

CVR ANNUAL REPORT

JULY 1 2000-JUNE 30 2002

Director's Message

Our mandate is to pursue interdisciplinary research and training in the broadly defined visual sciences and their applications. The sense of vision does not stand alone: it is the primary input not only for understanding the world around us, but also for guiding action in the world, for determining interaction with the world and inherently integrates with the other sensory processes. The CVR provides a simple and effective infrastructure that provides members with maximal freedom in pursuing their research programmes while encouraging collaboration among members and across disciplines.

Excitement continues in our centre. We have been very fortunate during the past two years to attract two excellent new faculty, Richard Hornsey (holder of a Premiere's Excellence Research Award) formerly at the University of Waterloo, and Richard Wildes previously with Sarnoff Corp., Princeton, NJ both joining the Department of Computer Science. Our Adjunct Faculty program has expanded dramatically and we welcomed Richard Zemel, Allan Jepson, Brendan Frey, Jay Pratt and Douglas Tweed all of the University of Toronto, Evangelos Milios of Dalhousie University, Richard Mann of the University of Waterloo, Brian Rogers of the University of Oxford, Andrew Smith of Royal Holloway University of London, and Suzanna Becker of McMaster University.

Several CVR members have received important awards this year. Our membership now includes 4 Canada Research Chair holders: Allison Sekuler holds the Chair in Cognitive Neuroscience, Patrick Bennett holds the Chair in Vision Science, Evan Thompson holds the Chair in Cognitive Science and the Embodied Mind, and Douglas Crawford holds the Chair in Visuomotor Neuroscience. Crawford was also named one of 20 Young Explorers in Canada by the Canadian Institute for Advanced Research. David M. Regan was named a Member of the Order of Canada in 2001, he was the first Canadian awarded the Proctor Medal (Association for Research in Vision and Ophthalmology), 2001 and won the NSERC Award of Excellence (one of three finalists for the Herzberg gold medal 2000). Hiroshi Ono won a Canada Council for the Arts Killam Research Fellowship and was named Distinguished Research Professor at York. Warm congratulations to all for these wonderful and hard-earned awards.

June 2001 saw a celebration of Ian Howard's career with a well-attended and scientifically superb conference and banquet. Plans are set for a celebration of David M. Regan's career in June 2003. Check the web pages cvr.yorku.ca for details.

The past several months saw the CVR move into new space in the Computer Science Building, the first time the centre has space of our own and we thank the York University administration and particularly Stan Shapson, the VP Research & Innovation, for their continued support. Our dedication ceremonies for our new headquarters take place May 23 – 24, 2002 with a "Day of Science" and lab tours, open to the public. Our new base of operations will help us to spring forward with new opportunities for collaborations and continued research excitement!

John K. Tsotsos

Members

- Scott Adler Assistant Professor of Psychology
Interests: the relation between cognitive and visual processes in young infants
- Rob Allison Assistant Professor of Computer Science
Research Associate, Human Performance Laboratory
Interests: stereoscopic vision, perceptual issues in virtual environments, eye movements
- Doug Crawford Associate Professor of Psychology, Biology, and Kinesiology & Health Sciences
Canada Research Chair in Visual-Motor Neuroscience
Interests: three-dimensional eye and head movements, eye-hand coordination, modeling, visuomotor neurophysiology
- James Elder Associate Professor of Psychology, Computer Science and Mathematics
Project Leader, Human Performance Laboratory
Interests: visual psychophysics, computational vision and visual telepresence
- Keith Grasse Associate Professor of Psychology and Biology
Project Leader, Human Performance Laboratory
Interests: neurophysiology of the visual system, eye movements, auditory neurophysiology, neuropharmacology (currently on leave)
- Laurence Harris Professor of Psychology and Biology
Project Leader, Human Performance Laboratory
Interests: perception and coding of space and self motion
- Ian Howard Distinguished Research Professor of Psychology and Biology
Co-Director, Human Performance Laboratory
Interests: space perception, eye movements, visual-vestibular interactions
- Richard Hornsey Associate Professor of Computer Science and Physics
Interests: integrated electronic sensors, biologically inspired image sensors, low vision enhancement systems, sensors for space applications
- Michael Jenkin Professor and Chair of Computer Science
Project Leader, Human Performance Laboratory
Interests: computer vision, robotics and image understanding
- Hiroshi Ono Distinguished Research Professor of Psychology
Interests: visual perception of direction and distance, eye movements

Members cont'd.

