

# Jadrian Miles

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Department of Computer Science  
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**Education**

**2008–present** Brown University Providence, RI  
Ph.D. Candidate in Computer Science  
• Dissertation: “A Multi-Scale Model of Brain White-Matter Structure and Its Solution from Diffusion MRI”

**2008** Brown University Providence, RI  
Sc.M. in Computer Science

**2006** Duke University Durham, NC  
B.S. with Distinction in Computer Science, B.S. in Mathematics

## Publications and Presentations

### Journal Papers

- R. Boller, S.A. Braun, J. Miles, and D.H. Laidlaw. “Application of Uncertainty Visualization Methods to Meteorological Trajectories”. *Earth Science Informatics*, 3(1–2):119–126, June 2010.
- D.F. Keefe, D. Acevedo, J. Miles, F. Drury, S.M. Swartz, and D.H. Laidlaw. “Scientific Sketching for Collaborative VR Visualization Design”. *IEEE Transactions on Visualization and Computer Graphics*, 14(4):835–847, Jul–Aug 2008.
- A. McCauley, J. Michener, and J. Miles. “The Fountain That Math Built”. *UMAP Journal*, 23(3):221–234, Fall 2002.

### Refereed Conference Posters

- J. Miles, R.A. Cohen, and D.H. Laidlaw. “Tradeoffs in Supersampling of DTI Metrics”. Poster at ISMRM 2009.
- J. Miles, D.F. Keefe, D. Acevedo, F. Drury, S.M. Swartz, and D.H. Laidlaw. “Teaching Science in Virtual Reality with a Freehand 3D Illustration.” Poster at IEEE InfoVis 2007.

### Workshops

- R. Boller, S. Braun, J. Miles, and D. Laidlaw. “Application of Uncertainty Visualization Methods to Meteorological Trajectories”. NASA Earth and Space Science Informatics Workshop, University of Maryland, Baltimore County. August 2009.

### Invited Talks

- A. Gongvatana, J. Miles. “Diffusion MRI: Theory and Practice”. Biostatistics Program, Department of Public Health, Brown University. October 2010.
- J. Miles. “A Specialized Inter-Curve Similarity Measure for Agglomerative Diffusion MRI Streamline Clustering”. Section on Tissue Biophysics and Biomimetics, National Institutes of Health. May 2009.

- Work**
- 2008** Brown University Providence, RI  
Teaching Assistant in Computer Science Department
- **2008** CS137 Virtual Reality Design for Scientific Visualization: lesson planning, grading, in-class critiques, software support and hardware support
- 2000–2008** Avid Technology Tewksbury, MA  
Software Engineering, Software Quality Assurance, and Training seasonal internships
- **2008** Research and development of machine learning algorithms for video deinterlacing
  - **2006** R&D of computer vision algorithms for scene reconstruction
  - **2004** Video codec evaluation; development of in-house codec testing workflow software
  - **2003** R&D of cryptographic steganography algorithms
  - **2003** Migration of full corporate code base to Visual Studio .net compiler; software refactoring and optimization
  - **2002** Software quality assurance; network and hardware construction and maintenance
  - **2000** Office assistant
- 2004–2006** Duke University Durham, NC  
Undergraduate Teaching Assistant in Computer Science Department
- **2006** CS102 Discrete Mathematics: grading, office hours
  - **2005** CS124 Computer Graphics: grading, office hours, lectures
  - **2005** CS250 Graduate Numerical Analysis: grading, office hours
  - **2004** CS108 Software Design: grading, office hours
- Service**
- Reviewer** for *IEEE Visualization* and *IEEE Transactions on Visualization and Computer Graphics*
- 2009–present** New Urban Arts Providence, RI
- **2009, 2010** Academic mentor and tutor, math and science
- 2006–present** Brown University Providence, RI
- **2008, 2010** Technical Officer, Brown Graduate Student Council
  - **2006–2009** CS Department Representative, Brown Graduate Student Council
  - **2008** Member, CS Graduate Student Committee for Faculty Search
  - **2007, 2008** Organizer, CS Graduate Student Recruitment
- 2005–2006** Duke University Durham, NC
- **2006** President, Duke University Chapter of ACM
  - **2006** Member, Student Advisory Committee to the Office of the Dean of Students
  - **2005–2006** DJ, WXDU
- Honors**
- **2002–2006** Duke University: William D. Jones Memorial Alumni Scholarship (merit-based, partial tuition)
  - **2002** Microsoft: National High School Computer Science Scholarship
  - **2002** COMAP: Outstanding Solution in Mathematical Contest in Modeling
  - **2002** INFORMS: INFORMS Prize in COMAP Mathematical Contest in Modeling