

April 11, 2006

Curriculum Vitae

of

Parham Aarabi, M.A.Sc., Ph.D. (Stanford)
**Associate Professor and Canada Research Chair in Multi-Sensor
Information Systems**

**The Edward S. Rogers Sr. Department of Electrical and Computer
Engineering**

University of Toronto



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1 General Information

1.1 Basic Information

Name: Parham Aarabi
Department: Electrical and Computer Engineering
Rank: Associate Professor (with tenure)
Date of Birth: August 25, 1976

1.2 Education History

June 1999 – June 2001 **Stanford University, Stanford, CA**
Ph.D. in Electrical Engineering
Thesis: “Spatial Integration and Localization of Dynamic Sensors”
Advisor: Vaughan Pratt
Associate Advisor: Bernard Widrow

June 1998 – June 1999 **University of Toronto, Toronto, Ontario, Canada**
M.A.Sc. in Electrical and Computer Engineering
Thesis: “Multi-Sense Artificial Awareness”
Assigned Grade = A+
Advisor: Safwat Zaky

Sept. 1994 – June 1998 **University of Toronto, Toronto, Ontario, Canada**
Honours B.A.Sc. in Electrical Engineering option of Engineering
Science
Thesis: “Artificial Awareness”
Assigned Grade = 100%
Advisor: Safwat Zaky

1.3 Academic Appointments

Dec. 2005 – Present Appointed as Director of Undergraduate Recruiting
Department of Electrical and Computer Engineering
University of Toronto

Dec. 2005 – Present Appointed as Computer Engineering Option Chair
Division of Engineering Science
University of Toronto

- July 2005 – Present Associate Professor (with tenure) and Canada Research Chair in Multi-Sensor Information Systems
The Edward S. Rogers Sr. Department of Electrical and Computer Engineering
University of Toronto
- June 2001 – June 2005 Assistant Professor (tenure stream) and Canada Research Chair in Multi-Sensor Information Systems
The Edward S. Rogers Sr. Department of Electrical and Computer Engineering
University of Toronto
- June 1999 – June 2001 Teaching Assistant and Research Assistant
Department of Electrical Engineering
Stanford University
- June 1998 – June 1999 Teaching Assistant and Research Assistant
Department of Electrical and Computer Engineering
University of Toronto

1.4 Honours and Awards

- 2006 Awarded the University of Toronto SAC/APUS Undergraduate Teaching Award (university-wide teaching award given by the Student’s Administrative Council)
- 2005 Awarded the Early Researcher Award (note that this is a renamed version of the Premier’s Research Excellence Award - provincial research award)
- 2005 Selected by MIT’s Technology Review Magazine as one of the “top young innovators in the world” also known as the TR35 award (international award – note that the TR35 was formerly known as the TR100, except that with the TR35 the top 35 individuals instead of the top 100 are selected)
- 2005 Selected by TVO as one of “Ontario’s Best Lecturers” (provincial award – one of only two Professors selected in Engineering in all of Ontario and the only one in Electrical and/or Computer Engineering)
- 2005 Gordon R. Slemon Award for the teaching of design (departmental award)
- 2004 ECE Departmental Teaching Award (formerly known as the Professor of the Year Award) (departmental teaching award)

- 2004 Selected to attend the “Leaders of Tomorrow” Symposium at the Federal Parliament of Canada and to give a talk for members of Parliament and senators
- 2004 Inaugural IEEE Mac Van Valkenburg Early Career Teaching Award (international teaching award)
- 2003 ECE Professor of the Year Award (departmental teaching award)
- 2003 Faculty of Engineering Early Career Teaching Award (faculty-level teaching award)
- 2002 Fall Session Best Computer Engineering Professor Award (formerly known as the Professor of the Year Award) (departmental teaching award)
- 2002 Ontario Distinguished Researcher Award (provincial research award)
- 2002 Canada Research Chair in Multi-Sensor Information Systems (2002-2007) (national research award)
- 1998 NSERC Postgraduate (PGS-A) Scholarship
- 1997 Division of Engineering Science Spirit of Engineering Science Award
- 1997 APSC Scholarship
- 1995 Wallberg Undergraduate Scholarship
- 1994 University of Toronto Entrance Scholarship
- 1994 Professional Engineers of Ontario Scholarship
- 1994 Canada Scholarship

2 Teaching Summary

2.1 Teaching Experience

- 2001-Present **University of Toronto**
 Professor/Instructor
 Department of Electrical and Computer Engineering
 Courses: Probability and Applications (ECE302F)
 Microphone Arrays: Theory and Applications (ECE1775F)
 Digital and Computer Systems (ECE253F)
 Computer Organization (ECE352F)
- 2001 **Stanford University**
 Co-Instructor
 Department of Electrical Engineering
 Course: The Fourier Transform and Applications (EE261)
- 2000 **Stanford University**
 Teaching Assistant
 Department of Electrical Engineering
 Course: The Fourier Transform and Applications (EE261)
- 1998 **University of Toronto**
 Teaching Assistant
 Department of Electrical and Computer Engineering
 Course: Introductory Electronic Circuits (ECE360S)

2.2 List of Teaching Awards

- 2006 **University of Toronto SAC/APUS Undergraduate Teaching Award** (university-wide teaching award given by the Student’s Administrative Council)
- 2005 Selected by TVO as one of “**Ontario’s Best Lecturers**” (Provincial award – one of only two Professors selected in Engineering in all of Ontario and the only one in Electrical or Computer Engineering)
- 2005 **Gordon R. Slemon Award** for the teaching of design (Departmental award)
- 2004 **ECE Departmental Teaching Award** (teaching award given by the vote of undergraduate ECE students)
- 2004 **IEEE Mac Van Valkenburg Early Career Teaching Award** (International teaching award given for the first time by the IEEE Education Society to a single faculty member world-wide who, according to the official award requirement, “has made outstanding contributions to teaching unusually early in his/her professional career”). The official citation indicates that this award was given “for outstanding

contributions to electrical and computer engineering education, including exemplary classroom teaching and inspirational mentoring of undergraduate students in research projects.”

