

# Ashish Myles

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## Academics

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### New York University

- **Postdoctoral Researcher** in Computer Science, May 2009 – August 2013
  - Advisor: Denis Zorin
  - Topic: Mesh Parametrization
- **Courant Instructor / Assistant Professor**, May 2009 – August 2013

### University of Florida

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

GPA 4.0/4.0

## Research Interests

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- Curve and Surface Geometry and Analysis
- Surface and Volume Parametrization
- GPU Computation

## Publications

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### Journal Publications

- [Ashish Myles](#) and Denis Zorin. **Controlled-Distortion Constrained Global Parametrization**. *ACM Transactions on Graphics*, 32(4), pp. 105:1-105:14, 2013. (Proceedings of SIGGRAPH 2013)
- [Ashish Myles](#) and Denis Zorin. **Global Parametrization by Incremental Flattening**. *ACM Transaction on Graphics*, 31(4), pp. 109:1-109:11, 2012. (Proceedings of SIGGRAPH 2012)
- Ofir Weber, [Ashish Myles](#), and Denis Zorin. **Computing Extremal Quasiconformal Maps**. *Computer Graphics Forum*, 31(5), pp. 1679-1689, 2012. (Proceedings of the Symposium on Geometry Processing 2012, **Best Paper Award**)
- [Ashish Myles](#) and Jörg Peters. **C<sup>2</sup> Splines Covering Polar Configurations**. *Computer-Aided Design*, 43(11), pp. 1322-1329, 2011. (Proceedings of Solid and Physical Modeling 2011)
- Denis Kovacs, [Ashish Myles](#), Denis Zorin. **Anisotropic Quadrangulation**. *Computer Aided Geometric Design*, 28(8), pp. 449-462, 2011.
- [Ashish Myles](#), Nico Pietroni, Denis Kovacs, and Denis Zorin. **Feature-Aligned T-meshes**. *ACM Transactions on Graphics*, 29(4), pp. 1-11, 2010. (Proceedings of SIGGRAPH 2010)
- [Ashish Myles](#) and Jörg Peters. **Bi-3 C<sup>2</sup> Polar Subdivision**. *ACM Transactions on Graphics*, 28(3), pp. 1-12, 2009. (Proceedings of SIGGRAPH 2009)
- Young In Yeo, Tianyun Ni, [Ashish Myles](#), Vineet Goel, and Jörg Peters. **Parallel Smoothing of Quad Meshes**. *The Visual Computer*, 25(8), pp. 757-769, 2009.
- [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 2008)

- [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.
- [Ashish Myles](#) and Jörg Peters. **Threading Splines Through 3D Channels**. *Computer Aided Design*, 37(2), pp. 139-148, February 2005.

## Conference Publications

- Denis Kovacs, [Ashish Myles](#), Denis Zorin. **Anisotropic Quadrangulation**. *ACM Symposium on Solid and Physical Modeling*, pp. 137-146, Haifa, Israel, September 1-3, 2010.
- 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.
- [Ashish Myles](#), Young In Yeo, and Jörg Peters. **GPU Conversion of Quad Meshes to Smooth Surfaces**. *ACM Symposium on Solid and Physical Modeling*, pp. 321-326, Stony Brook, New York, June 2-4, 2008.
- [Ashish Myles](#), Kestutis Karciauskas, 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.
- Kestutis Karciauskas, [Ashish Myles](#), and Jörg Peters. **A  $C^2$  Polar Jet Subdivision**. *Symposium on Geometry Processing*, pp. 173-180, Sardinia, Italy, June 26-28, 2006.
- [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.
- [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

- [Ashish Myles](#), Young In Yeo, Minho 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.
- Sukitti Punak, Minho 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.

## In Progress

- [Ashish Myles](#), Denis Zorin. **Metric-Aware Feature-Aligned Parametrization**.

