

Nathan R. Andrysc

Curriculum Vitae

Contact

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Education

Ph.D., Computer Science, August 2011

Purdue University

West Lafayette, IN

Thesis: *Data Structures for Efficient Analysis of Large-Scale Unstructured Datasets*

Adviser: Prof. Xavier Tricoche

Committee: Prof. Bedřich Beneš, Prof. Voicu Popescu, and Prof. Elisha Sacks

GPA: 3.67/4.0

M.Sc., Computer Science, May 2009

Purdue University

West Lafayette, IN

B.S., Computer Science and Engineering, June 2005

The Ohio State University

Columbus, OH

Thesis: *A User Study Contrasting 2D Unsteady Vector Field Visualization Techniques*

Adviser: Prof. Han-Wei Shen

Committee: Prof. Roger Crawfis and Prof. David Mathias

GPA: 3.82/4.0

Graduated with Honors and Distinction

Employment

7/2011–present

Rotation Engineer, MIC Software

Intel Corporation

Portland, OR

8/2005–7/2011

Teaching / Research Assistant

Purdue University, Department of Computer Science

West Lafayette, IN

6/2005–8/2005

Research Assistant

The Ohio State University, Department of Computer Science and Engineering

Columbus, OH

6/2005–9/2004

Software Intern

Nationwide Insurance

Columbus, OH

Teaching Experience

Teaching Assistant (Purdue)

- CS 240 *Programming in C*: Fall 2007, Spring 2009
- CS 251 *Data Structures*: Spring 2008
- CS 334 *Fundamentals of Computer Graphics*: Fall 2008
- CS 530 *Introduction to Scientific Visualization*: Fall 2009, Fall 2010
- CS 535 *Interactive Computer Graphics*: Fall 2007, Spring 2009

Tennis Coach

Thomas Worthington High School: Spring 2004, Spring 2005

Professional Activities

External Reviewer

IEEE Visualization Conference, 2011

IEEE Information Visualization Conference, 2009

Research Interests

Interactive computer graphics, visualization, simulation, CFD, many-core architectures

Publications

Journal Papers

Samer Samir Barakat, Xavier Tricoche, and **Nathan Andryscio**. Fast Extraction of High-quality Crease Surfaces for Visual Analysis. *Computer Graphics Forum*, June 2011.

Nathan Andryscio and Xavier Tricoche. Matrix Trees. *Computer Graphics Forum*, 29:963–972(10), June 2010.

Nathan Andryscio, Kevin Robert Gurney, Bedřich Beneš, and Kathy Corbin. Visual Exploration of the Vulcan CO₂ Data. *IEEE Computer Graphics and Applications*, 29(1):6–11, 2009.

Daniel G. Aliaga, Bedřich Beneš, Carlos A. Vanegas, and **Nathan Andryscio**. Interactive Reconfiguration of Urban Layouts. *IEEE Computer Graphics and Applications*, 28(3):38–47, 2008.

Conference Papers

Nathan Andryscio, Paul Rosen, Voicu Popescu, Bedřich Beneš, and Kevin Robert Gurney. Experiences in Disseminating Educational Visualizations. In *International Symposium on Visual Computing (ISVC)*, pages 239–248, September 2011.

Nathan Andryscio and Xavier Tricoche. Implicit and Dynamic Trees for High Performance Rendering. In *Proceedings of Graphics Interface (GI)*, St. John's, Canada, 2011.

Nathan Andryscio, Martin Koster, Markus Thommes, and Xavier Tricoche. A Topological Study of Salient Structures in a High-Resolution Spherization Simulation. In *Foundations of Topological Analysis Workshop in conjunction with IEEE VisWeek 2010*, Salt Lake City, UT, oct. 2010.

Bedřich Beneš, **Nathan Andryscio**, and Ondrej Stava. Interactive Modeling of Virtual Ecosystems. In Eric Galin and Jens Schneider, editors, *Eurographics Workshop on Natural Phenomena*, pages 9–16, Munich, Germany, 2009. Eurographics Association.

Posters / Talks

- Nathan Andrysko.** Efficient Data Structures for Interactive Visual Analysis of Large-Scale Unstructured and Meshfree Datasets on Many-Core Architectures. Doctoral Colloquium at IEEE Vis 2010, San Diego, CA, October 2010.
- Nathan Andrysko** and Xavier Tricoche. Dynamic and Implicit Trees for Graphics and Visualization on the GPU. Poster at NVIDIA GPU Technology Conference, San Jose, CA, September 2010.
- A. Rosato, O. Dybenko, V. Ratnaswamy, D. Hornthrop, **N. Andrysko**, X. Tricoche, and L. Kondic. Density Relaxation of Granular Matter. Poster at Gordon Research Conference on Granular and Granular Fluid Flow, Colby College, Waterville, ME, June 2010.
- K. R. Gurney, D. Mendoza, S. Geethakumar, Y. Zhou, M. Fischer, K. Corbin, C. Miller, B. Beneš, **N. Andrysko**, S. Ilyushchenko, S. Denning, and D. Ojima. The Vulcan Project: Methods, Results, and Evaluation. Poster at North American Carbon Program All Investigators meeting, San Diego, CA, February 2009.
- K. R. Gurney, D. Mendoza, S. Geethakumar, Y. Zhou, M. Fischer, K. Corbin, C. Miller, B. Beneš, **N. Andrysko**, S. Ilyushchenko, S. Denning, and D. Ojima. The Vulcan Project: Methods, Results, and Evaluation. Poster at Mid-Continent Interim Synthesis meeting, Oak Ridge National Laboratory, Oak Ridge, TN, February 2009.
- K. R. Gurney, D. Mendoza, S. Geethakumar, Y. Zhou, M. Fischer, K. Corbin, C. Miller, B. Beneš, **N. Andrysko**, S. Ilyushchenko, S. Denning, and D. Ojima. The Vulcan Project: Methods, Results, and Evaluation. Talk at American Geophysical Union meeting, December 2008.
- Nathan Andrysko**, Bedřich Beneš, and Kevin Gurney. Interactive poster: Visual analytic techniques for CO₂ emissions and concentrations in the United States. pages 173 –174, oct. 2008.
- Nathan Andrysko**, Bedřich Beneš, and Matt Brisbin. Permeable and Absorbent Materials in Fluid Simulations. Poster at ACM Siggraph/Eurographics Symposium on Computer Animation (SCA), October 2008.

Thesis

- Nathan Andrysko.** *Data Structures for Efficient Analysis of Large-Scale Unstructured Datasets.* PhD thesis, Purdue University, July 2011.
- Nathan Andrysko.** A User Study Contrasting 2D Unsteady Vector Field Visualization Techniques. Undergraduate thesis, The Ohio State University, May 2005.

References

Available upon request

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