

# PHD STUDENT POSITION

**Department of Physics**

**Faculty of Science, University of Kragujevac, Serbia**

## *The Position*

If you are interested in exploring the **fundamental phenomena of quantum physics** and **thermodynamics**, have a strong background in quantum mechanics and phenomenological thermodynamics as well as in statistical mechanics, **apply now!**

The candidate will be a **student of the academic doctoral studies** working on scientific research toward the dissertation at the Department of Physics, Faculty of Science and Mathematics, University of Niš, Serbia.

**No tuition fees are charged for doctoral study.** However, when you apply for a study visa in Serbia, the authorities may ask to see **whether you have sufficient funds to cover the cost of living** – approximately 4,000 euros a year.

Details of the **curriculum** can be found at [for the English version please contact the email address below] [http://wpresspmf.pmf.ni.ac.rs/?page\\_id=1737](http://wpresspmf.pmf.ni.ac.rs/?page_id=1737).

## *The work*

The goal of the research is to lay down theoretical basis for introducing temperature for different structures (separations, i.e. partitions, into subsystems) of a composite open quantum system. Actually, as we already know from the team-members' results, correlations (quantum as well as classical) in composite quantum systems are structure-dependent. Hence structure dependence of temperature in a composite system can be expected. Investigating the energy ("heat") exchange between the constituents as well as the subsystems' thermalization for different structures is the main task to be investigated mainly for the systems of interacting qubits.

## ***Required qualifications and competencies***

Our ideal candidate has a **strong background in foundations of quantum mechanics, phenomenological thermodynamics and in classical statistical mechanics, and has the academic master degree in physics or related fields.**

## ***How to apply***

Expressions of interest or applications with a short CV should be sent to Jasmina Jeknić-Dugić at [dugic@open.telekom.rs](mailto:dugic@open.telekom.rs).