

## Job Information

**Job Title:** PhD student/ postdoc

**Discipline:** Applied Physics / Bio-Medical engineering/ Fiber optics/ endoscopes

**Positions available from:** immediately

### **Development and application of fiber-based endoscopes for minimally invasive deep live tissue imaging in neuroscience and immunology**

We are seeking PhD and postdoc candidates to join our ~€7m research project Gate2 $\mu$ , cofounded from the European Structural and Investing Funds Operational Programme Research, Development and Education of the Ministry of education youth and sports and Institute of Scientific Instruments of the CAS, v.v.i. (ISI).

The friendly international team of Gate2 $\mu$  is located in newly refurbished premises, featuring spacious optics laboratory, access to mechanical workshops, small-animal facility and further personal support from skilled IT and administrative departments. The institute has a private car park, library and in-house dining facility. It is situated about 10 minutes from Brno city center by public transportation.

The project Gate2 $\mu$  combines expertise in wavefront shaping technologies, digital holography, fibre optics and bio-medical photonics in an effort to introduce new imaging modalities deep inside tissue of living organisms (brain and lymphoid organs in particular).

We are particularly interested in recruiting in one of the work-package focus areas:

1. Theoretical: modelling of light propagation in optical fibers or complex media with applications to optical imaging.
2. Technological: development of new experimental procedures for advanced control of light propagation in optical waveguides and their applications in bio-medical settings.
3. Application: development of Raman spectroscopy via fiber-based endoscopes for diagnosing tumors in sensitive locations (e.g. the brain), without the need to perform a biopsy.

The positions are available immediately and applications are open until they are filled. In case of interest, please send an email to Dr. Johanna Traegaardh ([johanna@isibrno.cz](mailto:johanna@isibrno.cz)) and Dr. Petr Ják ([jakl@isibrno.cz](mailto:jakl@isibrno.cz)).

Project title: Holographic endoscopy for in vivo applications  
The registration number: CZ.02.1.01/0.0/0.0/15\_003/0000476



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