

# Ashish Myles

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## EDUCATION

### University of Florida

- **Doctor of Philosophy** in Computer Engineering, December 2008
  - Chair: Jörg Peters
  - Dissertation: *Curvature-Continuous Bicubic Subdivision Surfaces for Polar Configurations*
- **Master of Science** in Computer Engineering, August 2004
  - Chair: Jörg Peters
  - Thesis: *Linear Programming Approach to Fitting Splines through 3D Channels*
- **Bachelor of Science** in Computer Engineering, May 2002
  - Honors Thesis: *Wheelchair Detection in a Calibrated Environment*
  - Minor in Mathematics

GPA 4.0/4.0 in each case

## RESEARCH INTERESTS

- Curves and Surfaces
- GPU Computation

## PUBLICATIONS

### Journal Publications

1. Ashish Myles and Jörg Peters. **Bi-3 C<sup>2</sup> Polar Subdivision**. *ACM Transactions on Graphics*, accepted. (Proceedings of SIGGRAPH 2009, New Orleans, Louisiana, August 3-7, 2009)
2. Young In Yeo, Tianyun Ni, [Ashish Myles](#), Vineet Goel, and Jörg Peters. **Parallel Smoothing of Quad Meshes**. *The Visual Computer*, accepted.
3. [Ashish Myles](#), Tianyun Ni, and Jörg Peters. **Fast Parallel Construction of Smooth Surfaces from Meshes with Tri/Quad/Pent Facets**. *Computer Graphics Forum*, 27(5), pp. 1365-1372, 2008. (Proceedings of the Symposium on Geometry Processing, Copenhagen, Denmark, July 2-4, 2008)
4. [Ashish Myles](#), Kestutis Karciauskas, and Jörg Peters. **Pairs of Bi-Cubic Surface Constructions Supporting Polar Connectivity**. *Computer Aided Geometric Design*, 25(8), pp. 621-630, 2008.
5. [Ashish Myles](#) and Jörg Peters. **Threading Splines Through 3D Channels**. *Computer Aided Design*, 37(2), pp. 139-148, February 2005.

### Conference Publications

1. Tianyun Ni, Young In Yeo, [Ashish Myles](#), Vineet Goel, and Jörg Peters. **GPU Smoothing of Quad Meshes**. *IEEE International Conference on Shape Modeling and Applications*, pp. 3-9, Stony Brook, New York, June 4-6, 2008.

2. [Ashish Myles](#), Young In Yeo, and Jörg Peters. **GPU Conversion of Quad Meshes to Smooth Surfaces**. *ACM Solid and Physical Modeling Symposium*, pp. 321-326, Stony Brook, New York, June 2-4, 2008.
3. [Ashish Myles](#), Kestutis Karčiauskas, and Jörg Peters. **Extending Catmull-Clark Subdivision and PCCM with Polar Structures**. *Pacific Conference on Computer Graphics and Applications*, pp. 313-320, Maui, Hawaii, October 29-November 02, 2007.
4. Kestutis Karčiauskas, [Ashish Myles](#), and Jörg Peters. **A  $C^2$  Polar Jet Subdivision**. *Symposium on Geometry Processing*, pp. 173-180, Sardinia, Italy, June 26-28, 2006.
5. [Ashish Myles](#) and Jörg Peters. **Fast Safe Spline Surrogates for Large Point Clouds**. *3rd International Symposium on 3D Data Processing, Visualization and Transmission*, pp. 631-638, Chapel Hill, North Carolina, June 14-16, 2006.
6. [Ashish Myles](#), Niels da Vitoria Lobo, and Mubarak Shah. **Wheelchair Detection in a Calibrated Environment**. *5th Asian Conference on Computer Vision*, Melbourne, Australia, January 23-25, 2002.

## Conference Short Papers

1. [Ashish Myles](#), Young In Yeo, Minh Kim, Sergei Kurenov, Jörg Peters. **Interactive Peritoneum in a Haptic Surgery Illustration Environment**. *17th Annual Medicine Meets Virtual Reality Conference*, Long Beach, California, January 19-22, 2009.
2. Sukitti Punak, Minh Kim, [Ashish Myles](#), Juan Cendan, Sergei Kurenov, Jörg Peters. **Fatty Tissue in a Haptic Illustration Environment**. *16th Annual Medicine Meets Virtual Reality Conference*, pp. 384-386, Long Beach, California, January 29-February 1, 2008.

## PRESENTATIONS AND INVITED TALKS

### Conference Posters

- **GPU Conversion of Quad Meshes to Smooth Surfaces**, *ACM Solid and Physical Modeling Symposium*, Stony Brook, New York, June 2008.
- **Fast Safe Spline Surrogates for Large Point Clouds**, *3D Data Processing, Visualization and Transmission*, University of North Carolina, Chapel Hill, June 2006.
- **Wheelchair Detection in a Calibrated Environment**, *Asian Conference on Computer Vision*, Melbourne, Australia, January 2002.

