

James Vanderhyde

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EDUCATION

Georgia Institute of Technology

Ph.D. in Computer Science, Math minor, August 2007

Thesis: "Topology control of volumetric data"

Advisor: Andrzej Szymczak

Michigan State University

M.S. in Computer Science, May 2001

Project: "Comparing evolutionary trees and tree-building methods"

Advisor: Eric Torng

Hope College, Holland, MI

B.S. in Math and Computer Science, German minor, May 1999, *summa cum laude*

ADMINISTRATIVE EXPERIENCE

Saint Xavier University, Chicago, IL 60655

2016–present

MACS program director—admitted and advised all graduate students in the Masters of Applied Computer Science program, assisted international students with additional academic paperwork, and served on the Graduate Advisory Council.

TEACHING EXPERIENCE

Saint Xavier University, Chicago, IL 60655

2015–present

Assistant professor—taught upper-level and lower-level computer science courses (across curriculum) and graduate courses, developed old and new courses, and engaged in research projects.

Benedictine College, Atchison, KS 66002

2009–2015

Associate professor—taught upper-level and lower-level computer science courses (across curriculum), advised undergraduates, performed department and college service, engaged in undergraduate research projects, and taught precalculus and numerical analysis.

Governor's Honors Program, Valdosta, GA 31698

2004–2006

Math teacher—taught various math and computer science topics in a six-week summer program for advanced high school students. Topics included graph theory, topology, computer science theory, discrete math, introductory programming in Delphi, and advanced programming with Java and with OpenGL.

Michigan State University, East Lansing, MI 48823

1999–2000

Teaching Assistant—CSE 101, Computing Concepts and Competencies. Led 3 of 60 sections offered each semester. Presented material and helped students with tasks in word processing, spreadsheet design, and website design. Held office hours and graded exams.

Georgia Institute of Technology, Atlanta, GA 30332

2001–2007

Teaching assistant—Theory and Algorithms, Discrete Math, Computer Graphics, Digital Video Special Effects, Video Game Design. Graded papers, held office hours, presented homework solutions, led review sessions, helped design projects, guest lectured, and graded and advised projects.

Hope College, Holland, MI 49423

1996–1999

German Drill instructor—instructed first-year German students once a week

Math tutor in math drop-in center—tutored random students who needed help in undergrad math courses

INDUSTRY EXPERIENCE

IronCAD, Atlanta, GA 30339 2007–2009
Software Engineer—Visual C++ development

Fusionary Media, Grand Rapids, MI 49503 1999–2001
Java, ASP, and ColdFusion research and development for web applications

RESEARCH AND WORK EXPERIENCE

Georgia Institute of Technology, Atlanta, GA 30332 2002–2003
Research Assistant—Graphics and visualization of topology

Michigan State University, East Lansing, MI 48823 2000–2001
Research Assistant—Computational biology and artificial life

Hope College, Holland, MI 49423 1996–1999
Summer math research program—chaos theory, funded by NSF REU
Summer computer science research program—educational visualizations, funded by NSF REU
Research Assistant—typed quizzes, corrected papers, and helped with research for German professor

PUBLICATIONS

- J. Vanderhyde and F. Appel, “With greater CS enrollments comes an even greater need for engaging teaching practices,” *Journal of Computing Sciences in Colleges: Volume 32 Issue 1*, October 2016, pp. 38–45.
- A. Szymczak and J. Vanderhyde, “Airway segmentation by topology-driven local thresholding,” *Proc. SPIE, Vol. 6914*, 69143D (2008).
- J. Vanderhyde and A. Szymczak, “Topological simplification of isosurfaces in volumetric data using octrees,” *Graphical Models* 70 (2008), pp. 16-31.
- A. Szymczak and J. Vanderhyde, “Simplifying the topology of volume datasets: an opportunistic approach,” Georgia Institute of Technology (2005), GVU Technical Report, GIT-GVU-05-09.
- A. Szymczak and J. Vanderhyde, “Extraction of Topologically Simple Isosurfaces from Volume Datasets,” *IEEE Visualization 2003*, pp. 67–74.
- H. L. Dershem and J. Vanderhyde, “Java Class Visualization for Teaching Object-Oriented Concepts,” *ACM SIGCSE 1998*, pp. 53-57.

PRESENTATIONS

- “Monte Carlo tree search,” Chicago Clojure Meetup, 26 July 2017.
- “Jumping implementation in video games,” poster presentation by J. Rioux and J. Vanderhyde, SIGCSE 2015.
- “Nifty assignment: Exploiting a networked game,” Consortium for Computing Sciences in Colleges: Central Plains regional conference, 2013.
- “Nifty assignment: Cellphone text messaging,” Consortium for Computing Sciences in Colleges: Central Plains regional conference, 2013.
- “Board game project ideas for CS1 and CS2,” workshop co-led with Zack Kurmas, SIGCSE 2012.

PROFESSIONAL SERVICE

- Served on General Education Committee at Saint Xavier University—helped oversee general education assessment activities (2017–present).
- Chaired Sylvia Schlunk scholarship committee, 2017.
- Reviewed papers for SIGCSE and CCSC conventions, 2013 through 2018.
- Served on Assessment Committee at Benedictine College—helped oversee general education and departmental assessment activities (2011–2014).
- Reviewed posters for MINK WIC (regional women in computing conference) (October 2013).
- Reviewed two chapters of a new discrete math book from Wiley.
- Served as a technical reviewer for a book: *Learning Stencyl 3.x Game Development* by Innes Borkwood, 2013 Packt Publishing.

Interviewed applicants for presidential scholarships at Benedictine College and Georgia Tech (2010–2015).
Served as a student volunteer at the SIGCSE 2007 convention.

PROFESSIONAL AFFILIATIONS

Association for Computing Machinery
ACM Special Interest Group for Computer Science Education
Chicago Clojure Meetup

EXTRA-CURRICULAR ACTIVITIES

Palos Heights Christian Reformed Church Celebration Choir, Palos Heights, IL	2015–present
Pine Ridge Presbyterian Church Chancel Choir, Kansas City, MO	2011–2015
Theater Awards Academy, Benedictine College, Atchison, KS	2014–2015
North Avenue Presbyterian Church Chancel Choir, Atlanta, GA	2005–2009
Georgia Tech Christian Campus Fellowship (various leadership groups)	2002–2007
Spartasoft Video Game Programming Group (co-founder and secretary), Michigan State University	2000–2001
Graduate InterVarsity (executive committee), Michigan State University	2000–2001
Alpha Kappa Pi academic fraternity (one of original members, treasurer), Hope College	1996–1999
Hope College Orchestra, Hope College Gospel Choir	1995–1999

ACHIEVEMENTS AND AWARDS

Tenured at Benedictine College, Atchison, KS
President’s Fellowship, Georgia Institute of Technology
Hope College Summa Cum Laude, GPA 3.962
Third in my high school class with GPA 3.9
Top 100 in Michigan Math Prize Competition (Michigan high schoolers), 1994
National Merit Finalist
First place out of 30 teams in Lower Michigan Math Competition (MIAA colleges)
Scored positively on the Putnam Math Competition, 1995–1998
Phi Beta Kappa Honor Society
Sigma Xi Science Research Honor Society
Pi Mu Epsilon, Math Honor Society
Delta Phi Alpha, German Honor Society