

ATF 2021 in Prague

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Technology Forum 2021: organized by APPEC, NuPECC, ECFA, CTU in Prague (2 research institutes – IEAP, CIIRC), NRPI

Date: June 1-2. 2021 (it was changed due to covid-19)

Venue: CTU in Prague (2 possibilities – CIIRC or IEAP CTU)



European Committee for Future Accelerators



Státní ústav radiační ochrany, v. v. i.
National Radiation Protection Institute



Scientific Committee:

Beniamino Di Girolamo (chair, CERN), **Teresa Montaruli** (APPEC), **Hanna Franberg** (NuPECC/GANIL), **Corrado Gargiulo** (ECFA), **Václav Hlaváč** (CIIRC, CTU in Prague), **Jiří Hůlka** (NRPI), **Ivan Štekl** (IEAP, CTU in Prague), **Enrico Chesta** (CERN, Knowledge Transfer Group)

Organizing Committee:

Ivan Štekl (IEAP, CTU in Prague), **Maroš Petro** (IEAP, CTU in Prague), **Aneta Chaloupková** (IEAP, CTU in Prague), **Martina Vanišová** (IEAP, CTU in Prague), **Daniel Seifert** (CIIRC, CTU in Prague), **Ivan Hupka** (NRPI)

Topics:

1. Robotics, electronics and detectors **in medical applications** (including Covid-19 era)
2. Robotics, electronics and detectors **in space**
3. Robotics, electronics and detectors **in underground, high energy physics and nuclear reactors.**

Indico page:

<https://indico.utef.cvut.cz/indico/event/20/overview>

Some remarks (opened for discussion):

- a) ≤ 50 -60 participants
- b) Participation of technology companies in ATF subjects
- c) Student session (the possibility for selected students to present their activities in ATF subjects)
- d) Poster session ???

Venue No 1: Respirium conference room in the CIIRC (10 minutes from Prague's castle) (<https://www.ciirc.cvut.cz/about/ciirc-ctu-building/>)



Venue No 2: Conference center of IEAP CTU, Bethlem palace (3 minutes from Charles bridge)



Special stamp
of the Czech Post



18.4.1869: Czech Polytechnical School in Prague, and Deutsche Technische Hochschule in Prag.

A) Research subjects in IEAP CTU:

LHC at CERN – ATLAS (shielding, ATLAS TPX – radiation field measurement, luminosity monitoring, data processing), MoEDAL

Neutrino physics – $\beta\beta$ decay (^{82}Se SuperNEMO, ^{76}Ge LEGEND); atmospheric neutrinos (Baikal-GVD); reactor antineutrinos

Detection of dark matter – experiment PICO in SNOLAB (Canada)

Detection of high-energy cosmic rays – Timepix detectors on ISS, NASA; on ESA satellite Proba-V and RISESAT, Japan)

Applications – pixel and strip detectors, imaging, biomedicine, study of material.....

B) Research subjects in CIIRC CTU:

Automatic control and optimization; robotics; artificial intelligence; computer graphics; computer vision and machine learning; designing software systems; designing decision and diagnostic systems and their applications in medicine, energy transport, including smart homes and smart cities. Technology transfer to industry. Industry 4.0.

C) Research subjects in NRPI:

Radiation protection; support of state supervision in radiation protection; operating the Radiation Monitoring Network in the Czech Republic including Early Warning System and atmospheric contamination monitoring; operating the mobile team for radiation accidents and emergency events; Radon R&D; radiation protection assessments for medical exposure...

