Gregory M. Cipriano

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Education

University of Wisconsin-Madison *Madison, Wisconsin* Aug. '04 - Aug. '10
- PhD in Computer Science.
- Emphasis: Computer Graphics and Scientific Visualization
- Dissertation Title: *Molecular Surface Abstraction*
- Advisor: Michael Gleicher
- GPA: 3.8

University of Oregon *Eugene, Oregon* Aug. '96 – June '00
- BS with honors, double major in Computer Science and Math, minor in Music.
- Magna Cum Laude, GPA: 3.9/4.0. CIS GPA: 4.08

Sandpoint High School *Sandpoint, Idaho* Aug. '92 – June '96
- Graduated Valedictorian, GPA: 4.0

Work experience

SolidWorks Oct. '10 -

Senior Graphics Developer for CAD. As part of graphics team, worked on adding speed and functionality improvements to the core rendering engine. Also implemented user controls such as cameras, manipulators and rulers.

University of Wisconsin Aug. '04 – June '05

Led two discussion sections as a Teaching Assistant for Intro to Programming.

WellMed/WebMD Health Services June '00 – Aug. '04

Created database-driven web applications using C#, SQL, Java, Javascript and HTML with CSS. Led small group of developers to customize tools to meet client needs.

Honors/Awards received

- Computational Informatics in Biology and Medicine (CIBM) Fellowship, 2005-2009
- Inducted into Phi Beta Kappa honors fraternity
- Dean's List Fall '96, Fall '97 through Spring '2000
- Wm. H. Stenhjem Jr Scholarship, 1999
- Laurel Scholarship, 1998
- 6th place, 1999 ACM Pacific Region programming contest
- 1st place, 1999 University of Oregon programming contest
- 1st place, 2000 University of Oregon programming contest

Publications

- Greg Cipriano, George Phillips, Michael Gleicher "Local functional descriptors for surface comparison based binding prediction." **BMC Bioinformatics**. Nov 2012.
- Greg Cipriano, Gary Wesenberg, Tom Grim, George Phillips, Michael Gleicher. "GRAPE: GRaphical Abstracted Protein Explorer." **Nucleic Acids Research, Web Server Issue.** May 2010. URL: http://grape.uwbacter.org (Chosen as Featured Article)

- Greg Cipriano, George N. Phillips Jr., Michael Gleicher. "Multi-Scale Surface Descriptors." **IEEE Transactions on Visualization and Computer Graphics (Proceedings Visualization 2009).** October 2009.
- Greg Cipriano, Michael Gleicher. "Text Scaffolds for Effective Surface Labeling." **IEEE Transactions on Visualization and Computer Graphics (Proceedings Visualization 2008).** October 2008
- Greg Cipriano, Michael Gleicher. "Molecular Surface Abstraction." **IEEE Transactions on Visualization and Computer Graphics (Proceedings Visualization 2007).** October 2007

Invited Presentations

- 2010 Eurovis Poster Session
- 2009 UW Eye Research Institute Symposium (Best Poster Award)
- 2009 CIBM Conference Talk: “Multi-scale Surface Techniques”
- 2008 National Library of Medicine Informatics Training Conference
- 2008 3DSig Structural Bioinformatics Poster Session
- 2007 CIBM Conference Talk: “Molecular Surface Abstraction”
- Guest Lecturer for Advanced Graphics, Game Development classes at the University of Wisconsin, covering the following topics: ray tracing, global illumination, non-physical lighting, stylized rendering, curvature estimation.

Academic Research and Projects

- Scientific Visualization – PhD work with Prof. Michael Gleicher to create tools combining novel abstractions and real-time rendering techniques to help molecular biologists better understand the structure and function of complex proteins.
- Bioinformatics – Also part of PhD work: researching methods for characterizing the protein functional surface to inform binding prediction and classification.
- Physically Based Rendering – Worked under Prof. Stephen Chenney to adapt PBR toolkit to allow for motion blur. Spring 2005 term.
- DinoMorph Project – Researched and implemented inverse-kinematic methods for articulated dinosaur skeletal structure. Winter 2000 term.

Academic Interests/Skills

Graphics: real-time rendering techniques, scientific visualization
Computational Geometry: surface parameterization, analysis

Technical Proficiency

Strong Languages: C++, Java, OpenGL, SQL, HTML, XML
Other Skills: Javascript, Python, OpenMP, CUDA

Interests and activities

Music performance and theory, jazz piano and clarinet, skiing, sailing, camping

References available upon request