

JOB OFFER	
Position in the project:	PhD Student
Scientific discipline:	physics, atomic physics, quantum gases, quantum optics
Job type (employment contract/stipend):	stipend
Number of job offers:	1
Remuneration/stipend amount/month :	4 000 PLN/month
Position starts on:	1.10.2019
Maximum period of contract/stipend agreement:	1.10.2019-30.06.2020
Institution:	University of Warsaw, Faculty of Physics Institute of Experimental Physics, Optics Division, Warsaw, Poland
Project leader:	Dr Mariusz Semczuk
Project title:	<i>Cold atom-based quantum simulators.</i> Project is carried out within the Homing programme of the Foundation for Polish Science
Project description:	Within this project a device will be built which will be used to investigate novel techniques of laser cooling of atoms directly in optical lattices. In particular, cesium atoms will be laser cooled to the vibrational ground state of the confining potential without obtaining quantum

	degeneracy in a bulk atomic cloud. This approach will enable creation of a universal platform for quantum simulations of lattice models that will help to understand, model and design new, advanced multi-functional materials. The device will be compatible with miniaturization and will be scalable. Lattice trapped atoms could be used as qubits in novel quantum computing schemes thanks to the fast preparation rate.
Key responsibilities include:	1. Designing and constructing experimental setups. 2. Writing codes for data analysis. 3. Data analysis. 4. Writing manuscripts. 5. Assistance with the supervision of undergraduate students.
Profile of candidates/requirements:	1. Documented experience in experimental AMO (atomic, molecular and optical) physics. 2. Experience with designing electronic circuits and programming microcontrollers will be preferred. 3. Experience with programming (preferably Python/Matlab/Labview). 4. Spoken and written English sufficient to read and write scientific papers.
Required documents:	1. CV 2. Cover letter 3. Description of scientific interests and research experience. 4. Contact to at least 2 academic referees. 5. Transcript of study records.
We offer:	1. Participation in cutting-edge research 2. Collaboration with the top groups in the field,

	including research visits in partner's laboratories.
Please submit the following documents to:	msemczuk@fuw.edu.pl with the email title "FNP Homing PhD Student Application" In case of a successful application, please provide the original documents within a week to the project leader. The candidates should arrange for at least 2 academic reference letters to be sent to the project leader.
Application deadline:	August 21, 2019; 9:00 a.m. CET
For more details about the position please visit (website/webpage address):	The website http://ultracold.fuw.edu.pl/
Euraxess job/stipend offer (in case of PhD and postdoc positions):	
Please include in your offer: "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."	