dec. 7.,
Budapest, Hungary



József Zimányi (1931 - 2006)

The Zimányi School aims to summarize the developments of 2018 in high energy heavy ion physics, with particular attention to the new data emerging from the **Relativistic Heavy Ion Collider (RHIC)** and the **Large Hadron Collider (LHC)**, **SPS** and **J-PARC**. We will discuss results from other high energy nuclear and particle physics facilities of the world, most importantly lower energy colliders, exploring the nuclear phase diagram (with special attention to **FAIR** and **NICA**). Another important point of the School is to discuss important new results in hydrodynamics, flow and femtoscopy. One of the main aims of the School is to encourage interaction between the theoretical and experimental community. A slightly overlapping list of topics of the School includes (in alphabetical order):

- Effective QCD theory/model approaches
- Elastic scattering and diffraction (experiment+theory)
- Femtoscopy (experiment+theory)
- Flow and hydrodynamics (experiment+theory)
- Gluon saturation and electron-ion collider (experiment+theory)
- Heavy flavor and quarkonia (experiment+theory)
- Intermediate energies (FAIR, J-PARC, nuclear physics)
- Jets and high pT probes (experiment+theory)
- Magnetic field in heavy ion collisions (experiment+theory)
- Photons and dileptons (experiment+theory)
- QCD at non-zero temperature and density
- Search for the QCD critical point (experiment+theory)
- Strongly coupled gauge theories (beyond SM, AdS/CFT)
- Vorticity and polarization in heavy ion physics (experiment+theory)

MONDAY, 3 DECEMBER

09:00 → 10:50 **Thermodynamics and photons**

Bldg 3, Council room

09:00 **Opening and welcome at Wigner** ⌚ 5m

Speaker: Peter Levai (Hungarian Academy of Sciences (HU))

09:05 **A guide to lattice QCD thermodynamics** ⌚ 40m

Speaker: Szabolcs Borsanyi (University of Wuppertal)

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09:45 **Highlights from BNL and RHIC 2018** ⌚ 40m

Speaker: Michael Tannenbaum (Brookhaven National Laboratory (US))

 Tannenbaum-Ziman...

10:25 **Direct photons in heavy ion collisions: what we learned and what we didn't learn (yet)** ⌚ 25m

Speaker: Gabor David (Brookhaven National Laboratory)

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10:50 → 11:10 **Coffee break** ⌚ 20m

📍 Bldg 3, Council room

11:10 → 12:40 **Jets and high pT probes**

📍 Bldg 3, Council room

11:10 **Jets and high pT probes in heavy-ion collisions** ⌚ 25m

Speaker: Miguel angel ESCOBEDO ESPINOSA (University of Jyväskylä)

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11:35 **Surprising similarities between high pt spectra in PbPb and pp collisions at high multiplicities** ⌚ 25m

Speaker: Guy Paic (Universidad Nacional Autonoma (MX))

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12:00 **Jet structure studies in small systems** ⌚ 15m

Speaker: Zoltán Varga

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12:15 **High-pT hadron+jet correlations in ALICE** ⌚ 25m

Speaker: Filip Krizek (Acad. of Sciences of the Czech Rep. (CZ))

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12:40 → 14:00 **Lunch break** ⌚ 1h 20m

📍 Bldg 3, Council room

14:00 → 15:40 **Jets and QCD matter**

📍 Bldg 3, Council room

14:00 **Physics of small systems using underlying event observables** ⌚ 20m

Speaker: Antonio Ortiz Velasquez (Universidad Nacional Autonoma (MX))

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14:20 **Spectra and flow of light nuclei in relativistic heavy ion collisions at RHIC and the LHC** ⌚ 20m

Speaker: Lilin Zhu

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14:40 **Low pT direct photons in heavy ion collisions** ⌚ 15m

Speaker: Mr Zhandong Sun (University of Debrecen)

 LowpTPhon_ziman...

14:55 **Study of angular correlations in Monte Carlo Simulations** ⌚ 15m

Speaker: Balazs Endre Szigeti (Hungarian Academy of Sciences (HU))

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15:10 **Estimating the variation of neutron star observables by dense nuclear matter properties** ⌚ 15m

Speaker: Péter Pósfay (Wigner Research Centre for Physics)

 Peter_Posfay_zima...

15:25 **Neutron star properties from the extended linear sigma model** ⌚ 15m

Speaker: Mr János Takátsy (Wigner RCP, Budapest, Hungary)

 Takatsy_Janos_Zim...

15:40 → 16:10 **Coffee break** ⌚ 30m

📍 Bldg 3, Council room

16:10 → 18:10 **Flow**

📍 Bldg 3, Council room

16:10 **Flow in heavy-ion collisions** ⌚ 25m

	Speaker: Piotr Bozek (AGH University of Science and Technology)  flowbudapeszt.pdf
16:35	Anisotropic flow studies at the LHC ⌚ 25m Speakers: Panos Christakoglou (Nikhef National institute for subatomic physics (NL)), Panos Christakoglou (Nikhef National institute for subatomic physics (NL))  Christakoglou.Zima...
17:00	Measurement of non-linear flow modes for identified charged particles with ALICE ⌚ 25m Speaker: Naghmeh Mohammadi (CERN)  nonlinearflow_zima...
17:25	Simulation study of effects induced by final granularity of detector in particle flow deduced from experimental data in relativistic heavy ion collisions ⌚ 15m Speaker: Alexandr Prozorov  Prozorov_Zimanyi.p...
17:40	Do we need viscosity to suppress v_2 ⌚ 15m Speaker: Ádám Takács (Wigner Research Centre for Physics)  Takacs_Zimanyi_2...
17:55	Analytical solutions of ideal hydrodynamics and viscous hydrodynamics with longitudinal accelerating flow ⌚ 15m Speaker: Zefang Jiang (CCNU)  JiangZF-ZIMANYI-V...  Pseudo-rapidity dist...

TUESDAY, 4 DECEMBER		
09:00	→ 10:35	Femtoscopy 📍 Bldg 3, Council room
09:00		Averaging and the shape of the correlation function ⌚ 25m Speaker: Boris Tomasik (Univerzita Mateja Bela (SK))  tomasik_Zimanyi20...
09:25		Bose-Einstein correlations in pp and pPb collisions at LHCb ⌚ 20m Speaker: Bartosz Piotr Malecki (Polish Academy of Sciences (PL))  BartoszMalecki_Zi...
09:45		Lévy HBT in PHENIX ⌚ 20m Speaker: Dániel Kincses (Eötvös Loránd University)  kincsesd_zimanyi20...
10:05		Three-dimensional Levy HBT at the PHENIX experiment ⌚ 15m Speaker: Bálint Kurgyis  kurgyis_zimanyi_20...
10:20		Lévy HBT at NA61/SHINE ⌚ 15m Speaker: Mr Barnabas Porfy (Eötvös Loránd University)  bporfy_ZIM18_HBT...
10:35	→ 11:05	Coffee break ⌚ 30m 📍 Bldg 3, Council room
11:05	→ 12:25	Femtoscopy and chiral symmetry 📍 Bldg 3, Council room
11:05		A new generation of hadron-hadron interaction measurements with ALICE ⌚ 25m