- 2003 **ECE Professor of the Year Award** (teaching award given by the vote of undergraduate ECE students)
- 2003 **Faculty of Engineering Early Career Teaching Award** which was officially awarded “in recognition of superb accomplishment in teaching”
- 2002 **Fall Session Best Computer Engineering Professor Award** (teaching award given by the vote of undergraduate ECE students)

2.3 Teaching Evaluation Results

For every single course taught, received higher than average overall teaching ratings, resulting in commendations from the Department Chair for each course, as shown below:

Course Number and Date	Number of Students in Class	Overall Teaching Evaluation Result (Q. 16)	Department Average	Faculty Average
Fall 2005 ECE101F	364	6.63 out of 7	5.03 out of 7	5.24 out of 7
Fall 2005 ECE253F	209	6.65 out of 7	5.65 out of 7	5.24 out of 7
Fall 2005 ECE352F	22	6.25 out of 7	5.65 out of 7	5.24 out of 7
Fall 2004 ECE302F	102	6.46 out of 7	5.27 out of 7	5.16 out of 7
Fall 2004 ECE253F	193	6.47 out of 7	5.27 out of 7	5.16 out of 7
Fall 2003 ECE302F	187	6.63 out of 7	5.27 out of 7	5.37 out of 7
Fall 2003 ECE253F	85	6.62 out of 7	5.27 out of 7	5.37 out of 7
Fall 2002 ECE302F	85	6.74 out of 7	5.40 out of 7	5.28 out of 7

Fall 2002 ECE253F	81	6.57 out of 7	5.40 out of 7	5.28 out of 7
Fall 2001 ECE302F	76	6.53 out of 7	5.34 out of 7	5.30 out of 7

2.4 List of Graduate and Undergraduate Students

Academic Year (Sept.-Sept.)	Graduate Students Who Finished Their Degrees	Ongoing Graduate Students	Undergraduate Summer Research Assistants	Design Project and Thesis students
2005-2006	1	6	10	20
2004-2005	3	6	12	23 (19 co-supervised)
2003-2004	3	8	8	20
2002-2003	3	5	16	22
2001-2002	0	2	11	7
2000-2001	0	0	5	0

Note: unless otherwise stated, all students were solely supervised

2.4.1 Graduate Students Who Have Completed Their Degrees

Guangji Shi, Ph.D., Completed in 2006	
Guangji Shi, M.A.Sc. Completed in 2002 (in 12 months)	Grade = B
Bob Mungamuru, M.A.Sc. Completed in 2003 (in 12 months)	Grade = A+
Steven Rennie, M.A.Sc. Completed in 2003 (in 20 months)	Grade = A
Calvin Lai, M.A.Sc. Completed in 2003 (in 16 months)	Grade = A+
Sam Mavandadi, M.A.Sc. Completed in 2004 (in 11 months)	Grade = A+
Teodor Ivanov, M.A.Sc. Completed in 2004 (in 12 months)	Grade = A-
David Halupka, M.A.Sc. Completed in 2004 (in 27 months)	Grade = A+
Duy Nguyen, M.A.Sc. Completed in 2005 (in 15 months)	Grade = A+
Nevena Lazic, M.A.Sc. Completed in 2005 (in 16 months)	Grade = A

2.4.2 Current Graduate Students

Steve Rennie, Ph.D. Student (Jointly supervised by Prof. Frey)
 Sam Mavandadi, Ph.D. Student

David Halupka, Ph.D. Student (Jointly supervised by Prof. Sheikholeslami)
 Nevena Lazic, Ph.D. Student
 Sarah Ali, M.A.Sc. Student
 Jerry Lam, M.A.Sc. Student (Jointly supervised by Prof. Eizenmann)
 Ron Appel, M.A.Sc. Student

2.4.3 Undergraduate Summer Research Assistants

2001 Summer	Bert Leesti Sam Mavandadi Alborz Mahdavi Foad Mashayekhi Kelvin Wong	
2002 Summer	Sam Mavandadi Alborz Mahdavi Foad Mashayekhi Kelvin Wong Duy Nguyen Nevena Lazic Ahsan Khan David Halupka Maryam Modir Shanechi Weiyu Gao Teddy Atmadja	(Jointly supervised by Prof. Sheikholeslami) (Jointly supervised by Prof. Sheikholeslami)
2003 Summer	Maryam Modir Shanechi Weiyu Gao Teddy Atmadja Jamy Li Ivana Konvalinka Qing Hua Wang Nan Zhang Wei Mark Fang Olivia Chung Yuen Man Vahid Hasanzadeh Masoud Yeganegi Andy Hung Min Ding Ashwin Wagadarikar Kevin Chan	

Vivek Sekhar

2004 Summer

Sherry Gad
Ron Appel
Amir Sanei
Alireza Seyed Rabi
Azadeh Khaleghi
Arezou Kheshavarz
Genevieve Mak
Kevin Teh

