



## Job Announcement

Young, modern, and research oriented... the University of Potsdam has firmly established itself within the scientific landscape since its founding in 1991. Nationally and internationally renowned scientists teach and perform research here at Brandenburg's largest university. The University of Potsdam is successful in acquiring third-party funds, delivers outstanding performance in technology and knowledge transfer, and has a very service-oriented administration. With about 21,000 students studying at three campuses – Am Neuen Palais, Griebnitzsee and Golm – the University of Potsdam is a prominent economic factor and engine of development for the region. The University of Potsdam has a total of over 3,000 faculty and staff members and is located in one of Germany's most scenic areas.

The **University of Potsdam, Faculty of Science, Institute for Physics and Astronomy, Professorship for Theoretical Quantum Physics** invites applications for the following position:

### Academic Staff Member (Postdoc position) Requisition No.: 353/2020

The position is available from October 01<sup>st</sup>, 2020. The salary is determined by the collective bargaining agreement for public employees in Germany (TV-L 13 Ost). The position is for 40 hours per week (100%), but flexibility for part-time arrangements exist. This is a temporary position initially limited to 2 years, with the possibility of extension for another 2 years in accordance with Section 2 subsection 1 of the Academic Fixed-Term Contract Law (WissZeitVG). position offers the possibility of scientific qualification.

**Job aim:** The position will focus on developing and using quantum thermodynamics and open quantum systems methods [1, 2] to develop a microscopic theory of the sharing of heat between different degrees of freedom in materials at the nanoscale, when energy is provided, for example, by ultrashort excitation with light [3]. The position is a theory position, but interaction with experimental groups, including the group of Prof. Bargheer working on ultrafast dynamics at Potsdam University, is strongly encouraged with the goal to transfer our theoretical calculations into proposals for experimental tests.

**Person specifications:** The successful applicant will have (or soon complete) a PhD in quantum thermodynamics theory, open quantum systems, quantum optics or condensed matter theory or a neighbouring field, and will have a strong track record of high quality publications in this field.

#### The successful applicant will

- have sufficient knowledge of research methods and techniques used in quantum thermodynamics theory (or a neighbouring field),
- have pro-actively pursued research and participated as a member of a research team,
- demonstrate that they are able to advance thinking and complete research projects on time,
- have a strong track record of published research commensurate with their stage of career,
- be strongly motivated and able to work highly independently, as well as work in a team with others in collaborative projects,

- have a strong interest in advancing knowledge and show evidence of own creative contributions to science,
- be able to balance competing pressures of research, teaching and administrative tasks and deadlines,
- have a reliable and approachable personality,
- have excellent written and verbal communication skills in English.

The position holder will be required to contribute to teaching [4] in the Institute of Physics, for example teaching undergraduate problem classes in theoretical physics (in English or German). Hence the successful applicant demonstrate the ability to explain new concepts in physics to undergraduate students.

Under the laws of the federal state of Brandenburg, employees under this contract are permitted to dedicate at least 33% of their contract time for their scientific qualification.

The University of Potsdam aims to increase the proportion of women in research and teaching and therefore invites qualified applicants to apply. The University of Potsdam values the diversity of its members and pursues the goals of equal opportunities regardless of gender, nationality, ethnic and social origin, religion/belief, disability, age, sexual orientation or identity. In the case of equal suitability, women within the meaning of Section 7 (4) BbgHG and severely disabled people will be given preferential consideration. Applications from abroad and from persons with a migration background are expressly welcome.

The number of teaching hours complies with the applicable provisions of the Teaching Obligation Ordinance (Lehrverpflichtungsverordnung, or LehrVV) of the federal state of Brandenburg as well as the teaching load regulations approved by the Senate of the University of Potsdam:

[http://www.uni-potsdam.de/fileadmin01/projects/verwaltung/docs/Dezernat3/Merkblatt\\_LehrVV.pdf](http://www.uni-potsdam.de/fileadmin01/projects/verwaltung/docs/Dezernat3/Merkblatt_LehrVV.pdf)

**Applicants should send their application materials (a cover letter explaining your interest in the position - please include position reference number -, your CV, including details on education/degrees, previous employment, list of scientific publications and preprints, list of any teaching experience, list of awards, prizes or grants if any, etc., 1page summary of your current and near-future research interests, contact details of 3 referees, copies of academic certificates (PhD or most recent degree). as a single pdf, by August 17<sup>th</sup> 2020 at the latest, by E-mail to [derlig@uni-potsdam.de](mailto:derlig@uni-potsdam.de).”**

Potsdam, July 22, 2020

[1] Quantum thermodynamics, S. Vinjanampathy, J. Anders, *Contemporary Physics* 57, 545 (2016).

[2] Thermodynamics in the quantum regime, F. Binder, L. Correa, C. Gogolin, J. Anders, G. Adesso, Springer (2018).

[3] Layer specific observation of slow thermal equilibration in ultrathin metallic nanostructures by femtosecond X-ray diffraction, J. Pudell, et al, *Nature Communications* 9, 3335 (2018).

[4] Teaching obligations are regulated by the state of Brandenburg and the Senate of the University of Potsdam. Further information can be accessed here [http://www.uni-potsdam.de/fileadmin01/projects/verwaltung/docs/Dezernat3/Merkblatt\\_LehrVV.pdf](http://www.uni-potsdam.de/fileadmin01/projects/verwaltung/docs/Dezernat3/Merkblatt_LehrVV.pdf)