Camille IZARD

camille.izard@jhu.edu
(410)-516-8103

Clark 307C, Johns Hopkins University,
3400 N Charles St, Baltimore MD 21218
www.cis.jhu.edu/~camille

Objective

Seeking a postdoctoral position or a Scientist position in image analysis, to develop algorithms based on computer vision, machine learning and statistical methods for (medical) image.

Education

PhD in Applied Mathematics and Statistics, (expected Fall '07) *10/04-now*
Université des Sciences et Technologies de Lille, France
in collaboration with the Johns Hopkins University, Baltimore, MD

MS in Stochastic and Statistical Modeling *10/03-09/04*
Université Orsay Paris XI, France & Institut National Agronomique Paris-Grignon, France

BS in Bio-engineering and Statistics *09/99-09/03*
Institut National Agronomique Paris-Grignon, France

Research Experience

Johns Hopkins University, Baltimore, MD

- ***Research Assistant*, *Center for Imaging Science:*** *10/04-now*
  Development of a novel algorithm for the automatic detection of anatomical landmarks in medical images, using probabilistic template and deformable models. Application to landmark detection in brain MRI in the temporal lobe.
  3D brain MRI segmentation, rigid and non-rigid registration with or without correspondences, image deformation, statistical methods for atlas estimation.
- ***Research Intern, Center for Imaging Science:*** *04/04-07/04*
  Automatic detection of the head of the hippocampus in brain MRI, using a generative model of the image intensities.

CNRS Orléans, France

- ***Research Intern, Center for Molecular Biophysics***: *06/03-09/03*
  Design and production of plasmids with enhanced transcription once transfected into cancerous cells.

Publications

- C. Izard, B. Jedynak, C. Stark, *Spline-Based Probabilistic Model for Anatomical Landmark Detection*, Medical Imaging Computing and Computer Assisted Intervention (MICCAI), October 2006.
- C. Izard, B. Jedynak, *Bayesian Registration for Anatomical Landmark Detection*, IEEE International Symposium on Biomedical Imaging (ISBI), April 2006.
- C. Izard, B. Jedynak, C. Stark, *Automatic Landmarking of Magnetic Resonance Brain Images*, SPIE Medical Imaging, February 2005.
- C. Izard, *Automatic Detection of the Head of the Hippocampus*, MS thesis, July 2004.

Teaching Experience

- ***Teaching Assistant:*** Statistical Methods and Imaging, BME 466 *Spring '06*
  Project mentoring: Particle filtering applied to curve tracking in medical imaging.
- ***Student Intern Mentor*:** Mentoring of an undergrad student in charge of performing simulation experience using my landmark detection algorithm. *Summer '05*

Computer and Language Skills

English: fluent, French: native, Spanish: beginner
Operating systems: Windows, Linux, Unix
Programming language: some experience with C++
Scientific computing: SAS, high proficiency in Matlab (some experience with mex-files)
Other: LateX, MS Office, Access.

Talks and Seminars

- Department of Biostatistics, Johns Hopkins University, Baltimore MD, April 2007.
- Laboratoire Paul Painlevé, Université des Sciences et Technologies de Lille, *Statistical Model of Medical Imaging for Landmark Detection,* January 2007.
- Laboratoire Paul Painlevé, Université des Sciences et Technologies de Lille, *Bayesian Registration for Anatomical Landmark Detection,* October 2005*.*
- Laboratoire d'Informatique Fondamentale de Lille*,* Université des Sciences et Technologies de Lille, CNRS, *Bayesian Registration for Anatomical Landmark Detection,* October 2005.
- Center for Imaging Science, Johns Hopkins University, *Detection of the Head of the Hippocampus in brain MRI,* July 2004

Relevant Projects

- ***Computer Vision:*** Segmentation of dynamic scenes containing a variable number of rigid motions and dynamic textures by recursive Generalized Principal Component Analysis, an algebraic solution for simultaneous segmentation and model estimation.
- ***Bioinformatics:*** Detection of the cleavage site between a protein and its preceding signal peptide based on analysis of the protein amino acid sequence using pattern recognition techniques and SVM.
- ***Bioinformatics:*** Building a classifier to distinguish two types of leukemia, based on gene expression profiles from microarray data.

References

Dr. Bruno Jedynak, Visiting Associate Professor,
Department of Applied Math and Statistics, Johns Hopkins University, Baltimore, MD.

Dr. Craig E.L. Stark, Assistant Professor,
Department of Psychological and Brain Sciences, Johns Hopkins University, Baltimore MD.

Pr. Jean-Louis Bon, Dean of Polytech'Lille,
Université des Sciences et Technologies de Lille, Villeneuve d'Ascq, France.