2005 Summer

Ron Appel
Alireza Seyed Rabi
Azadeh Khaleghi
Arezou Keshavarz
Sanaz Motahari-Asl
Ben Lau

2.4.4 Undergraduate Design Project and Thesis Students Supervised

2001-2002

Thanh Huynh
Michael Goldberg
Gershon Deutsch
Son Quoc Lam
Sumit Parab
Natalie Nguyen
Ronak Patel

2002-2003

Visnja Soronda
Weiyu Gao
Nevena Lazic
Sam Mavandadi
Foad Mashayekhi
Mark Dearborn
Chris Graham
Chi Ejim
Diana Al-Dajane
Vaanee Kugarajah
Seyed Ali Mirdamadi
Kyle Tron Nguyen
Stephen Beath

Sergio Valle
George Epaminondas
Khaled Lababidi
Norman Wang
Igor Keizner
Diana Milirud
Sean Menezes
Mike Branch
Robert Bradley

2003-2004

Andrew Mitchell
Alex Wolfe
Maryam Modir Shanechi
William Ali
Farhad Sadeghian
Andrei Mihnea Sonoc
David Yueh Chung Chang
Aaron Edward Kasman
Yu-Wei Sung
Avraham Sholom Hochman
Dov Eliyahu Mileevsky
Aron Joseph Roth
Teddy Atmadja
Puya Kiani
Payam Mousavi
Shubha Balasubramanyam
Christopher G. Heigl
Matthew Szeto
Joshua Brandley
Vahid Hasanzadeh

2004-2005

Yasir Mirza	(Jointly supervised by Prof. Anderson and Prof. Chow)
Eric Wang	(Jointly supervised by Prof. Anderson and Prof. Chow)
Bhavesh Khatri	(Jointly supervised by Prof. Anderson and Prof. Chow)
Richard Lishingman	(Jointly supervised by Prof. Anderson and Prof. Chow)
John Yat Fai Kok	(Jointly supervised by Prof. Anderson and Prof. Chow)
Sang-Joon Lee	(Jointly supervised by Prof. Anderson and Prof. Chow)
Vivian Lo	(Jointly supervised by Prof. Anderson and Prof. Chow)
Jun Ma	(Jointly supervised by Prof. Anderson and Prof. Chow)
Elise Fatourech	(Jointly supervised by Prof. Anderson and Prof. Chow)
Jeff Bloemink	(Jointly supervised by Prof. Anderson and Prof. Chow)
Sean Ray	(Jointly supervised by Prof. Anderson and Prof. Chow)

Hsiao Sheng Lin (Jointly supervised by Prof. Anderson and Prof. Chow)
James Shu-Hen Chen (Jointly supervised by Prof. Anderson and Prof. Chow)
Paul Yeung (Jointly supervised by Prof. Anderson and Prof. Chow)
Roger Cheung (Jointly supervised by Prof. Anderson and Prof. Chow)
Mohammad Rafique (Jointly supervised by Prof. Anderson and Prof. Chow)
Akram Omar Nafee (Jointly supervised by Prof. Anderson and Prof. Chow)
Kenneth Ma (Jointly supervised by Prof. Anderson and Prof. Chow)
Mohamad El-Sadek (Jointly supervised by Prof. Anderson and Prof. Chow)
Sarah Ali
Mehdi Moaveni
Eric Ng
Genevieve Mak

3 Research Summary

3.1 Research Experience

June 2001 – Present Professor and Canada Research Chair in Multi-Sensor Information Systems
The Edward S. Rogers Sr. Department of Electrical and Computer Engineering
University of Toronto

June 1999 – June 2001 Research Assistant in the Speech Group
Department of Computer Science
Stanford University
Supervised by Prof. Vaughan Pratt

June 1998 – June 1999 Research Assistant in the Computer Group
Department of Electrical and Computer Engineering
University of Toronto
Supervised by Prof. Safwat Zaky

1995-1999 (summers) Undergraduate Research Assistant in the Electronics Group
Department of Electrical and Computer Engineering
University of Toronto
Supervised by Prof. Stefan Zukotynski

3.2 List of Research Awards and Achievements

- Oct. 2005 Awarded the **Early Researcher Award** (note that this is a renamed version of the Premier's Research Excellence Award - provincial research award)
- Sept. 2005 Selected by MIT's Technology Review Magazine as one of the "**top young innovators in the world**" also known as the **TR35** award (international award – note that the TR35 was formerly known as the TR100, except that with the TR35 the top 35 individuals instead of the top 100 are selected)
- January 2002 **Canada Research Chair** in multi-sensor information systems (January 2002-2007, renewable to 2012, national research award)
- March 2002 **Ontario Distinguished Researcher Award** (provincial research award)

Founded and directed the University of Toronto's **Artificial Perception Lab (APL)**, a state-of-the-art facility with over \$1,000,000 worth of donated and purchased equipment. For more information about the APL, visit www.apl.utoronto.ca.

