

Patrick J. Quirk

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Objective

Seeking an opportunity to work full-time as a software engineer. Particularly interested in graphical applications and scientific computation. Comfortable developing under Unix and Linux as well as Windows.

Education

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

- Master of Science in Computer Science *May 2006*
- Bachelor of Science in Computer Science, minor in Mathematics *May 2004*

Computer Skills

Operating Systems	Microsoft Windows 95/98/ME/2000/XP, Unix (Solaris), Linux (RedHat 9 and Enterprise 3, Fedora Core 4, Gentoo), Mac OS X
Proficient Languages	C/C++, Perl, PHP, HTML, CSS, bash/csh/ksh scripting, L ^A T _E X, Java, MySQL
Development Tools	vi Editor, Microsoft Visual Studio 6/.NET, GNU Autotools, Adobe Photoshop 7, et al.
API Experience	OpenGL, Trolltech's QT user-interface library, BLAS, DirectX 9

Related Experience

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

Graduate Research Assistant, Department of Computer Science *Fall 2005-Present*

- Master's Thesis: Multi-User Tracking for Large Format Auto-stereoscopic Display
- Devised and implemented a unique, image analysis-based method for head-tracking multiple users around an auto-stereoscopic display.
- Created many tools utilizing OpenGL in Windows and Unix to aid in the research process.
- Worked under the guidance of Dr. Henry Fuchs.

Graduate Research Assistant, Department of Computer Science *Fall 2004-Present*

- Member, Wide Area Visuals Research Team.
- Researched methods to manipulate projective displays to allow for perspectively-correct projection onto any arbitrary surface.
- Developed large and small OpenGL and DirectX applications and tools.
- Modified a large open-source flight simulator, FlightGear.
- Worked under the guidance of Dr. Henry Fuchs.
- <http://www.cs.unc.edu/Research/oof/Projects/wav.html>

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| <p>Graduate Research Assistant, Department of Geography</p> <ul style="list-style-type: none"> - Worked to correct NASA's Landsat 7 satellite images. - Developed and implemented statistical image matching algorithms, with positive results. | <p><i>Summer 2004</i></p> |
| <p>Consultant, UNC-Chapel Hill Academic Technology and Networks</p> <ul style="list-style-type: none"> - Performed troubleshooting and maintenance of IBM-PC and Apple systems. | <p><i>Fall 2002</i></p> |

Professional Associations

- Member, Institute of Electrical and Electronics Engineers, Inc. (IEEE)

Publications

- Quirk, P., T. Johnson, R. Skarbez, H. Towles, F. Gyarfaz, H. Fuchs. RANSAC-Assisted display model reconstruction for projective display. *Emerging Display Technologies, IEEE VR 2006.*
- Woodcock, C. E., C. Song, P. J. Quirk. Filling the gaps of Landsat 7 ETM+ imagery caused by Scan-Line-Corrector Off. In Preparation.

Presentations

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| <ul style="list-style-type: none"> - Paper Presenter <ul style="list-style-type: none"> - Emerging Display Technologies, IEEE VR 2006, Alexandria, Virginia, Mar. 25 - Mar. 29, 2006 - Presented paper accepted to the Emerging Display Technologies Workshop. - Installer, Trainer, Wide Area Visuals <ul style="list-style-type: none"> - Naval Research Laboratory, Washington, D.C. - Performed an in-place installation of our projective display system. - Trained on-site personnel in the daily use and demonstration of our system. - Exhibitor, Wide Area Visuals under the DARWARS Research Project <ul style="list-style-type: none"> - Interservice/Industry Training, Simulation and Education Conference (I/ITSEC), Orlando, Florida, Nov. 28 - Dec. 1, 2005 - Discussed the progress made by the Wide Area Visuals Research Team in the field of display surface acquisition and refinement. - Performed live demonstrations of a flight simulator (FlightGear) modified with the team's code. | <p><i>Mar. 2006</i></p> <p><i>Feb. 2006</i></p> <p><i>Nov. 2005</i></p> |
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Independent Projects

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| <ul style="list-style-type: none"> - Participated in the Mid-Atlantic ACM Collegiate Programming Competition. - Created a visualization plug-in for the Winamp (version 2.x) audio player. - http://www.cs.unc.edu/~quirk/projects/plugin | <p><i>Fall 2002</i></p> <p><i>Nov. 2002</i></p> |
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Additional Skills

- Knowledgeable about modern computer hardware: have recently assembled several desktop machines.
- Reading proficiency in French.