
Education

- 2012 – 2015 **Master in Informatics**, *TU Munich*, Munich, Germany.
2009 – 2012 **Bachelor in Computing & Informatics Engineering**, *Faculty of Engineering, U. of Porto*, Porto, Portugal.

Employment

- 11/2015 – Now **Software Engineer**, *SurgicEye GmbH*, Munich, Germany.
- 9/2014 – 5/2015 **Research Assistant (Intern)**, *CAMP Group – Johns Hopkins University*, Baltimore, MD, USA.
Overall focus of this position was to conduct research on early-stage breast and cervical cancer treatment and diagnosis via nuclear imaging and robotic surgery. • Extended existing freehand SPECT scanning system to support robotic laparoscopic surgery. • Developed Computer Vision algorithm for tracking a novel SPECT probe. • Extended existing SPECT reconstruction algorithm to support reconstruction from two detectors. • Co-developed a method for intraoperative dynamic updating of medical augmented reality displays based on data collected from a gamma detector.
- 10/2013 – 7/2014 **Software Developer (P/T)**, *SurgicEye GmbH & IFL @ Rechts der Isar Hospital*, Munich, Germany.
Worked on the European EndoTOFPET-US project, led by CERN. • Designed a modular technical GUI for debugging each module in a hardware system. • Designed the project-wide network infrastructure for communication between different system components developed by different groups in the collaboration.
- 5/2013 – 8/2013 **Research Assistant (P/T)**, *Chair for Computer Aided Medical Procedures – TU Munich*, Munich, Germany.
Investigated methods for deformable registration of MRI to Ultrasound scans. • Worked with SOFA – a framework for real-time medical simulation – in order to build a model of the procedure under study.
- 2/2013 – 8/2013 **Research Assistant (P/T)**, *Chair for Software Engineering – TU Munich*, Munich, Germany.
Investigated automated penetration testing for web services. • Helped develop an Eclipse plugin to make the developed work more user-friendly. • Solved/implemented a number of longstanding issues/features. • Automated testing for the plugin. • Formally modeled web services for testing purposes.
- 7/2012 – 9/2012 **Software Engineer (Intern)**, *CERN*, Geneva, Switzerland.
Interned at CERN openlab, a collaboration between CERN and industry partners, as part of its Student Program. • Investigated Geant's – a particle physics simulation toolkit – interfaces and structure. • Developed an OpenGL-based tool capable of interpreting and visualizing benchmark data.
- 9/2011 – 1/2012 **Teaching Assistant – Systems Programming (P/T)**, *Faculty of Engineering, U. of Porto*, Porto, Portugal.
Assisted students with their Minix3-based Systems Programming projects and homework. • Provided insight into any problems encountered.

Skills

Programming	C, C++, Java, Python, Ruby
Markup	HTML4/5, CSS2/3, \LaTeX
OS	Developer proficiency: GNU/Linux (Debian, Ubuntu), Windows; Basic proficiency: Mac OS X
Other tech.	Qt, OpenCV, OpenGL, Matlab, Versioning (git, SVN, TFS)
Languages	Portuguese – Native; English – Fluent (TOEFL 117/120); French, German, Spanish – Basic

Publications

- [1] PINTO, Francisco ; FUERST, Bernhard ; FRISCH, Benjamin ; NAVAB, Nassir: Radiopositive Tissue Displacement Compensation for SPECT Guided Surgery. In: *Proc. Medical Image Computing and Computer-Assisted Intervention (MICCAI 2015)*, 2015
- [2] BORK, Felix ; FUERST, Bernhard ; SCHNEIDER, Anja-Katharina ; PINTO, Francisco ; GRAUMANN, Christoph ; NAVAB, Nassir: Auditory and Visio-Temporal Distance Coding for 3-Dimensional Perception in Medical Augmented Reality. In: *Proc. International Symposium on Mixed and Augmented Reality (ISMAR 2015)*, 2015
- [3] FUERST, Bernhard ; SPRUNG, Julian ; PINTO, Francisco ; FRISCH, Benjamin ; WENDLER, Thomas ; SIMON, Herve ; BERG, Nynke van d. ; POEL, Henk van d. ; LEEUWEN, Fijs van ; NAVAB, Nassir: First Robotic SPECT for Minimally Invasive Sentinel Lymph Node Mapping. In: *IEEE Transactions on Medical Imaging*, 2015