

Diego Macrini – February 2011

Personal Information

Work Address: *Colonel By, Room B407. School of Information Technology and Engineering.
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Education & Fellowships

- 2011- present **Post-doctoral Fellow, Computer Vision, University of Ottawa.**
School of Information Technology and Engineering.
- 2009, 2010 **Post-doctoral Fellow, Computer Vision, Queen's University.**
Department of Electrical and Computer Engineering.
- 2009 **Ph.D., Computer Vision, University of Toronto**
Department of Computer Science
- 2003 **M.Sc., Computer Vision, University of Toronto**
Department of Computer Science
- 1998 **Engineering Diploma, Information Technology**
Information Technology Department. University of Belgrano.
Buenos Aires, Argentina.
- 1993 **High-School Diploma with Specialization in Electronics**
French Republic High School, ET Num. 28
Buenos Aires, Argentina

Publications

a. Refereed Journals

1. **D. Macrini**, S. Dickinson, D. Fleet and K. Siddiki. *Bone Graphs: Medial Shape Parsing and Abstraction*. Journal on Computer Vision and Image Understanding (CVIU). (to appear).
2. **D. Macrini**, S. Dickinson, D. Fleet and K. Siddiki. *Object Categorization using Bone Graphs*. Journal on Computer Vision and Image Understanding (CVIU). (to appear)
3. K. Siddiqi, J. Zhang, **D. Macrini**, A. Shokoufandeh, S. Bioux, and S. Dickinson. (2007) *Retrieving Articulated 3-D Models Using Medial Surfaces*. Machine Vision and Applications (MVA). 19(4): 261–275.
4. Shokoufandeh, L. Bretzner, **D. Macrini**, M.F. Demirci, C. Jonsson, and S. Dickinson. (2006) *The Representation and Matching of Categorical Shape*. Computer Vision and Image Understanding (CVIU). 103: 139–154.
5. Shokoufandeh, **D. Macrini**, S. Dickinson, K. Siddiqi, and S. Zucker. (2005) *Indexing Hierarchical Structures using Graph Spectra*. IEEE Transactions on Pattern Analysis and

b. Refereed Conferences

6. P. Sala, **D. Macrini**, and S. Dickinson. *Spatiotemporal Contour Grouping using Abstract Part Models*. Asian Conference on Computer vision. ACCV 2010.
7. **D. Macrini**, K. Siddiqi and S. Dickinson. (2008) *From Skeletons to Bone Graphs: Medial Abstraction for Object Recognition*. IEEE International Conference on Computer Vision and Pattern Recognition (CVPR).
8. M. van Eede, **D. Macrini**, A. Telea, C. Sminchisescu, and S. Dickinson. (2006) *Canonical Skeletons for Shape Matching*. International Conference on Pattern Recognition (ICPR).
9. J. Zhang, K. Siddiqi, **D. Macrini**, A. Shokoufandeh, and S. Dickinson. (2005) *Retrieving Articulated 3-D Models Using Medial Surfaces and their Graph Spectra*. International Workshop on Energy Minimization Methods in Computer Vision and Pattern Recognition.
10. F. Qureshi, **D. Macrini**, D. Chung, J. MacLean, S. Dickinson, and P. Jasiobedzki. (2005) *A Computer Vision System for Spaceborne Safety Monitoring*. International Symposium on Artificial Intelligence, Robotics and Automation in Space (iSAIRAS).
11. **D. Macrini**, A. Shokoufandeh, S. Dickinson, K. Siddiqi, and S. Zucker. (2002) *View-Based 3-D Object Recognition using Shock Graphs*. International Conference on Pattern Recognition (ICPR).

