Curriculum Vitae

Thomas F. El-Maraghi

February 2006

Contact Information

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Education

Sep 1996 – Feb 2003 **Ph.D. in Computer Science**
University of Toronto, Toronto, Ontario
Thesis title: Robust on-line appearance models for visual tracking
Supervision: Professor Allan D. Jepson

Sep 1994 – Aug 1996 **M.Sc. in Computer Science**
Queen's University, Kingston, Ontario
Thesis title: Segment-based disparity estimation
Supervision: Professor David J. Fleet

Sep 1990 – May 1994 **B.Sc.Eng. in Electrical and Computer Engineering**
Queen's University, Kingston, Ontario
Thesis title: Graphical 6811 EVB simulator

Sep 1985 – June 1990 **Ontario Secondary School Diploma**
Barrie Central Collegiate, Barrie, Ontario
8 OACs

IT/Research/Development Experience

Nov 2004 – Present **Self Employed Programmer/Web Designer**
tem Media and Technology, Hawkestone, Ontario
Sole proprietorship designing database-driven web sites, developing custom programming solutions, as well as media work and hardware/software support.

Feb 2004 – Aug 2004 **Research Assistant**
University of Toronto, Toronto, Ontario
Research on interest point detection and appearance-based tracking. Planning, development and testing of interest point detection and tracking software.
Supervisor: Professor Allan Jepson

Feb 2003 – May 2003 **Post-Doctoral Researcher**
University of Toronto, Toronto, Ontario
Research on Computer-Aided Rotoscoping (CAR), i.e., the segmentation and tracking of objects in high-resolution motion picture sequences. Planning, development and testing of CAR software.
Supervisor: Professor Allan Jepson

Mar 2002 – Feb 2003

Research Scientist

Project funded by CITO and IMAX Corp. at the University of Toronto.
Research on Computer-Aided Rotoscoping (CAR). Planning, development, and testing of CAR software.
Supervisor: Professor Allan Jepson

June 2000 – Aug 2000

Summer Intern

Palo Alto Research Center (PARC), Palo Alto, CA
Research on on-line appearance models for visual tracking. Development and testing of and on-line appearance model based tracker.
Supervisor: David Fleet

May 1995 – Dec 1995
July 1994 – Aug 1994

Research Assistant

Queen's University, Kingston, Ontario
Research in stereo disparity estimation and robust image segmentation. Development and testing of software for stereo disparity estimation.
Supervisor: Professor David J. Fleet.

May 1993 – Aug 1993

Research Assistant

Queen's University, Kingston, Ontario
Research and development of a distributed simulation of the TORNET2 network protocol.
Supervisor: Professor V.C. Hamacher.

Teaching Experience

Jan 2000 – Apr 2000
Sep 1999 – Dec 1999
May 1999 – Aug 1999
Jan 1999 – Apr 1999

Teaching Assistant

University of Toronto, Toronto Ontario
CSC-270, Fundamental Data Structures and Techniques.

Sep 1998 – Dec 1998

Teaching Assistant

University of Toronto, Toronto, Ontario
CSC-181, Introduction to Computer Programming.

Sep 1997 – Dec 1997
Jan 1997 – Apr 1997

Teaching Assistant

University of Toronto, Toronto, Ontario
CSC-209, Software Tools and Systems Programming.

Sep 1996 – Dec 1996

Teaching Assistant

University of Toronto, Toronto, Ontario
CSC-180, Introduction to Computer Programming.

Jan 1996 – Apr 1996

Teaching Assistant

Queen's University, Kingston, Ontario
CISC-231, Computer Architecture.

Jan 1995 – Apr 1995
Sep 1994 – Dec 1994

Teaching Assistant

Queen's University, Kingston, Ontario
CISC-454, Computer Graphics.

May 1992 – Aug 1992

Teaching Assistant

Queen's University, Kingston, Ontario
CISC-231, Computer Architecture.

Publications

Journal Articles

A. D. Jepson, D. J. Fleet, and T. F. El-Maraghi, "Robust on-line appearance models for visual tracking", *IEEE Transactions on Pattern Analysis and Machine Intelligence*. Vol. 25, No. 10, October 2003, pp. 1296-1311.

Conference Papers

T. F. El-Maraghi and A. D. Jepson, "Saturated independent color coordinates for image alignment", *IEEE International Conference on Pattern Recognition*, Quebec City, August 2002.

R. Mann, A. D. Jepson, and T. F. El-Maraghi, "Trajectory segmentation using dynamic programming", *IEEE International Conference on Pattern Recognition*, Quebec City, August 2002.

A. D. Jepson, D. J. Fleet, and T. F. El-Maraghi, "Robust on-line appearance models for visual tracking", *IEEE Conference on Computer Vision and Pattern Recognition*, Kauai, December 2001, Vol. I, pp. 415-422 **[Best Paper Runner-Up Award]**

Patents

US Patent Application: "Robust, on-line, view-based appearance models for visual motion analysis and visual tracking", Allan D. Jepson, David J. Fleet, and Thomas F. El-Maraghi.
Serial No. 10/016,659-3907 Filing Date: December 7, 2001

European Patent: "Robust, on-line, view-based appearance models for visual motion analysis and visual tracking", Allan D. Jepson, David J. Fleet, and Thomas F. El-Maraghi.
Patent No. 02027305.8- Date: 16.04.02

Academic Awards

- **Best Paper Runner-Up Award**, IEEE Conference on Computer Vision and Pattern Recognition (2001)
- **Top-Up Award**, University of Toronto (1996)
- **NSERC PGS-B Graduate Scholarship**, University of Toronto (1996)
- **NSERC PGS-A Graduate Scholarship**, Queen's University (1994)
- **James H. Rattray Memorial Scholarship**, Queen's University (1993-94)
- **NSERC Undergraduate Research Award**, Queen's University (1993-94)
- **Schlumberger Collegiate Award**, Queen's University (1992-93)
- **HP (Canada) Ltd. Calculator Award**, Queen's University (1991)
- **Queen's Anniversary Scholarship**, Queen's University (1990-91)

Skills/Tools/Other

- 15 years of object-oriented programming experience
- C/C++
- Visual Basic, Visual Basic .NET
- C#
- JavaScript
- Java
- Matlab
- SQL
- HTML
- ASP, ASP.NET
- XML
- Photoshop
- CorelDRAW
- Windows/Linux/Unix/Internet
- Office suites, graphics packages, database, electronic mail software, etc.

References

Professor Allan D. Jepson

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Toronto, Ontario M5S 3G4

Voice: (416)946-8485
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Assistant Professor W. James MacLean

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Toronto, Ontario M5S 3G4

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