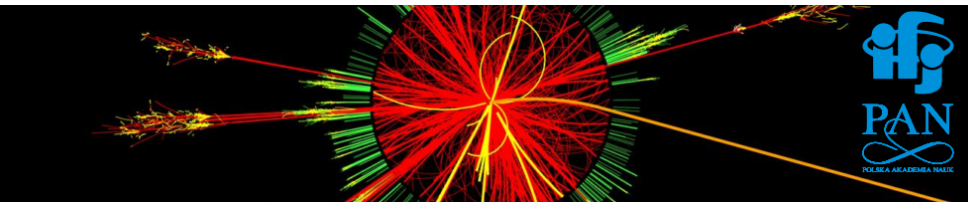


Particle Physics Summer Student Programme

Project Selection

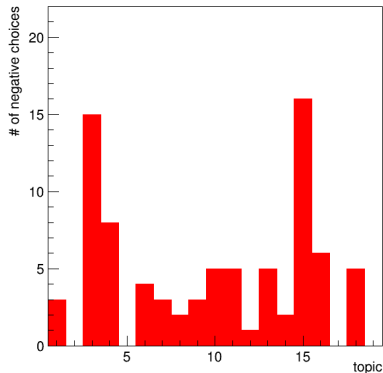
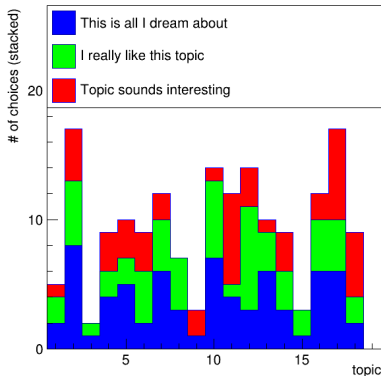
Maciej Trzebiński



Institute of Nuclear Physics Polish Academy of Sciences

7th July 2021

IFJ PAN PPSS Programme – Project Selection



- Number of people assigned to topic with the highest self-declared weight¹: 29
- Number of people assigned to topic with 2nd highest self-declared weight: 5
- Number of people assigned to topic with 3rd highest self-declared weight: 2
- Number of people assigned to topic other than selected²: 0
- Number of people assigned to negative selection: 0

¹Not necessarily 'This is all I dream about' since in some cases the highest weight was simply 'Topic sounds interesting'.

²Excluding negative selections, but containing cases when no selection was done.

- 1 Polarization measurement in B meson decays**
Supervisor: dr hab. Andrzej Bożek, dr Jarosław Wiechczyński, Department of Leptonic Interactions (NZ11), bozek@belle2.ifj.edu.pl, wiechczynski@belle2.ifj.edu.pl
Students: Justyna Mędrala, Ralph Torres
- 2 Search for CP violation in decays $B_0 \rightarrow D^* D^\pm$ in the Belle II experiment**
Supervisor: dr Olga Werbycka, Department of Leptonic Interactions (NZ11), olga.verbytska@ifj.edu.pl
Students: Silje Oino, Bartłomiej Pierzchała
- 3 Monte Carlo generator of bremsstrahlung events for EIC**
Supervisor: prof. dr hab. Janusz Chwastowski, The Diffractive Physics Department (NZ13), Janusz.Chwastowski@ifj.edu.pl
Students: Kacper Kinastowski, Suvadeep Roy
- 4 AFP event classification with machine learning**
Supervisor: dr Maciej Lewicki, The Diffractive Physics Department (NZ13), maciej.piotr.lewicki@cern.ch
Students: Fatemeh Nouri, Janusz Twardak
- 5 Reconstruction of exclusive jet events**
Supervisor: dr Rafał Staszewski, The Diffractive Physics Department (NZ13), rafal.staszewski@ifj.edu.pl
Students: Bhupesh Dixit, Chin Zhe Tee
- 6 Analysis of Cluster Shapes in the ATLAS AFP Detector**
Supervisor: dr Maciej Trzebiński, The Diffractive Physics Department (NZ13), maciej.trzebinski@ifj.edu.pl
Students: Niki Gallou, Sara Ibrahim
- 7 Optimization and training of neural networks for b-jet identification in the heavy ion collisions**
Supervisor: dr Dominik Derendarz, The ATLAS Experiment Department (NZ14), dominik.derendarz@ifj.edu.pl
Students: Jakub Garwoła, Krzysztof Szafrński

