

Position Description

Position	Image processing and programming engineer
Duration	1 year with potential extension starting between now and January 2018
Reporting to	IMAG2 laboratory; IHU Imagine <ul style="list-style-type: none">• Surgeons and Radiologists from Necker Hospital, Paris• Researchers from LTCI / Télécom ParisTech, Paris
Background	<p>Our field of expertise at IMAG2 laboratory concerns pediatric surgery of children presenting rare abdominal/pelvic tumors and malformations, guided by magnetic resonance imaging (MRI). Image guided surgery, a current revolution in surgery, requires precise and quick semi-automatic patient specific 3D modeling. The aim of our project is to develop segmentation and visualization tools from MRI imaging data, in order to help the surgeon during all the different phases of the surgical management: surgical planning, patient information, per operative guidance, post-operative evaluation, and follow up.</p> <p>Preliminary semi-automatic in-house developed segmentation tools have to further developed, especially with machine learning approaches, to obtain a complete 3D patient specific model including bones, vessels, organs, nerves, muscles and tumors, usable by a surgeon with no particular skills in image processing in a reasonable amount of time.</p>
Context	<p>You will join a multi-disciplinary team in a quite unique collaboration towards image guided surgery.</p> <p>Your tasks will consist in developing segmentation algorithms and user interface writing a user guide, and improving the present portability chain.</p>
Requirements	<ul style="list-style-type: none">• Diploma: PhD thesis or engineering / master degree• Programming skills: Matlab and/or C/C++ with experience in image processing (segmentation, pattern recognition, visualization) and machine learning.
Application	<p>Application must be sent to:</p> <ul style="list-style-type: none">• Sabine Sarnacki (sabine.sarnacki@aphp.fr)• Isabelle Bloch (isabelle.bloch@telecom-paristech.fr)• Cécile Muller (cecile.muller@aphp.fr) <p>and must include in pdf format:</p> <ul style="list-style-type: none">✓ a detailed CV,✓ a motivation letter,✓ a summary of your previous work (master or PhD thesis if applicable),✓ 2-3 recommendation letters.