- David Regan CAE/NSERC Industrial Research Professor.
Distinguished Research Professor of Psychology and Biology, York University
Professor of Ophthalmology and Medicine, University of Toronto
Co-Director, Human Performance Laboratory
Fellow of the Royal Society of Canada
Foreign Fellow of the Royal Netherlands Academy of Science
Interests: psychophysics of spatial vision, motion, stereopsis, colour vision; vision aviation; visually evoked magnetic and electrical brain activity; visual disorders; auditory psychophysics
- Josée Rivest Associate Professor of Psychology, Glendon College, York University
Department of Psychology of the Baycrest Centre for Geriatric Care
Interests: neuropsychology, object recognition, multiple attributes in visual processing
- Lauren Sergio Assistant Professor of Kinesiology
Interests: neural mechanisms of visually guided reaching in parietal and precentral cortex
- Minas Spetsakis Associate Professor of Computer Science
Interests: computer vision and robotics
- Paul Stager Professor of Psychology
Research Associate, Human Performance Laboratory
Interests: human engineering in aerospace performance and system design
- Martin Steinbach Distinguished Research Professor of Psychology and Biology
Director, Vision Science Research, Toronto Western Hospital
Senior Scientist, Dept. of Ophthalmology, Hospital for Sick Children
Director of Research, Department of Ophthalmology, University of Toronto
Interests: eye movements, visual-motor coordination, clinical disorders of the oculomotor system.
- Wolfgang Stuerzlinger Assistant Professor of Computer Science
Interests: human-computer interaction, virtual reality, computer graphics
- Evan Thompson Associate Professor of Philosophy
Interests: philosophical foundations of cognitive science and perception
- John Tsotsos Professor, Dept. of Computer Science, York University
Director, Centre for Vision Research, York University
Adjunct Professor, Dept. of Computer Science, University of Toronto
Associate Professor, Dept. of Medicine (Cardiology), University of Toronto
Professor, Dept. of Ophthalmology, University of Toronto
Visiting Scientist, Centre for Advanced Studies, IBM Canada, Toronto Labs
Adjunct Professor, Dept. of Computer Science, University of Western Ontario
Interests: human and machine vision, computational models of attention, visual motion understanding, robotics

Members cont'd.

Laurie Wilcox	Associate Professor of Psychology Interests: stereopsis/depth perception
Richard Wildes	Associate Professor of Computer Science Interests: spatiotemporal analysis of visual information, motion analysis, binocular vision, biometrics
Frances Wilkinson	Professor and Chair of Psychology, Atkinson College Interests: involvement of the visual system in migraine; intermediate visual form perception using psychophysical, computational and fMRI methodologies
Hugh Wilson	ORDCF Professor of Biology Interests: psychophysical and neural models of form vision; fMRI studies of cortical form vision, nonlinear dynamics of cortical function

Adjunct Members

Susanna Becker	Dept. of Psychology, McMaster
Pat Bennett	Dept. of Psychology, McMaster
Sven Dickinson	Dept. of Computer Science, Toronto
Brenden Frey	Dept. of Computer Science, Waterloo
Alan Jepson	Dept. of Computer Science, Toronto
Pierre Jolicouer	Dept. of Psychology, Waterloo
Richard Mann	Dept. of Computer Science, Waterloo
Evangelos Milios	Dept. of Computer Science, Dalhousie
Jay Pratt	Dept. of Psychology, University of Toronto
Brian Rogers	Dept. of Experimental Psychology, Oxford University
Allision Sekuler	Dept. of Psychology, McMaster
Andrew Smith	Royal Holloway University of London
Doug Tweed	Dept. of Psychology, Toronto
Rich Zemel	Dept. of Psychology, Toronto

Visiting Scientists 2000-2002

Dr. Randolph Blake	Vanderbilt University
Mr. Elke Hergenroether	Fraunhofer, Germany, visiting PhD student
Dr. Barbara Gillam	University of New South Wales
Dr. Robert Hess	McGill
Mr. Jeounghoon Kim	Korean Advanced Institute of Science & Technology
Dr. Amnon Krupnik	Israel
Dr. Rainer Herpers,	Sankt-Augustin, Germany
Dr. Brian Rogers	Oxford University, U.K.
Dr. Simon Rushton	Nissan
Dr. Erich Schneider	Munich
Dr. Robert Sekuler	Brandeis University
Dr. Nicholas Wade	Dundee

Research Associates

Dr. Bob Cheung	With I.P. Howard
Mr. Konstantinos Derpanis	With J. Tsotsos
Mr. Ronen Goldstein	With J. Elder
Dr. Esther Gonzalez	With M. Steinbach
Dr. Xiang-Hua Hong	With D. Regan
Dr. Yuqian (Bob) Hou	With J. Elder
Ms. Linda Lillakas	With H. Ono/M. Steinbach
Mr. Al Mapp	With H. Ono
Mr. Markus Latzel	With J. Tsotsos
Ms. Caroline Pantofaru	With J. Tsotsos
Dr. Marian Regan	With D. Regan
Mr. Ricardo Tabone	With D. Crawford/J. Elder/L. Sergio/L. Wilcox
Mr. Albert Rothenstein	With J. Tsotsos
Evgueni Simine	With J. Tsotsos
Sotirios Stergiopoulos	With J. Tsotsos
Saihong Sun	With D. Crawford /L. Sergio
Mr. Luben Tuikov	With J. Tsotsos
Dr. Hongying Wang	With D. Crawford
Mr. Gregory Wu	With J. Elder
Ms. Marie-Anne Violet	With J. Tsotsos
Dr. Xiaogang Yan	With D. Crawford/L. Sergio
Mr. Yongjian Ye	With J. Tsotsos
Mr. Jim Zacher	With I.P. Howard/ R. Allison/L. Harris

