

PhD Scholarship Offer within the NCN OPUS 16 scientific project „DYNAMICS OF MICROPARTICLES IN FLUIDS”

General information

Project leader: Professor Maria L. Ekiel-Jeżewska

Institution: Institute of Fundamental Technological Research, Polish Academy of Sciences, Warsaw, Poland

Funding and duration: The NCN stipend is 90 000 PLN for 33 months. An additional PhD stipend of the IPPT Doctoral School may be granted.

Scientific plan of the PhD

The goal is to analyze dynamics of microparticles settling under gravity or entrained by external fluid flows. What is the influence of elasticity of elongated microparticles on shape deformation, motion and hydrodynamic interactions with other particles? Under what conditions the particles attract and repel each other hydrodynamically? What is the role of periodic solutions? What scaling laws are valid and which modes of the dynamics can be identified? How electrostatic charge affects the dynamics? How the particle motion is changed by the presence of solid intrusions in the fluid? These questions will be addressed numerically and theoretically, with a possibility to perform simple experiments.

Information about the project „Dynamics of microparticles in fluids” and the PhD

<https://www.ncn.gov.pl/sites/default/files/listy-rankingowe/2018-09-14/streszczenia/433227-en.pdf>

mekiel@ippt.pan.pl, <http://www.ippt.pan.pl/staff/mekiel>

During the PhD, it will be possible to participate in international scientific collaboration and attend scientific conferences and schools. The usual duration of PhD is 4 years.

Requirements

- ⑩ Master of science degree and documented knowledge in science (physics, mechanics, mathematics)
- ⑩ Documented experience in microhydrodynamics will be appreciated
- ⑩ Motivation and skills to carry scientific work
- ⑩ Fluent English

Deadlines

Applications until 9.09.2019

Notification about the results of the recruitment process until 24.09.2019

Starting date: 1.10.2019

Recruitment process

1) The scholarship is awarded according to the National Centre of Science Regulations on Awarding Scholarships in NCN-Funded Research Projects, as detailed in the Annex to resolution no 96/2016 of the Council of the NCN of 27th October 2016.

https://www.ncn.gov.pl/sites/default/files/pliki/uchwaly-rady/2016/uchwala96_2016-za11.pdf

2) It is necessary to file the documents to the IPPT PAN Doctoral School and pass the entry exams on September 16 (in special cases, it is possible to perform exams by skype), see below for the requirements <http://www.ippt.pan.pl/doktorat-w-ippt-pan/szko%C5%82a-doktorska-ippt-pan/rekrutacja.html>

3) Possible interview dates may be offered to selected candidates on an individual basis.

Required documents

- ⑩ Motivation letter (in English)
- ⑩ CV, including all scientific achievements and publication list
- ⑩ A reference letter
- ⑩ MSc certificate and other documents required by the IPPT PAN Doctoral School
- ⑩ Signed statement: “I hereby give consent for my personal data included in my application to be processed for the purposes of the recruitment process under the Personal Data Protection Act as of 29 August 1997, consolidated text: Journal of Laws 2016, item 922 as amended.”

Submission of the applications

by e-mail: mekiel@ippt.pan.pl, regular mail or in person to: Professor Maria L. Ekiel-Jeżewska, ul. Pawińskiego 5b, 02-106 Warszawa, to be received by 9.09.2019.