ANNE JORSTAD

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Objective

To obtain a position as a Computer Vision researcher in Industrial Research and Development. Specific research interests include shape representation, object recognition, medical imaging, computational geometry, and relevant aspects of optimization and machine learning.

Education

- **Ph.D., Applied Mathematics & Statistics, and Scientific Computation**
  University of Maryland, College Park, Maryland, USA *Expected Spring 2012*
  - Under the supervision of Dr. David Jacobs, Professor of Computer Science
- **Master's Degree, Mathematics (Applied and Computational)**
  University of Wisconsin, Madison, Wisconsin, USA *May 2007*
- **Bachelor's Degree, Mathematics (Computer Science Concentration)**
  Cornell University, Ithaca, New York, USA *May 2005*

Experience

- **University of Maryland Institute for Advanced Computer Studies**
  Research Assistant *8/2008 - Present*
  - Developing software to study shape representation methods as a subfield of object recognition. Thesis research involves a deformation- and lighting-insensitive face recognition algorithm applying techniques from differential geometry to measure 2-D morphings between faces.
- **Centre de Mathématique et de Leurs Applications (Applied Mathematics), École Normale Supérieure de Cachan, France**
  Research Assistant *1/2010 - 7/2010*
  - As a visiting graduate student, did research on deformable shape metrics under the supervision of Professor Alain Trouvé.
- **Johns Hopkins University Applied Physics Laboratory**
  Research Intern *6/2008 - 3/2010*
  - Worked with the Image, Video and Optics group to develop an object pose estimation algorithm for decentralized camera sensor networks. Also took part in the development of a dynamic computational model of the heart to aid in surgical planning.
- **Boeing Math and Computing Technology Group**
  Research Intern *Summers 2003 - 2007*
  - Worked with the Geometry and Optimization team to develop a spline-based geometry software package to aid in preliminary vehicle design with a focus on surface optimization.
- **University of Wisconsin & University of Maryland**
  Teaching Assistant *8/2005 - 5/2008*
  - Created lesson plans, wrote and graded quizzes, and provided general instruction for Calculus I, Calculus II, Multivariable Calculus and Differential Equations.

Honors and Awards

- Selected to participate in the Vision, Learning and Pattern Recognition summer school in Chengdu, China, 2011
- Gold Medal, Spotlight on Graduate Research Competition: Monroe Martin Talks, University of Maryland Department of Mathematics, 2011
- Best Talk in the category of "Smart Computers and Computer Science", Graduate Research Interaction Day, University of Maryland, 2011
- Selected to participate in the CVPR 2011 Doctoral Consortium
- International Scholarship Programme to study at the Ecole Normale Supérieure de Cachan, France, 2010
- The Johns Hopkins University Applied Physics Laboratory R.W. Hart Prize Honoring Excellence in Independent Research and Development for the Research Project "Information Fusion and Localization in Distributed Sensor Systems", 2008
- Block Grant Fellowship, University of Maryland Department of Mathematics, 2007-08
- Superior Rating, Teaching Assistant adjudication, University of Wisconsin Department of Mathematics, 2007
- VIGRE Summer Scholarship, University of Wisconsin, 2006
- Hirschfelder Scholarship for female graduate students in Mathematics, 2005
- National Merit Scholarship, 2001-04

Leadership

- Founded and organized the Computer Vision Student Seminar Series at the University of Maryland, 2011-12
- Applied Mathematics & Statistics and Scientific Computation student representative to the University of Maryland Graduate Student Government, 2008-12
  - Member of the Graduate Student Affairs Committee, 2009-12
- Applied Mathematics & Statistics and Scientific Computation Student Council Member, 2008-12
- Tae Kwon Do, Green Belt: provided instruction for novice martial artists, 2006-07
- Cornell University Pep Band, Treasurer: created and maintained budgets, submitted funding requests, and participated in the Big Red Bands Advisory Council, representing the organization to alumni who oversee the bands, 2004
- Cornell University Marching Band, Equipment Manager: maintained instruments and accessories, including repairs, orders, inventory and accounting, 2003-04
- Cornell University Wind Ensemble, Principal Oboe, 2003-04
- Bennett Elementary School, Bellevue, WA, Math Club Leader: founded and directed a math club at a local elementary school, constructed lessons to motivate and teach fourth and fifth graders more advanced mathematics, 1997-2001

Publications and Posters

A. Jorstad, D. Jacobs. "**A Fast Illumination and Deformation Insensitive Image Comparison Algorithm Using Wavelet-Based Geodesics.**" Under review.

A. Jorstad, D. Jacobs, A. Trouvé. "**A Deformation and Lighting Insensitive Metric for Face Recognition Based on Dense Correspondences.**" Computer Vision and Pattern Recognition (CVPR), pp. 2353-2360, Jun. 2011.

A. Jorstad, D. Jacobs, A. Trouvé. "**A Deformation and Lighting Insensitive Metric for Face Recognition.**" Poster, Women in Machine Learning Conference, Dec. 2010.

A. Jorstad, D. DeMenthon, I. Wang, P. Burlina. "**Distributed Consensus on Camera Pose.**" IEEE Transactions on Image Processing, vol. 19, pp. 2396-2407, Sep. 2010.

P. Burlina, C. Sprouse, D. DeMenthon, A. Jorstad, R. Juang, F. Contijoch, T. Abraham, D. Yuh, E. McVeigh. "**Patient-Specific Modeling and Analysis of the Mitral Valve Using 3D-TEE.**" Information Processing in Computer-Assisted Surgical Interventions, First International Conference, Jun. 2010; Lecture Notes in Computer Science, vol. 6135/2010, pp. 135-146, 2010.

P. Burlina, C. Sprouse, D. DeMenthon, A. Jorstad, F. Contijoch, E. McVeigh, R. Juang, T. Abraham, D. Yuh. "**Individualized Cardiothoracic Surgical Planning using Computer Aided 3D Modeling and Image Analysis.**" American Medical Association and the IEEE Engineering in Medicine and Biology Society Conference on Medical Technology, Mar. 2010.

A. Jorstad, P. Burlina, I. Wang, D. Lucarelli, D. DeMenthon. "**Model-Based Pose Estimation by Consensus.**" The Fourth International Conference on Intelligent Sensors, Sensor Networks and Information Processing (ISSNIP), pp. 569-574, Dec. 2008.

A. Jorstad, D. Jacobs. "**Leaf Classification from Local Boundary Analysis.**" Poster, Graduate Research Interaction Day, University of Maryland, Apr. 2008.

Skills

- Proficient in C/C++, Java, LaTeX, MATLAB, Python
- Native English speaker, conversational French

Citizenship

- United States (born in Seattle, WA, USA)
- Canada (through parents)

References

Available upon request.