### Conference Presentations

- **Bi-cubic Polar Subdivision**, *SIGGRAPH*, Los Angeles, California, August 2008.
- **Extending Catmull-Clark Subdivision and PCCM with Polar Structures**, *Pacific Graphics*, Maui, Hawaii, November 2007.

### Invited talks

- **Curvature-Continuous Bicubic Subdivision Surfaces for Polar Configurations**, *Media Research Laboratory*, New York University, New York, November 2008.
- **An Introduction to the B-spline Representation**, *Computational NeuroEngineering Lab*, University of Florida, February 2008.

## TEACHING EXPERIENCE

- **Teaching Assistant**, University of Florida, Gainesville, Florida

- **Data Structures and Algorithms** (undergraduate course), University of Florida, Fall 2002, Fall 2003, Fall 2004
  - Designed course assignments and exams and graded students.
  - Lead multiple discussion sections, Fall 2003 and Fall 2004.
- **Computer Graphics** (combined undergraduate/graduate course), Spring 2003
  - Designed course assignments and graded students.
- **Introduction to Computers for Architecture Majors** (undergraduate course), Spring 2005, Taught Fall 2005
  - Assisted students with AutoCAD and 3DViz and graded assignments.
  - Lectured, Fall 2005.
- **Advanced Graphics** (graduate course), Spring 2008
  - Designed course assignments and graded students.
- **Instructor**, National Technological University / Walden University
  - **Advanced Data Structures** (graduate course), 08-10/2003, 03-07/2004
    - Reorganized existing course material.
    - Taught and graded students via a web interface.
  - **Formal Methods in Software Engineering** (graduate course), 10-12/2006
    - Taught and graded students via a web interface.
  - **Analysis of Algorithms** (graduate course), 05-07/2007
    - Audited the course and offered feedback for improvement.
    - Created a diagnostic test covering all mathematical prerequisites for the course.

## WORK EXPERIENCE

- **Research Intern**, ATI, Orlando, 05/2005 - 08/2005  
Formulated and implemented techniques to support real-time morphing subdivision surfaces on the X-Box 360 GPU.
- **Lab Consultant**, University of Florida, 08/2003 - 05/2005  
Provided user support in Windows NT, Solaris, and Linux environments; troubleshot various software issues.
- **Administrator and Software Engineer**, DigiScribe Services, Gainesville, 01/2005 – 12/2005  
Implemented software catalog of transcription in a searchable database with a multi-user web-based interface.
- **Software Developer Intern**, International Carbon Bank Exchange, 08/2000 - 11/2000  
Created user-friendly software implementing pollution trends, and pollution reduction planning, and other issues.

## TECHNICAL SKILLS

- **Programming:** C/C++, Java, Ruby, PHP, SQL, HTML, Javascript, Python, Perl, Lisp, Shell scripts, Matlab, Maple
- **API and Application Software:** Ruby on Rails, Java/Swing, C++ Standard Template Library, TCP Sockets, OpenGL, Oracle, MySQL
- **Operating Systems:** Windows 9x/NT/XP, MS-DOS, Unix, Solaris, Linux (SuSE, Red Hat, Mandrake, Debian), MacOS X

## PROFESSIONAL DEVELOPMENT

- **Florida Institute for Development of Engineering Faculty (FIDEF)** course, 2007-2008  
Topics: "Successful NSF CAREER proposals", "NIH funding", "Mock tenure review", and more.

- **Tau Beta Pi Engineering Futures Program**, completed all sessions  
Topics: "People skills", "Team chartering", "Analytical problem-solving", "Group process"

## PROFESSIONAL ORGANIZATIONS

- **Association for Computing Machinery (ACM)**, member since 2008
- **Tau Beta Pi**, National Engineering Honor Society, member since 2005

## AWARDS AND HONORS

- 2007 Student Travel Grant from CISE, University of Florida
- 2003 and 2004 NSF Fellowship Scholarship Honorable Mention
- 2002 University Four-Year Scholar at the University of Florida
- 2002 Computer Research Association Outstanding Undergraduate Award Honorable Mention

## SERVICE

- **Tau Beta Pi, Florida Alpha Chapter**
  - Active member, Spring 2005 - Spring 2009 (most active member award, Fall 2005)
  - **Webmaster**, Spring 2006 (most active officer award), Fall 2006, Spring 2007, Spring 2009
  - **GatorTRAX** (K-12 Initiative), active Fall 2005 - Spring 2009
    - **Coordinator**, Fall 2007
    - **Webmaster**, Fall 2008 - Spring 2009
  - **SECME** (auxiliary K-12 program), active Spring 2005 - Spring 2009
    - **Elementary or Middle School Coordinator**, Spring 2006, 2007, 2009
    - **Webmaster**, Spring 2009
- **Engineering Bowl Technical Lead** (University of Florida Engineering Week), Spring 2006-09

## PROFESSIONAL ACTIVITY

- **Program Committee**, 4th International Symposium on Visual Computing, 2008
- **Reviewer**, Computer-Aided Geometry Design, 2008-present