Published over 50 peer-reviewed scientific publications as well as invited for several invited talks (including **Microsoft Research**, **Stanford University**, and **ICSI Berkeley**, and the **Federal Parliament of Canada**)

Served as reviewer, guest editor, and program committee member for numerous international conferences and journals including IEEE Transactions on Speech and Audio Processing, IEEE Transactions on Circuits and Systems, IEEE Transactions on Signal Processing, Information Fusion, EURASIP Journal on Applied Signal Processing, International Conference on Multimedia and Expo (ICME), International Conference on Information Fusion (FUSION), Neural Information Processing Systems (NIPS), and SPIE Conference on Information Fusion

Research coverage includes leading articles by the **New York Times**, **MIT's Technology Review Magazine** and **Scientific American**, TV interviews with the **Discovery Channel**, **Space TV**, **Tech TV**, **City TV**, World Business News, and **CBC Newsworld**, as well as press coverage by the Cannon, Varsity, National Post, EETimes, Independent Online, and Bulletin newspapers and the Edge, ClickSmart Living, and Moneysense Magazines. Research has also received coverage from a variety of international press including that of Germany, England, United States, Canada, Poland, Russia, Iran, Brazil, and Spain, to name a few.

3.3 List of Funding and Grant History

Note: All grants below were applied for or awarded on a sole principal-investigator basis

Grant Name or Agency	Funds Released in 2001	Funds Released in 2002	Funds Released in 2003	Funds to be Released in 2004	Funds to be Released in 2005	Funds to be Released in 2006	Total
Canada Foundation for Innovation	0	\$185,000	\$65,000	0	0	0	\$250,000
Ontario Innovations Trust	0	\$190,000	\$60,000	0	0	0	\$250,000
NSERC Discovery Grant	0	\$22,000	\$22,000	\$22,000	\$22,000	\$38,400	\$126,000
University of Toronto Departmental Startup Grant	\$80,000	0	0	0	0	0	\$80,000
Connaught New Staff Matching Grant	0	\$30,000	0	0	0	0	\$30,000
Connaught Automatic Start-up Grant	\$10,000	0	0	0	0	0	\$10,000
Canada Research Chair Funding	0	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$500,000
Early Career Teaching Award Research Grant	0	0	\$4,000	0	0	0	\$4,000
BioScript	0	0	0	0	\$15,000	0	\$15,000
Altera	0	0	0	0	\$35,000	0	\$35,000
NSERC CRD	0	0	0	0	\$58,000	0	0
ERA/PREA	0	0	0	0	0	\$75,000	\$150,000
Total	\$90,000	\$527,000	\$251,000	\$122,000	\$180,000	\$213,400	\$1,390,000

3.4 List of Supervised Postdoctoral and Graduate Students

Postdoctoral Students

Omid Jahromi (August 2002-June 2004)

Graduate Students Who Have Completed Their Degrees

Guangji Shi, Ph.D., Completed in 2006

Guangji Shi, M.A.Sc. Completed in 2002 (in 12 months)

Grade = B

Bob Mungamuru, M.A.Sc. Completed in 2003 (in 12 months)

Grade = A+

Steven Rennie, M.A.Sc. Completed in 2003 (in 20 months)

Grade = A

Calvin Lai, M.A.Sc. Completed in 2003 (in 16 months)

Grade = A+

Sam Mavandadi, M.A.Sc. Completed in 2004 (in 11 months)

Grade = A+

Teodor Ivanov, M.A.Sc. Completed in 2004 (in 12 months)

Grade = A-

David Halupka, M.A.Sc. Completed in 2004 (in 27 months)	Grade = A+
Duy Nguyen, M.A.Sc. Completed in 2005 (in 15 months)	Grade = A+
Nevena Lazic, M.A.Sc. Completed in 2005 (in 16 months)	Grade = A

Current Graduate Students

Steve Rennie, Ph.D. Student	(Jointly supervised by Prof. Frey)
Sam Mavandadi, Ph.D. Student	
David Halupka, Ph.D. Student	(Jointly supervised by Prof. Sheikholeslami)
Nevena Lazic, Ph.D. Student	
Sarah Ali, M.A.Sc. Student	
Jerry Lam, M.A.Sc. Student	(Jointly supervised by Prof. Eizenmann)
Ron Appel, M.A.Sc. Student	

4 Academic Talks

May 2004	The IEEE International Conference on Acoustics, Speech, and Signal Processing, Montreal, Canada
April 2004	The 8 th SPIE Conference on Information Fusion, Orlando, FL, (2 talks)
July 2003	The IEEE Conference on Multimedia and Expo (ICME'03)
April 2003	The 7 th SPIE Conference on Information Fusion, Orlando, FL, (2 talks)
July 2002	The 5th International Conference on Information Fusion, Annapolis, MD
May 2002	The IEEE International Conference on Acoustics, Speech, and Signal Processing, Orlando, FL
April 2002	The 6th SPIE Conference on Sensor Fusion, Orlando, FL
August 2001	The 4th International Conference on Information Fusion, Montreal, Canada
June 2001	The IEEE Workshop on Nonlinear Signal and Image Processing, Baltimore, MD, (2 talks)
April 2001	The 5th SPIE Conference on Sensor Fusion, Orlando, FL, (3 talks)
Oct. 2000	The 4th International Workshop on Microphone Array Systems: Theory and Practice, Harvard University, Cambridge, MA
July 2000	The 4th International Multi-Conference on Circuits, Systems, Communications, and Computers, Athens, Greece
July 2000	The 3rd International Conference on Information Fusion, Paris, France

June 2000 The 139th meeting of the Acoustical Society of America, Atlanta, Georgia

5 Invited Research Talks

Nov. 2004 Invited talk at the Federal Parliament of Canada in Ottawa

June 2004 Invited Talk as part of the University of Waterloo Distinguished Seminar Series