Post Doctoral Fellows

Dr. Florin Cutzu	With J. Tsotsos
Dr. Fadi Dornaika	With J. Elder
Dr. Richard Dyde	With I.P. Howard/L. Harris
Dr. Phil Duke	With L. Wilcox/ I.P. Howard
Dr. Phil Grove	With D. Regan
Dr. Heather Jenkin	With I.P. Howard/ R. Allison/L. Harris
Dr. Leigh Johnston	With J. Elder
Dr. Gunter Loffler	With H. Wilson
Dr. Jonathan Marrotta	With D. Crawford
Dr. Kazu Matsumiya	With H. Wilson
Dr. M. Obrecht	With R. Hornsey
Dr. Marc Pomplun	With J. Tsotsos
Dr. Stephane Ranville	With H. Wilson
Dr. Robert Reeves	With J. Elder

Joe Amati	2 nd year M.A.	Elder
Jachin Asenencio Monteon	1 st year M.Sc.	Crawford
Vadim Berestetsky	IBM-Congese 3 rd year M.Sc. at U of T	Tsotsos
R. Burns	1 st year M.Sc.	Hornsey
Yongqiang Cao	2 nd year M.Sc.	Elder
Alina Constantin	2 nd year M.Sc.	Crawford
Costa Derpanis	2 nd year M.Sc.	Tsotsos
Michael Goesele	Dipl.-Inf.	Stuerzlinger
Richard Goldberg	Obtained M.Sc.	Elder
Philip Grove	Obtained Ph.D.	Ono
Kevin Hansen	2 nd year M.A.	Rivest
Denise Henriques	Obtained Ph.D.	Crawford
Andrew Hogue	2 nd year M.Sc.	Jenkin
Y. Huang	2 nd year M.Sc.	Hornsey
Phil Jaekl	2 nd year M.A.	Harris
Donna Jolic	2 nd year M.A.	Rivest
Bill Kapralos	2 nd year M.Sc.	Jenkin
Aarlenne Khan	2 nd year M.A.	Crawford
Radha Kohly	Obtained Ph.D.	Regan
Slava Konovalova	1 st year Ph.D.	Wilcox
Agnieszka Kopinska	3 rd year Ph.D.	Harris
Eliana Klier	3 rd year Ph.D.	Crawford
J.-S. Lee	4 th year Ph.D.	Hornsey
S. Lee	2 nd year M.A.	Regan
Yunjo Lee	1 st year Ph.D.	Rivest
Y. Liu	3 rd year M.Sc.	Tsotsos
Kevin MacKenzie	2 nd year M.A.	Wilcox
Iraj Mantegh	Obtained Ph.D.	Jenkin
L. MacEachern	Ph.D.	Hornsey
Nathan Mekuz	IBM-Congese 2 nd year M.Sc. at UWO	Tsotsos
Andriy Pavlovyeh	1 st year M.Sc.	Stuerzlinger
Sergey Parilov	2 nd year M.Sc.	Stuerzlinger
Sandra Polifroni	2 nd year Ph.D.	Elder
Gilles Pouliquen	2 nd year Ph.D.	Stuerzlinger
Steve Prime	1 st year M.A.	Crawford
Arlene Ripsman	2 nd year M.Sc.	Jenkin
Albert Rothenstein	IBM-Congese 3 rd year M.Sc. at UofT	Tsotsos
Andrei Rotenstein	2 nd year M.Sc.	Tsotsos
Tanya Ruppell	3 rd year M.Sc. at UofT	Tsotsos
F. Saffih	3 rd year Ph.D.	Hornsey
Adam Sachs	Obtained M.Sc.	Elder
J. Shah	2 nd year M.Sc.	Hornsey
Graham Smith	Obtained M.Sc.	Stuerzlinger
Michael Smith	3 rd year Ph.D.	Crawford
Szymon Stachniak	2 nd year M.Sc.	Stuerzlinger
M. Tabet	5 th year Ph.D.	Hornsey
Oleksiy Tumanov	1 st year M.Sc.	Allison
Diana Tajik	2 nd year Ph.D.	Steinbach
Ljiljana Velisavljevic	4 th year Ph.D.	Elder
R. Venkatchalam	1 st year M.Sc.	Hornsey

S. Vinayagamoothy	2 nd year M.Sc.	Hornsey
Yanling (Caroline) Wang	1 st year M.Sc.	Allison
Jennifer Warner	3 rd year M.A.	Rivest
Jeffrey Zhifeng Wei	3 rd year M.Sc.	Stuerzlinger
Ji-Young Oh	2 nd year Ph.D.	Stuerzlinger
Grigori Yourganov	2 nd year M.Sc.	Stuerzlinger
Dan Zikovitz	4 th year Ph.D.	Harris/Jenkin
Y. Zhu	3 rd year M.Sc.	Tsotsos

Honours and Awards

Elder

2001 Young Investigator Award, Canadian Image Processing and Pattern Recognition Society

Crawford

Canada Research Chair

CIAR Young Explorer Award

Premier's Research Excellence Award

Ono

Killam Research Fellowship Award, 2002-2004

Distinguish Research Professorship, 2002

Regan

Member of the Order of Canada, 2001

Proctor Medal (Association for Research in Vision and Ophthalmology), 2001

NSERC Award of Excellence (one of the three finalists for the Herzberg medal), 2000

Steinbach

President, Vision Health Research Council of Canada

Wilcox

Faculty of Arts TML/TEL award (2000/2001)

Wilkinson

Terry Anders Lecture (Dalhousie Psychology, October 2001)

Wilson

Ontario Research Development Challenge Fund Professorship in Biological & Computational Vision, 2000-present.

