

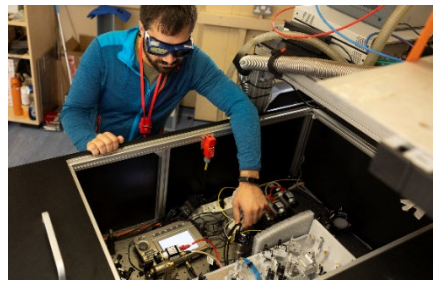
Postdoctoral researcher on laser physics and non-linear optics

A postdoctoral position (“assegno di ricerca”) will soon be opened at the **National Institute of Nuclear Physics in Trieste**, focused on the development of an Optical Parametric Oscillator/Optical Parametric Amplifier (OPO/OPA) laser source in the near infrared.

This opportunity falls within the framework of FAMU [1](Physics of Muonic Atoms), a nuclear physics experiment currently underway, and the **MENPHYS project** (MEtrology and Nonlinear optics for Precision muonic HYdrogen physicS) which aims to enhance the laser system of FAMU. The national research program PRIN 2022 funds the position.

MENPHYS will strengthen the potentials of the FAMU experiment by upgrading significantly the laser system; simplifying the coupling of the laser light into the optical cavity around the muon beam line; increasing the accuracy in the determination of the transition frequencies used as calibration standards of the excitation laser.

The research group of the National Institute of Nuclear Physics, Section of Trieste, has been leading the FAMU collaboration for many years. The work to be carried on in Trieste will be the realization of the new master oscillator emitting at 1260 nm based on an OPO/OPA laser source, similar to the one realized at a different wavelength by [2]. The development will be in strict collaboration with the National Institute of Optics (CNR-INO) group in Firenze (dr. Guido Toci).



We are looking for highly motivated candidates with the ability to think independently. The ideal candidate has a high level of autonomy, yet demonstrates strong collaboration skills and is able to work in a team. Applicants must hold a PhD degree in Physics, Chemistry, Materials Science or alike. Prior expertise laser systems is preferable but not mandatory. Proven laboratory experience and knowledge of Labview are a plus.

Please note that we are assessing potential interest before officially opening the application process.

The position is for 12 months and the gross salary is around 21 kE. Expected starting date is mid-2024.

Trieste is known for its high quality of life, its cultural diversity and offers a large and active scientific community, providing a stimulating environment for research and innovation.

Contacts:

For further details, send an expression of interest to cecilia.pizzolotto@ts.infn.it
Interested candidates are encouraged to include their CV.

[1] Vacchi A. et al., Nuclear Physics News, Vol. 33 Issue 4 (2023) [doi:10.1080/10619127.2023.2198913](https://doi.org/10.1080/10619127.2023.2198913)
Pizzolotto C. et al, Eur. Phys. J. A 56, 185 (2020) [doi:10.1140/epja/s10050-020-00195-9](https://doi.org/10.1140/epja/s10050-020-00195-9)
[2] Wang Y. et al., Rev. Sci. Instrum. 91, 053001 (2020) [doi:10.1063/1.5144491](https://doi.org/10.1063/1.5144491)