April 2004 Invited talk at the Mohandes Engineering Organization, covered by City TV and broadcast internationally over satellite

March 2004 Invited talk at York University

Feb. 2004 Invited talk at Stanford University as part of the Computer Systems Lab (CSL) Colloquium (webcast and televised live on the Stanford Instructional Television Network to over 300 silicon valley sites)

Feb. 2004 Invited talk at ICSI Berkeley

June 2003 Invited talk at Microsoft Research

6 Professional Contributions and Membership

2006 Technical Program Committee Member for the 9th International Conference on Information Fusion

2004 Program Committee Member for the 7th International Conference on Information Fusion

2004 Guest Editor for the Information Fusion Journal Special Issue on Robust Speech Processing Using Multi-Sensor Multi-Source Information Fusion (published in June 2004)

2003 Session chair and Technical Program Committee member for the 2003 IEEE International Conference on Multimedia and Expo (ICME'03)

2002-2004 Session Chair and Program Committee member for the 2002, 2003, and 2004 SPIE Conferences on Sensor Fusion

2002 Session chair and session co-chair for the 5th International Conference on Information Fusion

2001 Session Chair for the 2001 IEEE Nonlinear Signal and Image Processing (NSIP) Workshop

- 2000-present Reviewer for several Journal publications, including Information Fusion, IEEE Transactions on Speech and Audio Processing, IEEE Transactions on Signal Processing, IEEE Transactions on Circuits and Systems, and EURASIP Journal on Applied Signal Processing
- 2000-present Reviewer for several conferences, including Neural Information Processing Systems (NIPS), AISTATS, International Conference on Information Fusion, and the IEEE International Conference on Multimedia and Expo
- 1999-present Member, IEEE (Signal Processing, Systems, Man, and Cybernetics, and Education Societies)

7 University of Toronto Administrative Duties

- 2005-2007 Director of Undergraduate Recruiting, Department of Electrical and Computer Engineering, University of Toronto
- 2005-2008 Computer Engineering Option Chair, Division of Engineering Science, University of Toronto
- 2004-2005 Student-Staff Committee Member, Department of Electrical and Computer Engineering, University of Toronto
- 2003-2004 Chair of the Faculty Undergraduate Academic Committee, Faculty of Engineering, University of Toronto
- 2003-2004 Undergraduate Teaching Committee Member, Department of Electrical and Computer Engineering, University of Toronto
- 2003-2004 Student-Staff Committee Member, Department of Electrical and Computer Engineering, University of Toronto
- 2002-2003 Student-Staff Committee Member, Department of Electrical and Computer Engineering, University of Toronto
- 2002-2003 Computers and Communications Hiring Committee Member, Department of Electrical and Computer Engineering, University of Toronto
- 2001-present Served as Committee Chair for 2 Ph.D. Defence and over 10 M.A.Sc. Defenses, and as Committee member for more than 15 other M.A.Sc. and M.Eng. Defenses

8 Media Attention and News Articles

- Jan. 2006 Article title Critically Acclaimed in EDGE Magazine.

- Nov. 2005 Maclean's Magazine article about the University of Toronto, the APL, and Parham Aarabi
- Sep. 2005 Metro Article about Parham Aarabi titled "UofT prof to be awarded for tech expertise in US"
- Sep. 2005 Toronto Star Article about Parham Aarabi titled "Toronto Prof's work will 'shape world'"
- Sep. 2005 MIT Technology Review Magazine feature about Parham Aarabi's innovations and the TR35 award
- Sep. 2005 Globe and Mail Article about Parham Aarabi's MIT TR35 Award
- Sep. 2005 Toronto Sun Article about Parham Aarabi titled "MIT Hails Toronto Prof"
- Sep. 2005 Article about Parham Aarabi's selection as one of the "World's top Young Innovators", by News at UofT
- Aug 2005 Article about Parham Aarabi's selection by TVO, by News at UofT
- Aug. 2005 TVO Magazine Article selecting Parham Aarabi as one of "Ontario's Best Lecturers"
- July 2005 Skulematters Article titled "Students Give their Professor an A+" about P. Aarabi
- May 2005 30 minute Tech TV talk show "Tech Books" dedicated to APL robotics projects
- Mar. 2005 Feature article about the ECE-APL robotics competition in the Globe and Mail
- Mar. 2005 Feature segment on the Space Channel about the ECE-APL robotics competition
- Mar. 2005 Articles in the Bulletin and Varsity Newspapers about the ECE-APL robotics competition
- Feb. 2005 Discovery Channel coverage of APL Multi-camera 3D Image Search System
- Dec. 2004 Radio Canada International coverage of APL Multi-camera 3D Image Search System
- Dec. 2004 TRN Magazine article regarding APL Multi-camera 3D Image Search System
- Nov. 2004 Media attention regarding talk at the Federal Parliament of Canada in Ottawa
- October 2004 PulseTV Coverage of the IEEE Van Valkenburg International Teaching Award
- October 2004 Article in University of Toronto magazine regarding APL microphone array research
- August 2004 Article regarding APL speech processing algorithms by Globe & Mail .com
- August 2004 Feature article in the New York Times about APL speech processing research with commentary from leading international speech researchers from Microsoft Research and MIT.
- August 2004 Article on APL research in the Toronto Sun
- August 2004 Article regarding APL smart microphones by TheFeature.com

August 2004 Article regarding APL dual-microphone system by PriceWaterhouseCoopers

July 2004 Leading front-page article by Scientific American.com on Speech Enhancement

