

Krakow, February 26, 2024


The Henryk Niewodniczański Institute of Nuclear Physics Polish Academy of Sciences

announces a competition for the position

ADIUNKT /tenure/ - AT-NZ36/24

in Department of Molecular Engineering and Nanoelectronics /NZ36/

Division of Condensed Matter Physics /NO3/.

Deadline for application :	Przewidywany termin zatrudnienia:	Type of contract:	Number of positions:	Application address:
May 15th 2024	Second half of 2024 for indefinite period	contract of employment, full-time at IFJ PAN as the only place of work	1	 jobs@ifj.edu.pl

<https://www.ifj.edu.pl/en/career/recruitment-procedures.php>

I. Keywords:

Magnetism, spin waves, molecular magnets, magnonic crystals, artificial neural networks.

II. Description:

A person employed as an adiunkt-tenure (assistant professor) for an indefinite period at the Department of Molecular Engineering and Nanoelectronics – NZ36 at IFJ PAN will be obliged to participate in work on research topics and projects implemented and planned for the nearest period at the NZ36 Department.

The basic tasks of the employed person will include:

- design, modeling and simulation of the properties of magnetic units optimal for use as processing units in a molecular neural network (including magnetic nanowires and molecular magnets),
- design, modeling and simulation of the properties of layers that propagate lossless spin waves, optimal for use as weighted connections between molecular neurons (e.g. YIG, Mn3O4),
- development of a method of connecting magnetic processing units with layers propagating spin waves: simulation of interactions,
- experimental characterization of the magnetic properties of the above-mentioned systems using SQUID magnetometry and interpretation of the obtained results.

The employed person will also be obliged to disseminate the results of research in the form of publications in leading scientific journals indexed in the JCR and speeches during seminars and conferences, including international ones. This person will also be obliged to apply for external funding for research.

III. Required qualifications:

- habilitated doctor's degree in physical sciences or related disciplines, or a doctoral degree in physical sciences or related disciplines with scientific achievements that largely meet the requirements for candidates for the habilitated doctor's degree,
- qualifications necessary to carry out research tasks carried out at NZ36,
- good knowledge of solid state physics, in particular in the field of magnetism and magnetic materials, knowledge in the field of molecular magnetism,
- knowledge of the research topics of the Department of Molecular Engineering and Nanoelectronics,
- experience in methods for measuring magnetic properties (confirmed by scientific publications),
- good knowledge of programs for micromagnetic and atomistic calculations (confirmed by scientific publications),
- very good knowledge of spoken and written English.



Welcome:

- knowledge of the Python programming language,
- knowledge of synchrotron methods for the characterization of magnetic materials.

IV. Salary offered

A person employed for an indefinite period as an Assistant Professor will receive a monthly basic remuneration from **PLN 5,800.00 gross**, which depends on the candidate's achievements and academic degree. The total amount of remuneration will be increased by **allowances** for: length of service and working under conditions of exposure to ionizing radiation (if applicable).

V. General information

Detailed rules of the competition are specified in the Terms and Conditions of Recruitment of Adjuncts and Research Assistants adopted by the IFJ PAN Scientific Council on April 12, 2021 and accessible at:

<https://www.ifj.edu.pl/en/career/documents/terms-and-conditions-adjunct-research-assistant.pdf>

Candidates applying for employment in IFJ PAN are required to contact the head of the NZ36 Department, prof. Łukasz Laskowski at an early stage, who may ask the candidate to deliver a seminar before submitting the application and then the Head of the Department submits employment recommendation to the Competition Committee.

VI. Required documents

The list of required documents is included in the rules of the competition:

<https://www.ifj.edu.pl/en/career/documents/terms-and-conditions-adjunct-research-assistant.pdf>

VII. Deadline for application submission

- Applications with attachments shall be sent by e-mail by May 15th, 2024 to the following address: jobs@ifj.edu.pl with the note „**Adiunkt/tenure/AT-NZ36/24**”
- The employment recommendation from the two referees shall be sent directly, bypassing the candidate, to the following e-mail address: jobs@ifj.edu.pl

VIII. Conclusion of the competition

- Interviews with candidates shall take place from **June 10th, to June 12th, 2024**. Candidates qualified for interviews shall be notified by e-mail about the exact date of the Interview **by May 24th, 2024**. During the interview the candidate shall be required to give a presentation, **stored on a pen drive**, lasting 10 minutes at maximum which shall presenting candidate's most important achievement, research and team building plans,
- The competition shall be concluded **by June 28th, 2024**.
- Each candidate shall be notified by e-mail about the results of the competition.
- **The final decision on employing and salary shall be taken by IFJ PAN Director.**

IX. Contact

All questions can be sent by e-mail to the IFJ PAN Employment Department (jobs@ifj.edu.pl).