July 3, 2019

Veksler and Baldin Laboratory of High Energy Physics
Joint Institute for Nuclear Research
Baldina 4, 141980 Dubna, RUSSIA

Dear Members of the Candidate Search Committee :

I would like to present myself as a candidate for the recently advertised position of JINR Distinguished Postdoctoral Research Fellowship. I am presently a post-doctoral research fellow in the Department of Physics and Astronomy at the University of Hawaii at Manoa.

I completed my Ph.D. from the University of Massachusetts, Amherst under the supervision of Dr. David Kawall and Dr. Christine Aidala. My thesis work included cross-section and double helicity asymmetry measurements of inclusive charged hadrons at the PHENIX experiment. I also led the effort toward publication of the work.

I continued my research to probe nucleon spin structure as part of the PHENIX collaboration as a post-doctoral research fellow at University of New Mexico between 2012 and 2015 with Dr. Douglas Fields. I worked in the cross-section and double helicity asymmetry measurements of J/Ψ mesons via and di-muon decay channels.

I undertook a feasibility study of measurements of single spin asymmetry (A_N) of Drell-Yan processes from polarized p+p data recorded at PHENIX experiment. A possible measurements could be used to compare with A_N measured in DIS processes in similar kinematic range. The study concluded that measurement was statistically challenging at the time but could be possible in an upgraded version of PHENIX or future experiments.

From 2015, I worked on the two-pronged analysis effort in Dr. Philip von Doetinchem's group at UH, Manoa focused on measuring antideuterons for the first time in the cosmic rays using AMS-02 experiment on board International Space Station (ISS) and on the studies of formation of (anti)deuterons in the proton-proton collision data at NA61/SHINE fixed target experiment at CERN Super Proton Synchroton (SPS).

I collaborated with colleagues from National Autonomous University of Mexico (UNAM), working on studies of coalescence formation of light (anti)nuclei and in developing software to be used in tandem with widely used event generators (EPOS, GEANT4) to produce (anti)deuterons, a feature which is not available in present Monte Carlo event generators. The work has recently been published.

With my experience in collider (especially spin physics at PHENIX) and fixed-target exeriements I think I would be an excellent fit for the position you are looking to fill.

I am enclosing my curriculum vitae, publications list and a research statement with this application. I will arrange for reference letters to be submitted as required by the application process. Please let me know if you would like any further information.

Thank you very much for your considerations.

Best regards,

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