

# Gregory M. Cipriano

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## Education

- University of Wisconsin-Madison      *Madison, Wisconsin*      2004 - 2010
- PhD in Computer Science. Completed Aug. 2010.
  - Emphasis: Computer Graphics and Scientific Visualization
  - Dissertation Title: *Molecular Surface Abstraction*
  - Advisor: Michael Gleicher
  - GPA: 3.8
- University of Oregon      *Eugene, Oregon*      1996 - 2000
- 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*      1992 - 1996
- Graduated Valedictorian, GPA: 4.0

## Work experience

- University of Wisconsin      2004 - 2005
- Led two discussion sections as a Teaching Assistant for Intro to Programming.
- WellMed/WebMD Health Services      2000 - 2004
- 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, 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 – Current 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 current 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*