

## Postdoctoral Position Open

Last Updated Tuesday, 03 September 2019

The Laboratory for Ultrafast Spectroscopy @Physics Department, "Sapienza" University of Rome

is looking up to n.2

Postdoctoral fellows in the area of Ultrafast Raman spectroscopy.

Femtosecond Stimulated Raman Scattering (FSRS) and Impulsive Vibrational Scattering (IVS) setups are available in our laboratories for performing pump-probe vibrational spectroscopy with time resolution of  $\sim 10$ fs and energy resolution of  $\sim 10$ cm<sup>-1</sup>, in both frequency and time domains. Combined with our sub-picosecond transient absorption (TA) setup they represent an ideal tool to address the dynamics of intermediates involved in chemical reactions of biomolecules or solid state ultrafast photocarrier dynamics induced by a femtosecond optical trigger.

The following research lines are currently available:

- Photoinduced relaxation in Lead Halide Perovskite: lattice dynamics upon photocarrier injection probed by impulsive Raman spectroscopy;
- Ultrafast processes in biomolecules: time-resolved Raman spectroscopy of Hemeproteins, conjugated molecules and photosynthetic complexes;
- Development of novel time-resolved Impulsive Vibrational Scattering experimental schemes: wisely shaped pump and probe pulses for dissecting vibrational signatures;
- Multidimensional Coherent Raman spectroscopy.
- Time-resolved Raman micro-spectroscopy of 2D materials: heterostructures of graphene and transition metal dichalcogenides

Initial appointment is for 1 year with possible extension upon mutual consent.

Your profile:

Candidates with hands on background in linear and non-linear optics are encouraged to apply.

Previous experiences with ultrafast lasers and/or coherent and/or time-resolved Raman spectroscopy and/or transient absorption are highly appreciated. Excellent communication skills and team spirit are required.

Your task:

Prepare and carry out FSRS/IVS/TA experiments together with our team. Develop your own research within the areas of interest of the group.

For an overview of our current research see:

<http://femtoscopia.org/index.php/Research-Articles/Research-Articles.html>

Applications (including CV, list of publications and coordinates of at least two referees) should be addressed by email to: [tullio.scopigno@uniroma1.it](mailto:tullio.scopigno@uniroma1.it)