July 2004 University of Toronto On-line News Article on Speech Enhancement

June 2004 APL inspired article in Popular Mechanics on Rescue Robotics

June 2004 Article on APL research by CIO Magazine Sweden

April 2004 Talk on Humans, Speech, and Computers is covered by City TV and broadcast internationally over satellite

April 2004 Technology Review Online Magazine article

April 2004 MIT's Technology Review Magazine article

March 2004 Skulematters article top two students in all of engineering (both of whom happen to be former APL alumni)

Feb. 2004 Stanford talk is televised live over SITN

Jan. 2004 Nationally Broadcast Television Interview by Space TV

Jan. 2004 Nationally Broadcast Television Interview by City TV

Jan. 2004 Article by Scientific American Brazil

Dec. 2003 Nationally Broadcast Television Interview by CBC Newsworld

Dec. 2003 Article by The Washington Times

Dec. 2003 Leading front-page article by Scientific American.com

Dec. 2003 Nationally Broadcast Television Interview by the Discovery Channel

Dec. 2003 University of Toronto On-line News Article on Acoustic Robot Navigation

Dec. 2003 Interview and Article in the Cannon Newspaper

July 2003 More Human than Human Article in the Varsity Newspaper

June 2003 Humans, Computers, and Speech Article in Signals Newsletter

June 2003 Interview and Article in MoneySense Magazine

Feb. 2003 Interview and Article in Click-Smart Living Magazine

Jan. 2003 Article in University of Toronto Magazine

Dec. 2002 World Business Review Television Interview

October 2002 EDGE Magazine Article

October 2002 The Varsity Newspaper Article and Interview

October 2002 National Post Newspaper Article and Interview

October 2002 GIS Monitor Article
 October 2002 EETimes UK Article
 October 2002 NewsFactor Article
 Sept. 2002 University of Toronto On-line News Article
 June 2002 The Independent Weekly Newspaper Article and Interview
 May 2002 University of Toronto On-line News Article
 March 2002 The Bulletin Newspaper Article and Interview

9 Publications

9.1 Summary of Publication History

	Published/Accepted for Publication	Submitted for Publication	Total
Textbooks	1 (one as first author)	-	1
Book Chapters	1 (1 as second author)	-	1
Peer-Reviewed Journal Papers	19 (3 as only author, 5 as first author, 6 as second author, 5 as third author)	1 (1 as second author)	20
Peer-Reviewed Conference Papers	27 (3 as only author, 10 as first author, 12 as second author, 1 as third author, 1 as fourth author)	0	27
Abstract-Reviewed Conference Papers	11 (4 as only author, 3 as first author, 4 as second author)	0	11
Other Publications	3 (B.A.Sc., M.A.Sc., and Ph.D. Theses)	0	3
Total Publications	62	1	63
Patents	0	4	4

9.2 List of Published Books

[B1] **Aarabi, P.**, Shi, G., Modir-Shanechi, M., Rabi, A., Phase-Based Speech Processing, World Scientific, ISBN 981-256-612-0, December 2005.

9.3 List of Published Book Chapters

[BC1] Jahromi, O., **Aarabi, P.**, Distributed Signal Processing in Sensor Networks, in Embedded Systems Handbook (edited by R. Zurawski), CRC Press No. 2824, ISBN 0-8493-2824-1, August 2005.

9.4 List of Accepted/Published Peer-Reviewed Journal Publications

Note: Unless otherwise mentioned, all papers are full-length

[J19] Halupka, D., Rabi., A., **Aarabi, P.**, Sheikholeslami, A., Low-Power, Phase-based, Real-time Speech Localization and Enhancement in 0.18um CMOS, IEEE Transactions on Signal Processing. (30 pages, to appear)

[J18] Lazic, N., **Aarabi, P.**, Communication Over an Acoustic Channel Using Data Hiding Techniques, IEEE Transactions on Multimedia (15 pages, to appear).

[J17] Nguyen, D., Halupka, D., **Aarabi, P.**, Sheikholeslami, A., Real-time Face Localization Using Field Programmable Gate Arrays, IEEE Transactions on Systems, Man, and Cybernetics (25 pages, to appear)

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[J12] Halupka, D., Mathai, N., **Aarabi, P.**, Sheikholeslami, A., Robust Sound Localization in 0.18um CMOS, IEEE Transactions on Signal Processing, Vol. 53, No. 6, pp. 2243-2250, June 2005.

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[J10] **Aarabi, P.**, Shi, G. Phase-Based Dual-Microphone Robust Speech Separation, *IEEE Transactions on Systems, Man, and Cybernetics, Part B*, Vol. 34, No. 4, pp. 1763-1773, August 2004.

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[J8] Wang, Q.H., Ivanov, T., **Aarabi, P.**, Acoustic Robot Navigation Using Distributed Microphone Arrays, *Information Fusion (Special Issue on Robust Speech Processing)*, Vol. 5, No. 2, pp. 131-140, June 2004.

[J7] **Aarabi, P.**, Dasarathy, B. V., Robust Speech Processing Using Multi-Sensor Multi-Source Information Fusion - An Overview of the State of the Art, *Information Fusion (Special Issue on Robust Speech Processing)*, Vol. 5, No. 2, pp. 77-80, June 2004. (Editorial)

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[J4] **Aarabi, P.**, Mavandadi, S., Multi-Source Time Delays of Arrival Estimation Using Conditional Time-Frequency Histograms, *Information Fusion*, Vol. 4, No. 2, pp. 111-122, June 2003.