External Committees and Editorial Boards

Harris

Member of multi-disciplinary assessment committee for Canada
Foundation for Innovation(CFI)

Regan

NSERC Circle/Cercle du CRSNG
ARVO awards committee
Editorial Board: Spatial Vision
Editorial Board: Ophthalmic & Physiological Optics
Editorial Board: Vision Research

Steinbach

Canadian Public Health Task Force for Vision and Ophthalmology
Executive Committee, National Coalition for Vision Health
Binocular Vision
Member, Institute Advisory Board, Canadian Institutes of Health Research: Institute of Neuroscience,
Mental Health and Addiction
Executive Committee, Department of Ophthalmology, University of Toronto

Stuerzlinger

Editorial Board: Journal of Graphics Tools
Editorial Board: Journal of WSCG
Program Chair (together with M. McCool): Graphics Interface 2002, Calgary, May 2002
Program Chair (together with S. Mueller): Virtual Environments 2002, Barcelona, May 2002
Program Committee Member for ACM Symposium on Interactive 3D Computer
Graphics 2001, IEEE Virtual Reality 2001-2002, Graphics Interface 2000-2001,
International Conference in Central Europe on Computer Graphics and Visualization 2000-2002

Tsotsos

Journal Editorial Board Member: *Image and Vision Computing Journal*, North American Editor;
Computer Vision and Image Understanding, Area Editor; *Computational Intelligence*, Associate Editor
General Chairman: 7th IEEE International Conference on Computer Vision, September 1999
Program Committee Member: Workshop on Integration of Speech and Image Understanding, Sept,
1999; Vision Interface 2000, Montreal; International Conference on Pattern Recognition, Sept., 2000;
IEEE International Workshop on Biologically-Motivated Computer Vision, May, 2000
Committee Member: IEEE PAMI-TC, Conference Steering Committee, 2000 – 03; IRIS Research
Management Committee, 2000 – 01; CITO Machine Vision Thrust Review Committee, 2000

Wilson

Editorial Board, Vision Research: 2002-
Program Committee, Association for Research in Vision & Ophthalmology: 2000-
Edgar D. Tillyer Award Committee Member, Optical Society of America, 2001
NIH, National Eye Institute, Visual Sciences B, Grant Review Study Section, 2001

Research Grants (Annual for 2000-2002)

Ontario Centre of Excellence Grant, (HPL) Allison, Elder, Harris and Jenkin	440,000
Ontario Centre of Excellence Grant, (HPL) Allison, Elder, Harris, Jenkin, Regan and Stuerzlinger	486,000
Ontario Research and Development Challenge Fund (ORDCF)	76,000
Canadian Foundation for Innovation (CFI)	1,979,763
NSERC Major Facilities Access Grant (MFA)	182,000
Allison	
NSERC Research Grant	20,000
NSERC Equipment Grant (P.I., with M. Jenkin, I.P. Howard and L. Harris)	59,750
2002 Junior Faculty Fund	615
Crawford	
Canada Research Chair in Visual-Motor Neuroscience	180,000
CFI Grant	500,000
MRC Grant (with M. Goodale, T. Vilis, D. Tweed, R. Menon)	285,000
MRC Operating Grant	88,440
PREA Neural Mechanisms for eye-head coordination	37,500
NSERC Operating Grant	30,000
CIHR Grant	11,000
Elder	
IRIS Research Grant (with J. Clark, and J. Tsotsos)	120,000
GEOIDE Grant (with D. Clausi, G. Edward, F. Ferrie and J. Little)	170,000
NSERC Operating Grant	26,875
NSERC Operating Grant	29,000
Natural Resources Canada	25,000
Natural Resources Canada	16,000
Hornsey	
CRESTech	45,000
Topaz Technology Inc.	10,000
NSERC Equipment Grant	31,508
NSERC Strategic Project	120,500
BETACOM Inc.	20,000
Premier of Ontario's Research Excellence Award	50,000
NSERC Individual Research Grant	26,000
Harris	
NSERC Operating Grant	33,500
NSERC Operating	47,000
CSA (with M. Jenkin)	78,814
NSBRI (with I.P. Howard and W. Stuerzlinger)	124,800
Howard	
NSERC Operating Grant.	49,000
NSBRI Grant (with L. Harris and W. Stuerzlinger)	120,000
DCIEM Contract.	62,000
Jenkin	
NSERC Operating Grant	33,000
IRIS Grant (with M. Buehler, G. Dudek and E. Milios)	192,667
IRIS Grant (with J. Tsotsos, R. Wildes, R. Owston and S. Dickinson)	158,000
Ono	
NSERC Operating Grant	35,230
NSERC Operatng Grant	42,000
Killam Fellowship	70,320
Sabbatical Leave Fellowship	3,000
Faculty of Arts Research Grant	4,000
Regan	
NSERC/CAE Industrial Chair	90,000
NSERC Operating Grant	73,500

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AFOSR Grant	348,000
NSERC Award of Excellence	50,000

Research Grants (Annual for 2000-2002) cont'd

Rivest

NSERC Operating Grant	18,000
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Sergio

CFI New Opportunities Fund	318,984
CIHR Operating Grant (with D. Crawford)	69,969
CIHR (with D. Crawford)	86,245
NSERC Operating Grant	10,000

