



JAGIELLONIAN UNIVERSITY
IN KRAKÓW

INFORMATION ON THE COMPETITION

Krakow, 16th November, 2020

**DEAN
OF THE FACULTY OF PHYSICS, ASTRONOMY
AND APPLIED COMPUTER SCIENCE**

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**RECTOR
of the Jagiellonian University**
announces competition for the post of
ADJUNCT RESEARCH PROFESSOR

in the Institute of Theoretical Physics
at the Faculty of Physics, Astronomy
and Applied Computer Science

**within the scope of National Science Centre Project OPUS no. 2017/27/B/ST2/01139,
“New hadrons composed from light and heavy quarks”**

For the post of adjunct professor may apply persons who fulfil requirements stated in Article 113, 116 (2) (3) of the Act of 20th July 2018 Law on higher education and science.

The aim of this project is to estimate the masses and decay channels of heavy-light mesons and baryons, as well as exotica (tetraquarks, pentaquarks and even dibaryons) with the emphasis on the b – quark content. Methodology is based on simultaneous exploitation of the patterns of chiral symmetry breaking combined with heavy quark symmetry (Isgur-Wise symmetry) and heavy antiquark-diquark symmetry (Savage-Wise symmetry), confronted with novel, dual description based on holography, adapted suitably for heavy-light hadrons spectroscopy.

Requirements:

- 1) PhD in theoretical physics, obtained max. 7 years ago.
- 2) Experience in the area of quantum field theory and hadronic particle physics.
- 3) Advanced English in writing and speaking.
- 4) Ability to work in a scientific group.
- 5) Knowledge of Sakai-Sugamoto formalism is welcomed.

Research tasks:

- Critical review of the state of the art of so-called chiral doublers theory.
- Application of holographic principle to double heavy hadrons.
- Construction of a road map for experimentalists, aiming at identification of the most promising regimes for the discovery of new particles.

Terms of employment: contract of employment, full-time

Duration: 12 months, extendable to next 12 months

Starting date: to be agreed

Applications (Curriculum vitae, list of publications, 2 letters of recommendation) should be sent to Prof. Maciej A. Nowak via e-mail: maciej.a.nowak@uj.edu.pl with annotation "postdoc" until 17th of December, 2020.

Competition commencement date: 17th November, 2020

Applications can be filed till: 17th December, 2020

Decision regarding competition settlement shall be made till: 20th December, 2020

Jagiellonian University does not provide housing.

Statement forms can be downloaded on the website:

<http://www.dso.uj.edu.pl/druki-do-pobrania/dokumenty-dla-kandydatow-pracownikow>

On the basis of authorization
of the Rector of Jagiellonian University
Dean of the Faculty of Physics, Astronomy
And Applied Computer Science