

SUSAN M. MUNN, PH.D.

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OBJECTIVE

I am looking for a full-time position in applied computer vision research with a start date of October 1, 2009.

RESEARCH INTERESTS

I am primarily interested in computer vision, image/video processing and computer graphics. My dissertation work is focused on obtaining 3D information from video with applications to eye tracking.

EDUCATION

Ph.D., Imaging Science **August 2004 - August 2009**

Rochester Institute of Technology, Rochester, NY USA.

Dissertation Title: 3D Head Motion, Point-of-Regard and Encoded Gaze Fixations in Real Scenes: Next Generation Portable Video-Based Monocular Eye Tracking, GPA: 3.82/4.00

- Courses : Computer Graphics, Digital Image and Video Processing, Computer Vision, Visual Perception, Bundle Adjustment, Image Rendering, Spatial Pattern Recognition, Design of Experiments, Information Theory, Noise and Random Processes, Multivariate Statistics, Linear Image Mathematics.

B.S. (Cum Laude), Electrical Engineering **August 1999 - May 2003**

State University of New York at Binghamton, Binghamton, NY USA

- Student Marshall of Watson School of Engineering and Applied Science, GPA = 3.69/4.00.

ACADEMIC AND PROFESSIONAL EXPERIENCE

Software Intern **June 2008 - August 2008**

Sony Pictures Imageworks, Culver City, CA.

- Wrote C++ applications and libraries for the Motion Capture and Image Processing Group as well as added functions to existing in-house libraries. Wrote Python programs for importing information into Maya. Used MATLAB for prototyping. All work done on a Linux computer.

Graduate Research Assistant **Sep. 2004 – May 2008, September 2008 - Present**

Visual Perception Laboratory, Rochester Institute of Technology.

- Design and execute visual perception experiments from creating MATLAB applications that present stimuli to analyzing the final data. Design complex graphic user interfaces for viewing and analyzing eye tracking data and videos. Utilize computer graphics and computer vision techniques to extract and display 3D information from video sequences.

COMPUTER SKILLS

- Mathematical Packages: MATLAB, Octave, IDL.
- Languages: C, C++, Python, UNIX Shell Scripts, L^AT_EX.
- Operating Systems: Mac OS X, Red Hat Linux, Unix, Windows 98/2000/XP/Vista.

PUBLICATIONS

- Munn, S. M. and J. B. Pelz. (2009). FixTag: An algorithm for identifying and tagging fixations to simplify the analysis of data collected by portable eye trackers. To appear in *Transactions on Applied Perception, Special Issue on Applied Perception in Graphics and Visualization*.
- Munn, S. M. and J. B. Pelz. (2009). Simple routines for improving feature tracks. To appear in *2009 International Conference on Artificial Intelligence and Pattern Recognition (AIPR-09)*.
- Munn, S. M., L. Stefano and J. B. Pelz. (2008). Fixation-identification in dynamic scenes: comparing an automated algorithm to manual coding. In *Symposium on Applied Perception in Graphics and Visualization (APGV)*, ACM Press pp. 33-42.
- Munn, S. M. and J. B. Pelz. (2008). 3D point-of-regard, position and head orientation from a portable monocular video-based eye tracker. In *Eye Tracking Research and Applications (ETRA)*, ACM Press pp. 181-188.
- Li, F., S. M. Munn and J. B. Pelz. (2008). A model-based approach to video-based eye tracking. In *Journal of Modern Optics: Special Issue on Physiological Optics*, vol. 55, issue 4, pp. 503-531.
- Kolakowski, S. M. and J. B. Pelz. (2006). Compensating for eye tracker camera movement. In *Eye Tracking Research and Applications (ETRA)*, ACM Press, pp. 79-85.

POSTERS

- Munn, S. M. and J. B. Pelz. (2009). Ray tracing to get 3D fixations on VOIs from portable eye tracker videos. Poster at SIGGRAPH 2009 (Student Research Competition semi-finalist).
- Munn, S. M., D. F. Pontillo, M. Cook, J. Witwer and J. B. Pelz. (2009). Obtaining and analyzing gaze fixations on volumes-of-interest in real 3D environments. Poster (to appear) at International Conference on Vision in 3D environments.
- Kolakowski, S. M. (2007). 3D point-of-regard and subject motion from a portable video-based monocular eye tracker, Poster at SIGGRAPH 2007 (Student Research Competition semi-finalist).
- Li, F., S. M. Kolakowski and J. B. Pelz. (2006). Using structured lighting to enhance video-based eye tracking systems [Abstract]. *Journal of Vision*, 6(13):55.