## Presentations and Invited Talks

### Conference Presentations

- **Controlled-Distortion Constrained Global Parametrization**, *SIGGRAPH 2013*, Anaheim, California, July 2013.
- **Global Parametrization by Incremental Flattening**, *SIGGRAPH 2012*, Los Angeles, California, August 2013.
- **$C^2$  Splines Covering Polar Configurations**, *Solid and Physical Modeling*, Orlando, Florida, October 2011.
- **Feature-Aligned T-meshes**, *SIGGRAPH 2010*, Los Angeles, California, August 2010.
- **Parametrization and Patch Layout for Higher-Order Surface Approximation**, *Curves and Surfaces*, Avignon, France, June 2010.
- **Bi-3  $C^2$  Polar Subdivision**, *SIGGRAPH 2009*, New Orleans, Louisiana, August 2009.
- **Bi-cubic Polar Subdivision**, *SIGGRAPH 2008*, Los Angeles, California, August 2008.
- **Extending Catmull-Clark Subdivision and PCCM with Polar Structures**, *Pacific Graphics*, Maui, Hawaii, November 2007.

## Conference Posters

- **GPU Conversion of Quad Meshes to Smooth Surfaces**, *ACM Symposium on Solid and Physical Modeling*, 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.

## Invited talks

- **Global Parametrization and Incremental Flattening**, University of Florida, October 2011.
- **Feature-Aligned T-meshes**, *Istituto di Scienza e Tecnologie*, Italy, July 2010.
- **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

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- **Courant Instructor / Assistant Professor**, New York University, New York, New York
  - **Calculus III**, Spring 2011
  - **Algebra and Calculus (Precalculus)**, Fall 2011
  - **Discrete Mathematics**, Spring 2011
  - **Calculus III**, Fall 2010
  - **Calculus I**, Spring 2010 – led recitation sessions
- **Teaching Assistant**, University of Florida, Gainesville, Florida
  - **Data Structures and Algorithms**, Fall 2002, Fall 2003, Fall 2004
  - **Computer Graphics**, Spring 2003
  - **Introduction to Computers for Architecture Majors**, Spring 2005, Fall 2005
  - **Advanced Graphics**, Spring 2008
- **Instructor**, National Technological University / Walden University
  - **Advanced Data Structures**, Fall 2003, Spring 2004
  - **Formal Methods in Software Engineering**, Fall 2006
  - **Analysis of Algorithms**, Summer 2007 – Course auditer

## Work Experience

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- **Research Intern**, ATI, Orlando, 05/2005 – 08/2005  
Designed and implemented GPU-accelerated surface construction and rendering algorithms.
- **Lab Consultant**, University of Florida, 08/2003 – 05/2005  
Provided user support in Windows NT, Solaris, and Linux environments.

## Technical Skills

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- Windows (all flavors), Unix (Solaris, various flavors of Linux)
- C/C++, Java, Ruby, Python, PHP, Javascript, Matlab, Maple, Lisp
- OpenGL, SWIG
- Web development and technologies

## Professional Development

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- **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**

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- **Association for Computing Machinery (ACM)**, member since 2008
- **Tau Beta Pi**, National Engineering Honor Society, member since 2005
- **American Society for Engineering Education (ASEE)**, member since 2012

## **Professional Activity**

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- **Program Committees:** ISVC 2008, SGP 2011, GMP 2011-2012
- **Reviewer:** CAGD, ACM ToG, TVCG, Eurographics, GMP, SIGGRAPH, SIGGRAPH Asia, SGP, SMI

## **Awards and Honors**

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- 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**

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- **NYU cSplash**, Taught a class to high schoolers on the Bézier representation, Spring 2011
- **Tau Beta Pi MindSET National Management Committee** since 2009, Chair since 2010
- **Tau Beta Pi, Florida Alpha Chapter**, active student member and officer, Spring 2005-09
- **Engineering Bowl Technical Lead** (University of Florida Engineering Week), Spring 2006-09