Research Associate Position

The University Sorbonne Paris Nord is opening a Research Associate position in experimental atomic and quantum physics. Ideally, the starting date should be between April and June 2021. The initial length of the contact will be 1 year, with possibility of renewal.

The position is funded by the ANR-DFG project 'SQUAT (Shaping the quantum vacuum around atoms and molecules)', which is a 3-year collaborative project between our experimental group in the University Sorbonne Paris Nord and the theory group of Stefan Scheel in the University of Rostock. The group of David Wilkowski at the Nanyang Technical University, Singapore is also an external collaborator in this project.

The Sorbonne Paris Nord group (SAI: Spectroscopie Atomique aux Interfaces) consists of 4 permanent members of staff, one Research Assistant and a PhD student. The group is part of the Laboratoire de Physique des Lasers, located at the northern suburbs of Paris (about 10min from central Paris by public transport). Further details can be found at http://www-lpl.univ-paris13.fr/UK/EQUIPE-SAI-PAGE-01.awp

The research topic involves the experimental study of atoms and molecules in interaction with planar and nanostructured surfaces. For this purpose, we will use vapour cell spectroscopy and in particular selective reflection and thin cell spectroscopy that have been developed in our group for measuring atom and molecule surface interactions. More specifically the tasks include:

- Interactions of highly excited, Rydberg atoms, with surfaces.
- Rydberg atoms coupled with micro-fabricated resonators.
- Molecule-surface interactions.
- Theory of Rydberg-surface and molecule-surface interactions in collaboration with the theory group in Rostock.

Research visits can also be made to Rostock or Singapore as part of the collaborative project.

The successful applicant will have a good PhD degree in experimental physics and a solid background in atomic, quantum physics and optics. Experience with nanofabrication methods is not a requirement but could be a bonus. Willingness to interface with theoretical physicists and other experimentalists is also required for this position.

For further information, please contact: Dr. Athanasios Laliotis (laliotis@univ-paris13.fr, laliotis@sorbonne-paris-nord.fr)