Steinbach

NSERC Operating Grant	38,000
CIHR Opportunities Fund (with J. R. Brunette and R. LeBlanc)	35,000
Sir Jules Thorn Charitable Trust: Eye Movement Laboratory	118,068

Stuerzlinger

NSERC Operating Grant	14,700
NSERC Collaborative Grant	67,000

Evan Thompson

SSHRC Standard Research Grant	28,920
McDonnell Fellowship in Philosophy and the Neurosciences	40,000

Tsotsos

CRESTech	92,500
CRESTech	62,000
NSERC Operating Grant	72,000
IRIS	55,000
IRIS (with J. Clark and J. Elder)	200,000
CITO Grant	120,000
MDR Robotics	40,000

Wilcox

NSERC Operating Grant	24,000
IMAX Corporation research funding	40,000
Faculty of Arts	2,800

Wildes

NSERC Operating Grant	22,000
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Wilkinson

CIHR	82,900
NSERC Operating Grant	37,000
Krembil Foundation (with M. Steinbach)	100,000

Wilson

NSERC Operating Grant	40,000
NSERC Collaborative Grant	67,000

TOTAL	8,572,623
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Publications 2000-2002

Books

- Howard, I.P. *Vision in Depth. Volume 1 Basic Mechanisms*. Porteous Press. 650 pages. Published by I. Porteous, in press.
- Howard, I.P. and Rogers, B.J. *Vision in Depth. Volume 2 Seeing in Three-Dimensions*. 650 pages. Published by I. Porteous, in press.
- Jenkin, M. and Harris, L.R. (2001) (Eds.) *Vision and Attention*. Springer Verlag: New York, NY, ISBN 0-387 95058-3. 316 pages.
- Harris, L.R., and Jenkin, M. (Eds.) *Levels of Perception: A festschrift for Ian P. Howard*. Springer Verlag: New York, NY, in press.
- Regan D (2000) *Human Perception of Objects: Early spatial vision for objects rendered visible by luminance, color, texture, motion or binocular disparity*. Sunderland, MA: Sinauer, 567 pages.
- Stuerzlinger, W. and McCool, M., *Graphics Interface 2002*, A K Peters, in press.
- Stuerzlinger, W. and Mueller, S., *Virtual Environments 2002*, ACM Press, in press.

Chapters in Books

- Harris, L.R., Jenkin, M. (2001) Vision and Attention. In M. Jenkin and L. R. Harris (Eds.) *Vision and Attention*., Springer Verlag, New York, NY. pp 1-17.
- Harris, L.R, Beykirch, K. and Fetter, M. What is the appropriate level of analysis of eye movements? A postmodern approach to the vestibulo ocular reflex. In L. Harris and M. Jenkin (Eds.) *Levels of perception: A festschrift for Ian P. Howard*. Springer Verlag: New York, NY in press.
- Harris, L.R., Jenkin, M. Levels of Perception. In L. Harris and M. Jenkin (Eds.) *Levels of perception: A festschrift for Ian P. Howard*. Springer Verlag: New York, NY in press.
- Howard, I.P. The fidelity of disparity-based stereopsis in helmet-mounted displays. In Hettinger, L. *Virtual Reality Systems*. Elsevier in press.
- Howard, I.P. Depth perception. In H. Pashler (Series Ed.) & S. Yantis (Vol. Ed.) *Stevens' Handbook of Experimental Psychology: Vol. 1. Sensation and Perception* (3rd ed.). New York: Wiley, in press.
- Mapp, A.P., Ono, H. and Howard, I.P. Binocular visual direction. In I.P. Howard and B.J. Rogers, *Seeing in depth: Vol. II. Depth perception*. Toronto: I Porteous Publisher, in press.
- Oh, J-Y. and Stuerzlinger, W. (2002) Laser Pointers as Collaborative Pointing, Devices, *Graphics Interface 2002*, pp. 141-150.
- Ono, H., Lillakas, L. and Mapp, A.P. The making of the direction sensing system for the Howard eggmobile. In L. Harris and M. Jenkin (Eds.) *Levels of perception: A festschrift for Ian P. Howard*. Springer Verlag: New York, NY in press.
- Regan, D. Early visual processing of spatial form. In P.Semple (Ed.) *Adler's Physiology*.in press.
- Regan, D. and Gray, R. A step by step approach to research on time to contact and time to passage. In Savelbergh & Hirsch (Eds) *Research on Time to Collision*, in press.
- Regan, M.P. & Regan, D. Techniques for investigating and exploiting nonlinearities in brain responses evoked by sensory stimuli. In Z.L. Lu. G. Sperling & L. Kaufman (Eds.) *Magnetic Source Imaging of the Human Brain*, in press.
- Gray, R. and Regan, D. Binocular information about time to collision. In Savelbergh & Hirsch *Research on Time to Collision*, in press.
- Regan, D. and Kohly, R.P. (2000) Selective feature-based attention directed to a pair of lines: psychophysical evidence and a psychophysical model. In L. Harris and M. Jenkin (Eds.) *Vision and Attention*, Cambridge University Press, pp.253-280.

Chapters in Books cont'd.