[J3] **Aarabi, P.**, The Fusion of Distributed Microphone Arrays for Sound Localization. *EURASIP Journal of Applied Signal Processing Special Issue on Sensor Networks*, Vol. 2003, No. 4, pp. 338-347, March 2003.

[J2] **Aarabi, P.**, Self-Localizing Dynamic Microphone Arrays, *IEEE Transactions on Systems, Man, and Cybernetics, Part C*, Vol. 32, No. 4, pp. 474-484, November 2002.

[J1] **Aarabi, P.**, Zaky S., Multi-modal Sound Localization Using Audiovisual Information Fusion, *Information Fusion*, Vol. 3, No. 2, pp. 209-223, September 2001.

9.5 List of Submitted Peer-Reviewed Journal Publications

[SJ1] Mavandadi, S., **Aarabi, P.**, Interactive Multi-Camera Three-Dimensional Scene Searching, Image Sorting, and Object Localization, submitted to the *IEEE Transactions on Image Processing*. (30 pages, submitted February 2005)

9.6 List of Published Peer-Reviewed Conference Publications

- [C27] Ali, S., **Aarabi, P.**, A Novel Interface for Audio Search. Proceedings of the 2006 International Conference on Multimedia and Expo (ICME), Toronto, July 2006.
- [C26] Mavandadi, S., **Aarabi, P.**, Khaleghi, A., Appel, R., Predictive Dynamic User Interfaces for Interactive Visual Search. Proceedings of the 2006 International Conference on Multimedia and Expo (ICME), Toronto, July 2006.
- [C25] Rabi, S. A., **Aarabi, P.**, Face Fusion.. Proceedings of the 2006 International Conference on Information Fusion, Florence, Italy, July 2006.
- [C24] Rennie, S., Achan, K., Frey, B., **Aarabi, P.**, Variational Speech Separation of More Sources than Mixtures. Proceedings of the Tenth International Workshop on Artificial Intelligence and Statistics (AISTATS'05), Barbados, January 2005.
- [C23] Halupka, D., Rabi, A., **Aarabi, P.**, Sheikholeslami, A., Low-Power Phase-Based Speech Enhancement Using Field Programmable Gate Arrays. Proceedings of the 2005 IEEE Conference on Acoustics, Speech, and Signal Processing (ICASSP 2005), March 2005.
- [C22] Mavandadi, S., **Aarabi, P.**, Multi-Sensor Information Fusion with Application to Multi-Camera Systems. Proceedings of the 2004 IEEE International Conference on Systems, Man and Cybernetics (SMC 2004), The Hague, Netherlands, October 2004.
- [C21] **Aarabi, P.**, Wang, Q.H., Yeganegi, M., Integrated Displacement Tracking And Sound Localization. Proceedings of the 2004 IEEE Conference on Acoustics, Speech, and Signal Processing (ICASSP 2004), Montreal, May 2004.
- [C20] Jahromi, O., **Aarabi, P.**, Distributed Spectrum Estimation In Sensor Networks. Proceedings of the 2004 IEEE Conference on Acoustics, Speech, and Signal Processing (ICASSP 2004), Montreal, May 2004.
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- [C18] Shi, G., **Aarabi, P.**, Lazic, N., Adaptive Time-Frequency Data Fusion For Speech Enhancement Proceedings of the 6th International Conference on Information Fusion (FUSION 2003), Cairns, Australia, July 2003.
- [C17] **Aarabi, P.**, Mavandadi, S., Robust Speech Separation Using Two-Stage Independent

Component Analysis Proceedings of the 6th International Conference on Information Fusion (FUSION 2003), Cairns, Australia, July 2003.

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[C15] Mungamuru, B., **Aarabi, P.**, Joint Sound Localization and Orientation Estimation Proceedings of the 6th International Conference on Information Fusion (FUSION 2003), Cairns, Australia, July 2003.

[C14] **Aarabi, P.**, Shi, G., Jahromi, O., Robust Speech Separation Using Time-Frequency Masking. Proceedings of the 2003 IEEE Conference on Multimedia and Expo (ICME 2003), Baltimore, Maryland, July 2003.

[C13] **Aarabi, P.**, Mungamuru, B., Scene Reconstruction Using Distributed Microphones. Proceedings of the 2003 IEEE Conference on Multimedia and Expo (ICME 2003), Baltimore, Maryland, July 2003.

[C12] Nguyen, D., **Aarabi, P.**, Sheikholeslami, A., Real-Time Sound Localization Using Field-Programmable Gate Arrays. Proceedings of the 2003 IEEE Conference on Acoustics, Speech, and Signal Processing (ICASSP 2003), Hong Kong, April 2003.

[C11] Rennie, S., **Aarabi, P.**, Kristjansson, T., Frey, B., Achan, K., Robust Variational Speech Separation Using Fewer Microphones Than Speakers. Proceedings of the 2003 IEEE Conference on Acoustics, Speech, and Signal Processing (ICASSP 2003), Hong Kong, April 2003.

[C10] Jahromi, O., **Aarabi, P.**, Time Delay Estimation and Signal Reconstruction Using Multi-Rate Measurements. Proceedings of the 2003 IEEE Conference on Acoustics, Speech, and Signal Processing (ICASSP 2003), Hong Kong, April 2003.

