

# Curriculum Vitae

## Personal Information

Marcus Anthony Brubaker  
39 Baldwin Street, Apt 3  
Toronto, Ontario, M5T 1L1

Phone: *Withheld*

Webpage: <http://www.cs.toronto.edu/~mbrubake>

E-Mail: [mbrubake@cs.toronto.edu](mailto:mbrubake@cs.toronto.edu)

## Education

- 09/2006 – Ph.D. in Computer Science, University of Toronto
- 09/2004 – 09/2006 M.Sc. in Computer Science, University of Toronto  
Thesis: *Physics-Based Priors for Human Pose Tracking*
- 09/2001 – 06/2004 Honours B.Sc., University of Toronto  
Specialist in Computer Science, Minor in Mathematics  
Graduated with High Distinction

## Scholarships and Awards

- 2008 – 2010 National Science and Engineering Research Council Canadian Graduate Scholarship, \$35,000CAD/year over 2 years.
- 2006 – 2007 Ontario Graduate Scholarship, \$15,000CAD.
- 2005 – 2006 Ray Reiter Graduate Award in Computer Science, \$500CAD.

## Refereed Academic Contributions

- 2010 Brubaker, M.A., Fleet, D.J., and Hertzmann, A. *Physics-Based Person Tracking Using the Anthropomorphic Walker*. In International Journal of Computer Vision. (Accepted.)
- 2009 Brubaker, M.A., Sigal, L., and Fleet, D.J. *Estimating Contact Dynamics*. In proceedings of the IEEE International Conference on Computer Vision, Kyoto, Japan, October 2009.
- 2008 Brubaker, M.A. and Fleet, D.J. *The Kneel Walker for Human Pose Tracking*. In proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, Anchorage, Alaska, June 2008. (Poster. Acceptance Rate of 27.9%)
- 2007 Brubaker, M.A., Fleet, D.J. and Hertzmann, A. *Physics-based person tracking using simplified lower-body dynamics*.

- In proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, Minneapolis, Minnesota, June 2007. (Oral. Acceptance Rate of 4.8%)
- 2006 Brubaker, M.A., Fleet, D.J., and Hertzmann, A. *Physics-Based Human Pose Tracking*. Oral presentation at Neural Information Processing Systems Workshop: Evaluation of Articulated Human Motion and Pose Estimation. December 2006. (No proceedings.)

### Book Chapters

- 2009 Brubaker, M.A., Sigal, L., and Fleet, D.J. *Video-Based People Tracking*. In Handbook of Ambient Intelligence and Smart Environments. Springer. (To be published.)

### Oral Presentations

- 2009 Brubaker, M.A. *Physics-Based Human Motion Understanding*. Rutgers University, New Brunswick, New Jersey, USA. April 2009.
- 2008 Brubaker, M.A. *Bayesian Density Estimation from Cryo-EM*. University of Toronto, Toronto, Ontario, Canada. September 2008.
- 2008 Brubaker, M.A. *Physics-Based Models for Human Pose Tracking*. Queens University, Kingston, Ontario, Canada. April 2008.
- 2007 Brubaker, M.A. *The Kneel Walker for Human Pose Tracking*. Canadian Institute for Advanced Research Workshop on Neural Computation and Adaptive Perception, Vancouver, British Columbia. December 2007.
- 2007 Brubaker, M.A. *Physics-Based Person Tracking Using Simplified Lower-Body Dynamics*. Ecole Polytechnique Federale de Lausanne, Switzerland. August 2007.

### Non-Refereed Academic Contributions

- 2006 Brubaker, M.A. *Dynamical Priors for People Tracking*. Oral presentation at Canadian Institute for Advanced Research: Neural Computation & Adaptive Perception Summer School. August 2006.

### Academic Conferences Attended

- December 2008 Neural Information Processing Systems 2008 Conference.

	Vancouver, British Columbia.
June 2008	IEEE Conference on Computer Vision and Pattern Recognition 2008. Anchorage, Alaska.
December 2007	Neural Information Processing Systems 2007 Conference. Vancouver, British Columbia.
June 2007	IEEE Conference on Computer Vision and Pattern Recognition 2007. Minneapolis, Minnesota.
December 2006	Neural Information Processing Systems 2006 Conference and Workshops. Vancouver and Whistler, British Columbia.
August 2006	Canadian Institute for Advanced Research: Neural Computation & Adaptive Perception Summer School. University of Toronto, Toronto, Ontario.
May 2006	Dynamic Walking 2006. University of Michigan, Ann Arbor, Michigan.
June 2005	Computational Vision in Neural and Machine Systems 2005. York University, Toronto, Ontario.
June 2005	Montreal-Toronto Computer Vision Workshop 2005. University of Montreal, Montreal, Quebec.

### **Academic Service**

2009	Reviewer for IEEE International Conference on Computer Vision.
2009	Reviewer for IEEE Conference on Computer Vision and Pattern Recognition.
2008	Reviewer for Springer International Journal of Computer Vision.
2008	Reviewer for IAPR International Conference on Pattern Recognition.
2007	Reviewer for IEEE International Conference on Computer Vision.
2005 – 2007	Reviewer for Elsevier Pattern Recognition Letters.

### **Departmental and University Service**

2007 – 2009	Graduate Education Council School of Graduate Studies, University of Toronto.
2008 – 2009	Committee on Student Matters School of Graduate Studies, University of Toronto.

2008 – 2009	Advisory Committee to the Provost for the Appointment of Dean of Graduate Studies & Vice-Provost Graduate Education University of Toronto.
2007 – 2008	Committee on Program Matters School of Graduate Studies, University of Toronto.
2004 –	Departmental Computing Committee Department of Computer Science, University of Toronto.
2008	Working Group on Interdisciplinarity in Graduate Education School of Graduate Studies, University of Toronto.
2006, 2007	Graduate Student Representative, Annual Departmental Retreat Department of Computer Science, University of Toronto.
2005 – 2006	M.Sc. Program Restructuring Committee Department of Computer Science, University of Toronto.
2005 – 2006	Departmental Computing Transition Committee Department of Computer Science, University of Toronto.
2005	Graduate Student Representative for External Departmental Review Department of Computer Science, University of Toronto.

### **Teaching and Professional Experience**

2006 – 2009	TA for CSC320: Introduction to Visual Computing University of Toronto, St. George Campus
Fall 2007	TA for CSC487/2503: Foundations of Computer Vision (Graduate Course) University of Toronto, St. George Campus
2004 – 2006	TA for CSC418/D18: Computer Graphics University of Toronto, St. George and Scarborough Campuses
Fall 2005	TA for CSC192: Computer Programming, Algorithms, Data Structures and Languages University of Toronto, St. George Campus
Fall 2004	TA for CSC263: Data Structures and Analysis University of Toronto, St. George Campus
Fall 2002 – Spring 2006	Private Tutor for introductory Calculus and Linux use and administration

Fall 1998 – Spring 2002

Software Engineer for Alldata LLC, Peoria, IL

Summer 1998

Assistant Network Administrator for Washington Community High School, Washington, IL

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