- 8 Study of b-jet production in the ATLAS experiment at the LHC**
Supervisor: prof. dr hab. Adam Trzupek, The ATLAS Experiment Department (NZ14), Adam.Trzupek@ifj.edu.pl
Students: [Sridhar Hariharakrishnan](#), [Siddharth Thakker](#)
- 9 Charged particle production in Xe+Xe collisions**
Supervisor: dr hab. Krzysztof Woźniak, The ATLAS Experiment Department (NZ14), Krzysztof.Wozniak@ifj.edu.pl
Students: [Asad Parihar](#), [Kamil Zembaczyński](#)
- 10 Detection of Cosmic-Ray Ensembles**
Supervisor: dr hab. Krzysztof Woźniak, The ATLAS Experiment Department (NZ14), Krzysztof.Wozniak@ifj.edu.pl
Students: [Giorgi Asatiani](#), [Maria Ramos](#)
- 11 Bayesian Analysis of Cosmic Rays data for Earthquake Predictions**
Supervisor: dr David Alvarez, Department of Cosmic Ray Research and Neutrino Studies (NZ15), dalvarez@ifj.edu.pl
Students: [Bartosz Grygielski](#), [Clementine Mostyn](#)
- 12 Neutrino interaction studies in the near detector of the T2K experiment**
Supervisor: dr Marcela Batkiewicz-Kwaśniak, Department of Cosmic Ray Research and Neutrino Studies (NZ15), Marcela.Batkiewicz@ifj.edu.pl
Students: [Caetano Ternes](#), [Chirag Verma](#)
- 13 Geometry of heavy ion collisions during lepton pair production**
Supervisor: dr Mariola Klusek-Gawenda, Department of Theory of Strong and Multiple-body Interactions (NZ21), Mariola.Klusek@ifj.edu.pl
Students: [Yash Arya](#), [Roxana Busuioic](#)
- 14 Time-space evolution of the spectator in ultra-relativistic heavy-ions collisions**
Supervisor: dr hab. Katarzyna Mazurek, Department of Theory of Strong and Multiple-body Interactions (NZ21), Katarzyna.Mazurek@ifj.edu.pl
Students: [Syed Jahan](#), [Gokcen Karslioglu](#)

- 15 Central exclusive production of mesons in proton-proton collisions**
Supervisor: dr Piotr Lebedowicz, Department of Theory of Strong and Multiple-body Interactions (NZ21), Piotr.Lebedowicz@ifj.edu.pl
Students: [Stanisław Kalinowski](#), [Javier Oliva del Moral](#)
- 16 Applying machine learning methods in data analysis**
Supervisor: dr Jacek Biernat, Department of the Ultrarelativistic Nuclear Physics and Hadron Interactions (NZ23), jacek.biernat@cern.ch
Students: [Mikołaj Jędrzejewski](#), [Ahmad Ramezanpour](#)
- 17 Searches for new physics effects in the light by light scattering in the ALICE experiment**
Supervisor: dr hab. Adam Matyja, Department of the Ultrarelativistic Nuclear Physics and Hadron Interactions (NZ23), adam.tomasz.matyja@cern.ch
Students: [Harshit Dubey](#), [Martine Irog](#)
- 18 Studies of UPC trigger efficiency of the light by light scattering in the ALICE experiment**
Supervisor: dr hab. Adam Matyja, Department of the Ultrarelativistic Nuclear Physics and Hadron Interactions (NZ23), adam.tomasz.matyja@cern.ch
Students: [Mikhail Kolobov](#), [Mohammad Sharifi](#)

Questions?