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[C7] **Aarabi, P.**, Mahdavi, A., The Relation Between Speech Segment Selectivity and Source Localization Accuracy. Proceedings of the IEEE Conference on Acoustics, Speech, and Signal Processing (ICASSP 2002), Orlando, Florida, May, 2002.

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the 4th International Conference on Information Fusion (FUSION 2001), Montreal, Canada, pp. WeB3:3-9, August, 2001.

[C5] **Aarabi, P.**, Mohajer, K., Emami, M., Cooperative Sensation: A Mechanism for Robust Human Computer Interactions. Proceedings of the 5th World Multi-conference on Circuits, Systems, Computers, and Communications, Crete, Greece, July 2001.

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[C3] **Aarabi, P.**, Robust Sound Localization using the Formant Phase Transform. Proceedings of the 5th IEEE Workshop on Nonlinear Signal and Image Processing (NSIP'01), Baltimore, Maryland, June 2001.

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9.7 List of Published Abstract-Reviewed Conference Publications

[AC11] Fang, W. M., **Aarabi, P.**, Robust Real-Time Audiovisual Face Localization, Proceedings of the 2004 SPIE Conference on Multisensor, Multisource Information Fusion: Architectures, Algorithms, and Applications, Orlando, April 2004.

[AC10] Andreeva, E. O., **Aarabi, P.**, Mohajer, K., Emami, M., Driver Fatigue Detection Using Multimodal Sensor Fusion, Proceedings of the 2004 SPIE Conference on Multisensor, Multisource Information Fusion: Architectures, Algorithms, and Applications, Orlando, April 2004.

[AC9] Modir Shanechi, M., **Aarabi, P.**, Structural Analysis of Multisensor Arrays For Speech Separation Applications. Proceedings of Sensor Fusion: Architectures, Algorithms, and Applications VII (AeroSense 2003), Orlando, Florida, April 2003.

[AC8] Mavandadi, S., **Aarabi, P.**, Time-Delay of Arrival Estimation Using Non-Linear Phase-Error Selector Functions. Proceedings of Sensor Fusion: Architectures, Algorithms, and Applications VII (AeroSense 2003), Orlando, Florida, April 2003.

[AC7] **Aarabi, P.**, Khameneh, N. H., Robust Speech Separation using Visually Derived Speech

Signals. Proceedings of Sensor Fusion: Architectures, Algorithms, and Applications VI (AeroSense'02), Orlando, Florida, April 2002.

[AC6] **Aarabi, P.**, Hughes, D., Mohajer, K., Emami, M., The Automatic Measurement of Beauty. Proceedings of the IEEE International Conference on Systems, Man, and Cybernetics, Tucson, Arizona, October 2001.

[AC5] **Aarabi, P.**, Robust Multi-Source Sound Localization using Temporal Power Fusion. Proceedings of Sensor Fusion: Architectures, Algorithms, and Applications V (AeroSense'01), Orlando, Florida, pp. 67-77, April 2001.

[AC4] **Aarabi, P.**, The Equivalence of Bayesian Multi-Sensor Information Fusion and Neural Networks. Proceedings of Sensor Fusion: Architectures, Algorithms, and Applications V (AeroSense'01), Orlando, Florida, pp. 159-169, April 2001.

[AC3] **Aarabi, P.**, The Application of Spatial Likelihood Functions to Multi-Camera Object Localization. Proceedings of Sensor Fusion: Architectures, Algorithms, and Applications V (AeroSense'01), Orlando, Florida, pp. 255-265, April 2001.

[AC2] **Aarabi, P.**, Pratt, V. R., Dynamic Sensor Integration using Spatial Awareness Networks. Proceedings of the 139th Meeting of the Acoustical Society of America, Atlanta, Georgia, June 2000. Published in Vol. 107, No. 5, Pt. 2, pp. 2908 of the Journal of the Acoustical Society of America. (Abstract)

[AC1] **Aarabi, P.**, Speech Localization using Formant Phase Subtraction. Proceedings of the 139th Meeting of the Acoustical Society of America, Atlanta, Georgia, June 2000. Published in Vol. 107, No. 5, Pt. 2, pp. 2790 of the Journal of the Acoustical Society of America. (Abstract)

9.8 List of Other Publications

[O1] **Aarabi, P.**, Spatial Localization and Integration of Dynamic Sensors, Ph.D. Dissertation, Department of Electrical Engineering, Stanford University, May, 2001.

[O2] **Aarabi, P.**, Multi-Sense Artificial Awareness. M.A.Sc. Thesis, Department of Electrical and Computer Engineering, University of Toronto, June 1999. (Note: The maximum grade of A+ was awarded to this thesis.)

[O3] **Aarabi, P.**, Artificial Awareness. B.A.Sc. Thesis, Division of Engineering Science, University of Toronto, June 1998. (Note: The maximum grade of 100% was awarded to this thesis.)

9.9 Patents

[P4] Appel, R., **Aarabi, P.**, Hyperimage: A sub-image hyperlink based image database sorting, searching, and visualization (pending), filed September 15, 2005.

[P3] **Aarabi, P.**, Visual Image Searching, Sorting, and Evaluation Using Information Theory (pending), filed August 15, 2005.

[P2] Halupka, D., **Aarabi, P.**, Shi, G., Sheikholeslami, A., Low-power Phase-Based Speech Enhancement (pending), filed Sept. 17, 2004.

[P1] Mavandadi, S., **Aarabi, P.**, Interactive three dimensional scene-searching, image retrieval, and object localization (pending), filed July 9, 2004.