- Regan, M.P. and Regan, D. Techniques for investigating and exploiting nonlinearities in brain responses evoked by sensory stimuli. In Z.L. Lu, G. Sperling, and L. Kaufman (Eds.). *Magnetic Source Imaging of the Human Brain*, in press.
- Steinbach, M.J. Tendon end organs play an important role in supplying eye position information. In L. Harris and M. Jenkin (Eds.) *Levels of Perception: A Festschrift for Ian Howard*. Springer Verlag, New York, NY, in press.
- Smith, G., Salzman, T. and Stuerzlinger, W. 3D Scene Manipulation with 2D Devices and Constraints, In J. Buchanan and B. Watson (Eds.) *Graphics Interface 2001*, Morgan Kaufman Publishers, pp. 135-142
- Smith, G., Salzman, T. and Stuerzlinger, W. 3D Scene Manipulation with Constraints, In B. Fisher, K. Dawson-Howe and C. O'Sullivan (Eds.) *Virtual and Augmented Architecture*, Springer Verlag, pp. 35-46.
- Smith, G. and Stuerzlinger, W. On the Utility of Semantic Constraints, In B. Froehlich, J. Deisinger and H.-J. Bullinger (Eds.) *Immersive Projection Technology and Virtual Environments 2001*, Springer Verlag, pp. 41-50.
- Salzman, T., Stachniak, S. and Stuerzlinger, W. Unconstrained vs. Constrained 3D Scene Manipulation, In M. Little and L. Nigay (Eds.) *Engineering for Human-Computer Interaction*, Springer Verlag, pp. 207-219.
- Tsotsos, J.K. The Selective Tuning Model, 5th Course of International Summer School, Neural Nets E. R. Caianiello on *Visual Attention Mechanisms*, in press.
- Tsotsos, J.K. Neurobiological Models of Visual Attention, 5th Course of International Summer School Neural Nets E. R. Caianiello on *Visual Attention Mechanisms*, in press.
- Tsotsos, J.K. The Complexity of Search Tasks, 5th Course of International Summer School, Neural Nets E. R. Caianiello on *Visual Attention Mechanisms*, in press.
- Tsotsos, J. Computer Vision, *Encyclopedia of Cognitive Science*, L. Nadel (Ed.) MacMillan Reference, in press.
- Tsotsos, J.K. (2001) Complexity, Vision and Attention, Vision and Attention, L. Harris and M. Jenkin (Eds.), Springer-Verlag New York, p105 –128.
- Tsotsos, J.K., Culhane, S., Cutzu, F. (2001) From Theoretical Foundations to a Hierarchical Circuit for Selective Attention, *Visual Attention and Cortical Circuits*, J. Braun, C. Koch, and J. Davis (Eds.) MIT Press, p. 285 – 306.
- Wildes, R. Iris recognition. In J. Wayman, A. Jain, D. Maltoni and D. Maio (Eds) *Biometric Authentication: Technologies, Systems, Evaluations and Legal Issues*, London: Springer, in press.
- Wilkinson, F. and Wilson, H.R. (2001) Global processes in form perception and their relationship to spatial attention. In Jenkin, M and Harris, L. R. (Eds.) *Vision and Attention*, Springer-Verlag, New York, NY.
- Ye, Y. and Tsotsos, J.K. Knowledge Granularity Spectrum, Action Pyramid, and the Scaling Problem, In J. Liu, N. Zhong, (2001) Y. Tang and P. Wang, (Eds.) *Agent Engineering*, World Scientific, p 29-58.
- Wilson, H.R. (2001) Sensation and Perception: low level theory. In N. J. Smelser and P. B. Baltes (Eds.) *International Encyclopedia of the Social and Behavioral Sciences* (Vol. 2.2: Mathematics & Computer Science), T. Marley (Ed.) Elsevier, New York, NY.
- Wilson, H.R. and Wilkinson, F. Global visual pattern extraction. In *Handbook of Brain Theory & Neural Networks*, ed. by M.A. Arbib, MIT Press: Cambridge, MA., in press.
- Wilson, H.R. and Wilkinson, F. Spatial channels in vision and spatial pooling. In *The Visual Neurosciences*, ed. by L. M. Chalupa & J. S. Werner, MIT Press: Cambridge, MA, in press.
- Zikovitz, D.C. and Harris, L.R. (2000) Effects of gravito-inertial-force and vision on head tilt during driving. In: *Vision in Vehicles VII*. Gale, A (Ed.) Elsevier North-Holland pp 281-288.