[Close link with ATF conference subjects](#)

Selected conferences or summer schools organized by IEAP CTU:

1) Conferences MEDEX (Matrix Elements for the Double beta decay Experiments)

Organizers: O. Civitarese (Univ. La Plata), J. Suhonen (Univ. Jyvaskyla), I. Štekl (IEAP CTU); R. Hodák (IEAP CTU) – every two years

MEDEX'19: Prague, 27-31 May, 2019 (50 participants), venue = National Technical Library

See <https://indico.utef.cvut.cz/indico/event/15/overview>

Proceedings published in AIP



2) 2017: the VII Pontecorvo Neutrino Physics School at IEAP CTU

2019: the VIII Pontecorvo Neutrino Physics School to be held in Hotel International, Sinaia mountain resort, Romania, September 1 - September 10

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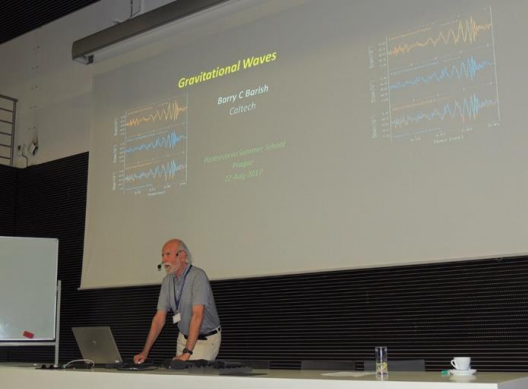
See <http://theor.jinr.ru/~neutrino19/>



VII International Pontecorvo Neutrino Physics School 2017



<http://theor.jinr.ru/~neutrino17>



Nobel price winner B. Barish, during his lecture in ν school (2017)

August 20 – September 1, 2017 **Prague, Czech Republic**

<p>Introduction to ν physics Theory of ν-masses and mixing ν-oscillation phenomenology Solar ν-experiments and theory Accelerator ν-experiments Reactor ν-experiments Measurement of ν-mass</p> <p>OνBβ-decay experiments OνBβ-decay nuclear matrix elements ν-nucleus interactions Sterile neutrinos</p> <p>Leptogenesis ν-astronomy ν-telescopes ν-cosmology Dark matter experiments Observation of gravitational waves Neutrino physics at CERN Future colliders Statistics for Nucl. and Particle Phys.</p>	<p>Bilenky S. (JINR Dubna) King S.F. (Southampton Univ.) Kayser B. (Fermilab) Smirnov A. (MPI Heidelberg) Feldman G.J. (Harvard Univ.) Wang Y. (HEP) Tchichev I. (JINR RAS, Moscow) Gastaldo L. (Heidelberg Univ.) Barabash A. (ITEP Moscow) Vogel P. (Caltech) Sobczyk J. (Wroclaw Univ.) Link J. (Virginia Tech.) Giunti C. (INFN Torino) Davidson S. (IPNL Lyon) Tambara I. (Copenhagen Univ.) Spiering C. (DESY) Mangano G. (INFN Naples) Formengo N. (INFN Torino) Barish B. (CALTECH) Eisen E. (CERN) Blondel A. (CERN) Dyk D.V. (IC, London)</p>	<p>Organized by Joint Institute for Nuclear Research (Dubna, Russia) Czech Technical University (Prague, Czech Republic) Charles University (Prague, Czech Republic) Comenius University (Bratislava, Slovakia) Institute of Nuclear Physics (Krakow, Poland)</p> <p>Members Bednyakov V.A. (JINR) Leitner R. (ChU) Zalawska A. (INP) Brudin V.B. (JINR) Rondio E. (NCBJ, Swierk) Kolganova E.A. (JINR)</p>	<p>Organizing Committee Matveev V.A. (JINR) - chairman Bilenky S.M. (JINR) - scientific program Štekl I. (CTU) - vice-chairman Otshevskiy A.G. (JINR) - vice-chairman Simkovic F. (CU/JINR) - vice-chairman Jezaek M. (INP) - vice-chairman</p> <p>Secretaries Hodák R. (CTU) Rusakovich E. (JINR) Rukhadze E. (CTU) Vaníšová M. (CTU)</p>
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Český Krumlov

Kutná Hora

Prague advertisement and other cities (for excursion): Cesky Krumlov, Kutna Hora, castle Krivokrat.....



Conclusion:

- IEAP, CIIRC CTU, NRPI are ready to participate in ATF 2021 organization
- Offering interesting conference venue (possibility to select – modern or old)
- Needed infrastructure in Prague
- High level of Czech science, education and industry
- Very good connections of Prague with many airports
- Attractive location

WELCOME in PRAGUE