d. Non-refereed contributions

9. **D. Macrini**. *Bone Graphs: Medial Abstraction for Shape Parsing and Object Recognition*. Ph.D. Thesis, University of Toronto, November 2009.
10. K. Siddiqi, J. Zhang, **D. Macrini**, S. Dickinson, and A. Shokoufandeh. (2008) *3-D Model Retrieval Using Medial Surfaces*. Medial Representations: Mathematics, Algorithms and Applications, Kaleem Siddiqi and Stephen Pizer, editors, Kluwer, Boston. (book chapter).
11. Shokoufandeh, Y. Keselman, F. Demirci, **D. Macrini**, and S. Dickinson. (2006) *Many-to-Many Feature Matching in Object Recognition*. Cognitive Vision Systems: Sampling the Spectrum of Approaches, Springer-Verlag. (book chapter).
12. S. Dickinson, A. Shokoufandeh, Y. Keselman, F. Demirci, and **D. Macrini**. (2005) *Object Categorization and the Need for Many-to-Many Matching*. Proceedings of The Annual meeting of the German Association for Pattern Recognition (DAGM). (invited paper).
13. **D. Macrini**. (2005) *Parsing Monocular Video Sequences: A Survey*. University of Toronto Technical Report CSRG-586.
14. **D. Macrini**. *Indexing and Matching for View-Based 3-D Object Recognition Using Shock Graphs*. Master's Thesis, University of Toronto, July 2003.
15. **D. Macrini**, A. Shokoufandeh, S. Dickinson, K. Siddiqi, and S. Zucker. (2002) *Spectral Methods for View-Based 3-D Object Recognition using Silhouettes*. Joint IAPR International Workshop on Syntactical and Structural Pattern Recognition. (invited paper).

Scholarships and Awards

Name of Award	Value (US\$)	Level	Type	Location of Tenure	Period held
Canadian Ministry of Research and Innovation / University of Ottawa Postdoctoral Fellowship	70,833	National	Research	University of Ottawa	2011/01 – 2012/05
Canadian Ministry of Research and Innovation / Queen's University Postdoctoral Fellowship	100,000	National	Research	Queen's University	2009/01 – 2010/12
ARC Postdoctoral Fellow Support	10,000	Institutional	Research	Queen's University	2009/01 – 2009/12
Precarn Project Scholarship	3,876	National	Research	University of Toronto	2004/10 - 2005/05
Precarn Student Scholarship	5,250	National	Research	University of Toronto	2006/10 - 2007/05
Precarn Student Scholarship	7,500	National	Research	University of Toronto	2007/10 - 2008/05
Ray Reiter Graduate Award in Computer Science	500	Institutional (U of T)	Academic	University of Toronto	2007/09
University of Toronto Ph.D. Fellowship	60,000	International	Academic	University of Toronto	2003/09- 2007/08
Best Poster Award	1,000	National	Research	IS / Precarn Conference	2005/06
University of Toronto M.Sc. Fellowship.	30,000	International	Academic	University of Toronto	2000/09 - 2002/02
Best Student Work Award	500	National (Argentina)	Research	Computer Science Conference	1999/09

Academic Activities

1. Reviewer for the journal IEEE Pattern Matching and Machine Intelligence.
2. Reviewer for the journal Pattern Recognition.
3. Reviewer for the conferences 3DPVT and 3DIM.

Teaching Experience

As Instructor

- Aug. 1999 - **Workshop on Windows Programming with C++ (four-month long)**
Nov. 1999 Information Technology Department. University of Belgrano.
- 1999 **Workshops on Windows Programming with C++ (three, four-month long)**
UBM Consulting. Joint venture between the University of Belgrano and IBM Argentina.

As Teaching Assistant

- 2000/ **Dept. of Computer Science (University of Toronto):** Computer System Modelling and
2008 Analysis (CSC470), Software Design (CSC207), Introduction to Visual Computing (CSC320F), Foundations of Computer Vision (CSC 487/2503), Data Structures (CSC263), Software Engineering (CSC 408), Fundamental Data Structures and Techniques (CSC 270) and File Structures and Data Management (CSC228).
- May 99/ **Dept. of Information Technology (University of Belgrano, Argentina):** Computability
Oct. 99 and Complexity.

Professional Industry Experience

- Jan 00 - Jul 00 **Synthesis Information Technology (Argentina)**
Software architect for the retail sector.
- Jan 99 - Dec 99 **Grupo Basicos (Argentina)**
Evaluation of requirements, analysis and design of software for personnel management and production control.
- Mar 97 - Jul 97 **Dynamic (Argentina)**
Database programmer for *Telefónica de Argentina*.