Papers in Refereed Journals

- Allison, R.S. and Howard, I.P. (2000) Depth perception with persisting and dynamic textures. *Vision Research*, 40: 3823-3827.
- Allison, R.S., Howard, I.P. and Fang, X. (2000) Depth selectivity of vertical fusional mechanisms. *Vision Research*, 40, 2985-2998.
- Ceylan, M.Z., Henriques, D.Y.P., Tweed, D.B. and Crawford, J.D. (2000) Task-dependent constraints in motor control: pin-hole goggles make the head move like an eye. *Journal of Neuroscience*, 20, 2719-2730.
- Elinas, P. and Stuerzlinger, W. (2001) Real-time Rendering of 3D Clouds, *Journal of Graphics Tools*, 5, no. 4, pp. 33-45.
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- Zikovitz, D.C., Jenkin, M. and Harris L.R. (2001) Overestimation of linear vection induced by optic flow: contributions of size of field and stereopsis. *Investigative Ophthalmology and Visual Science*, 42: 3322.
- Zikovitz, D.C., Jenkin, M. and Harris, L.R. (2001) Comparison of stereoscopic and non stereoscopic optic flow displays. *VSS Journal of Vision*, 1(3), 317a, <http://journalofvision.org/1/3/317>, DOI10.1167/1.3.317.
- Zikovitz, D.C., Jenkin M and Harris, L.R. (2001) Amplitude of self motion perception unaffected by the relative direction of visual and physical motion. *ECVP, Perception* 30.
- Zikovitz, D.C., Jenkin, M., Harris, L.R., Allison, R.S., Jaekl, P., Jasiobedzka, U. and Zacher, J.E. (2001) Perceptual Stability in Virtual Environments II: Stability during head translation. *Proceedings of the IRIS-PREARN 11th Annual Conference*.

Presentations at Conferences

- Amati, J. and Elder, J.H. (2001) Factors affecting the discrimination and perceived attitude of multiple transparent surfaces, *PREARN/IRIS Annual Meeting*, Ottawa.
- Ajemian, R., Sergio, L.E., Bullock, D., Grossberg, S. and Kalaska, J.F. (2001) Posture-dependent changes in MI cell tuning in an isometric task: comparison of model predictions with neural data. Presented at the *31st annual meeting of the Society for Neuroscience*, San Diego, CA.
- Crawford, J.D. (2001) Visuomotor transformations for eye-hand coordination. *European eye movement conference* 11.
- Crawford, J.D. (2002) Ocular kinematics in eye-hand coordination. *ARVO Symposium: Ocular Kinematics, Visual Perception, and Action*.
- Crawford, J.D. (2002) Internal representations and the geometry of eye-hand coordination. *International Conference on Eye-hand Coordination*, Queens University.
- Crawford, J.D. (2001) Brainstem Control of 3-D Gaze Shifts. *Brainerd Conference on Systems Analysis in Neurophysiology*, Brainerd, Minnesota.
- Crawford, J.D. (2001) Eye-hand coordination: seeing the questions, searching for the answers. *Neural Control of Movement Conference*, Seville, Spain.
- Crawford, J.D. (2001) Brainstem control of 3-D gaze shifts in the monkey. *The Vestibular and Oculomotor System: Basic Mechanisms and Clinical Applications*, Munich, Germany.
- Crawford, J.D., Bekkering, H., Van Donkelaar, P., Donkelaar, P., Synder, L. and Miall, C. (2001) Eye Hand Coordination: Seeing the Questions, Reaching for the Answers. *Neural Control of Movement, – 11th Annual Meeting* (workshop).
- Crawford, J.D., Smith, M.A., and Henriques, D.Y.P. (2000) Modelling and testing the principle of computation-on-demand in the 3-D saccade generator. *Computational Neuroscience Meeting*.

Presentations at Conferences cont'd.

- Crotogino, J., Ditto, B. and Wilkinson, F. Visual stress in migraine: autonomic reactivity and subjective complaints associated with exposure to intense visual stimulation. *10th Congress of the International Headache Society*, New York, NY, June 2001 Cephalalgia, 2001, 21(4), 390.
- Dornaika, F. and Elder, J.H. (2001) Image registration for attentive panoramic sensing, *PREARN/IRIS Annual Meeting*, Ottawa.

