

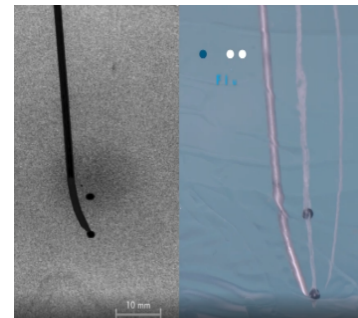


PhD Position open

The ICube Institute of the University of Strasbourg, is opening one PhD position, starting Jan/Feb 2024, in Strasbourg, France.

Description

The general framework of the research project is computer assistance to preoperative surgical planning, for an optimal placement of flexible needles. The PhD project focuses on **AI-assisted needle interventions using the new articulated «ARC needle»**, to develop methods dedicated to flexible needles and non-linear trajectories. It aims to facilitate their use by surgeons, promote their deployment and adoption in hospitals, and ultimately pave the way for robotic-assisted insertion to improve efficacy and performance. It will cover both automated preoperative planning of one or more articulated needle trajectories, and intraoperative real-time trajectory correction using augmented reality.



Work environment

With over 700 members, ICube is a major driving force for research in Strasbourg that gathers researchers from the University of Strasbourg, the French National Center for Scientific Research (CNRS), and the University Hospital. Biomedical engineering is one of its two main areas of application. The IMAGEs team is a multinational research group of around 30 members (academic, post-doc, PhDs and graduate students), with a strong track record in biomedical engineering and AI, and more particularly image processing, computer vision, graphics, and computer-assisted surgery. The lab offers a dynamic, challenging, and cooperative research environment, in close collaboration with clinicians from the university hospital. It is located in Strasbourg, a lively, green and cosmopolitan city, home of the European parliament and located in the heart of Europe. The work will be done in collaboration with the IHU Institute Strasbourg, and the RDH (Robotics) and MLMS (Biomedical Engineering) groups of the ICube institute.

Qualification and skills

We are looking for dynamic and motivated candidates with an MSc degree in Computer Science or equivalent. Strong programming skills in python and/or C++ are required. Knowledge and experience with computer graphics, image processing, optimization techniques, augmented reality, or related fields as well as advanced machine learning approaches such as deep learning is an advantage. You should be able to work in a multi-disciplinary team, interested in interdisciplinary applied research, and have a good oral and written proficiency in English. Strong theoretical skills and affinity with experimental work are required.

Information and application

Please send a long CV, motivation letter, academic transcripts in English or French with ranking information, and contact information of at least 2 people who can recommend you before Dec 1st, 2023, to Pr. Caroline Essert essert@unistra.fr, Dr. Lennart Rubbert lennart.rubbert@insa-strasbourg.fr, and Dr. Juan Verde juan.verde@ihu-strasbourg.eu.