



Post-doctoral position The University of Strasbourg



A post-doctoral fellow position in computer science research is available at the University of Strasbourg / ICube Laboratory (France), as part of an ongoing joint project with the University of Jerusalem (Israel) aiming at facilitating the use of an automatic planning system by surgeons and improving ergonomics of the computerized assistance. We seek a highly motivated candidate willing to integrate a team working on advanced methods for cryosurgery planning, involving semi-automatic segmentation of abdominal structures, modeling of thermal ablations, GPU programming, organs deformations, tool tracking and intraoperative plan adjustment.

Cryosurgery is a relatively recent surgical treatment of cancer that has experienced an increasing interest in the past decade. The principle is to ablate a tumor by inserting several interacting needles in the body and placing their active tips close to the volume around the tumor to be treated. A key aspect of cryoablation is the adequate preoperative planning of the procedure. The planning consists of determining on preoperative volumetric images of the patient, e.g., CT and/or MRI scans, the number of needles, their entry and target points, and the treatment protocol that is best suited for the patient condition.

Specific responsibilities will include:

- Developing new methods and algorithms within an existing platform
- Lead experiments using existing data, being in charge of all aspects of such experiments, with appropriate supervision
- Disseminating results as articles in peer-reviewed scientific journals and at major national and international conferences and workshops

Required qualifications and skills:

- PhD in computer science, biomedical engineering or related field
- Strong publication record and excellent academic credentials
- Basic or advanced knowledge of abdominal anatomy
- Substantial experience with scientific computing and programming
- Ability to work effectively unsupervised
- Ability to collaborate with multiple investigators
- Strong written and verbal communication skills

Duration: 1 year initial position (starting January or February 2017)

Location of the position: ICube Laboratory, Strasbourg, France

Application: Candidates should submit a cover letter with a brief statement describing their research experience and interests and goals, a full curriculum vitae, and the names of two individuals who would be willing to provide a letter of recommendation (with their contact information).

Contact: Inquiries and applications should be directed to Dr. Caroline Essert (essert@unistra.fr) and Pr. Leo Joskowicz (josko@cs.huji.ac.il).