- Elder, J.H. and Krupnik, A. (2001) Contour grouping with strong prior models. *IEEE Workshop on Perceptual Organization in Computer Vision*, Vancouver, Canada.
- Elder, J.H. (2002) Applications of intelligent visual sensing technologies. *Payloads, Packages and Platforms: Organizing Networks for a Canadian Mars Mission Workshop*, Toronto.
- Elder, J.H. (2001) Computational and perceptual issues in Enhanced/Synthetic Vision Systems, *Workshop on Enhanced and/or Synthetic Vision Systems*, Toronto.
- Elder, J.H. (2001) Extraction of features from remote-sensed imagery, *GEOIDE Annual Meeting*, Fredericton, Canada.
- Elder, J.H. (2001) Attentional methods for virtual reality and telepresence, *PRECARN/IRIS Annual Meeting*, Ottawa.
- Elder, J.H. (2000) Textures for helmet mounted synthetic environments. *National Research Council Flight Research Laboratory Head-Mounted Display Research Meeting*.
- Elder, J.H. (2002) Ecological statistics of Gestalt laws for the perceptual organization of contours, Gordon Research Conference on Sensory coding and the natural environment. *Probabilistic models of perception*, Mount Holyoke College, MA, June 2002.
- Grove, P. M., Gillam, B. and Ono, H. (2002) New considerations about depth recovery involving stereoscopic occlusion. *29th annual Experimental Psychology Conference*. April 2002, Adelaide, Australia.
- Grove, P. M., Gillam, B. and Ono, H. (2002) New considerations about depth recovery involving stereoscopic occlusion. *29th annual Experimental Psychology Conference*. April 2002, Adelaide, Australia.
- Harris, L.R., Allison, R.S., Jaekl, P.M., Jenkin, H.L., Jenkin, M.R., Zacher, J.E. and Zikovitz, D.C. (2002) Extracting self-created retinal motion. *Vision Sciences Society Annual Conference*.
- Herpers, R., Derpanis, K., Topalovic, D., MacLean, J., Jepson, A, and Tsotsos, J. Active visual control by stereo active vision interface SAVI, Workshop Dynamische Perzeption, Universitaet Ulm, Germany, 2 - 3 November 2000
- Hong, C.S. and Hornsey, R.I. (2001) On-Chip Binary Image Processing with CMOS Image Sensors, *10th Canadian Semiconductor Technology Conference*, Ottawa, Canada, 13-17 August 2001. Winner of Best Student Poster award.
- Hong, C. and Hornsey, R.I. (2001) Inverted Logarithmic Active Pixel with Current Readout, *2001 IEEE Workshop on CCDs and Advanced Image Sensors*, Crystal Bay, Nevada, June 2001.
- Hong C. and Hornsey, R.I. (2001) CMOS Active Pixel Sensor with In-Pixel Contrast Stretch, *2001 IEEE Workshop on CCDs and Advanced Image Sensors*, Crystal Bay, Nevada, June 2001.
- Hong, C. Hornsey, R. and Paul Thomas (2001) Single-Chip Camera Modules for Mosaic Image Sensor, *Sensors and Camera Systems for Scientific, Industrial, and Digital Photography Applications II, Proc. SPIE* vol. 4306, ed. M. Blouke, J. Canosa, and N. Sampat, 22-24 January 2001, San Jose USA, 227-238.
- Jaekl, P.M., Allison, R.S., Harris, L.R., Jenkin, H.L., Jenkin, M.R., Zacher, J.E. and Zikovitz, D.C. (2002) Judging perceptual stability during active rotation and translation in various orientations. *Vision Sciences Society Annual Conference*.
- Jasiobedzka, U., Jenkin, M., Harris, L.R., Allison, R.S., Jaekl, P., Zacher, J.E., Jenkin, H. L. and Zikovitz, D.C. (2001) Perceptual Stability in Virtual Environments III: Psychophysics in Microgravity.
- Kapralos, B., Jenkin, M., Milios, E. and J. Tsotsos, T. Eyes 'n Ears Face Detection. *2001 International Conference on Image Processing (ICIP 2001)*, Thessaloniki, Greece. October 7-10, 2001.

Presentations at Conferences cont'd.

- Kapralos, B., Jenkin, M., Milios, E. and J. Tsotsos. Eyes 'n Ears: face detection utilizing audio and video cues. *Second International Workshop on Recognition, Analysis and Tracking of Faces and Gestures in Real-time System*.
- Kapralos, B., Jenkin, M., Milios, E., and Tsotsos, J., Eyes 'n Ears: A System for Attentive Teleconferencing, *Acoustical Society of America Conference*, Atlanta, May 30 - June 3, 2000

- Klier, E.M., Wang, H. and Crawford, J.D. (2000) Stimulation of the Interstitial Nucleus of Cajal (INC) Produces torsional and vertical head rotations in Fick coordinates. *Southern Ontario Neuroscience Association Meeting*.
- Krouchev, N.I., Sergio, L.E. and Kalaska, J.F. (2001) Motor cortex activity and motor input/output parameters: neural networks. Presented at the 31st annual meeting of the *Society for Neuroscience*, San Diego, CA.
- Krouchev, N., Kalaska, J.F. and Sergio, L.E. (2000) Motor input/output as encoded by primary motor cortex cell activity: System identification. Presented at the *30th annual meeting of the Society for Neuroscience*, New Orleans, LA.
- Krupnik, A. and Elder, J.H. (2001) Extraction of lakes from satellite imagery, *GEOIDE Annual Meeting*, Fredericton, Canada.
- Lee, J.S. and Hornsey R.I.(2001) CMOS Photodiodes with Substrate Openings for Higher Conversion Gain in Active Pixel Sensors, *2001 IEEE Workshop on CCDs and Advanced Image Sensors*, Crystal Bay, Nevada, June 2001.
- Lee, J.S. and Hornsey, R. (2000) Photoresponse of Photodiode Arrays for Solid-State Image Sensors, *J. Vac. Sci. Technol. A* 18, 621-625 (Presented at 1999 *Canadian Semiconductor Technology Conference*, 10-13 August 1999, Ottawa, Canada).
- Lee, J.S. and Hornsey, R.I. (2001) Improved One-Dimensional Analysis of CMOS Photodiode Including Epitaxial Substrate Junction, *2001 IEEE Workshop on CCDs and Advanced Image Sensors*, Crystal Bay, Nevada, June 2001.
- MacLean, W.J. and Tsotsos, J.K. Fast Pattern Recognition Using Gradient-Descent Search in an Image Pyramid, *Proc. ICPR*, Barcelona, September 2000.
- McCull, S.L. and Wilkinson, F. Migraineurs show visual field defects on motion coherence perimetry during the interictal period. *10th Congress of the International Headache Society*, New York, NY, June 2001 *Cephalalgia*, 2001, 21(4), 391
- Ono, H., Mapp, A.P. and Howard, I.P. (2001) The cyclopean eye in vision: The new and old data continue to hit you right between the eyes. *Vision Sciences Society*, 170 p.49.
- Ono, H., Lillakas, L. and Mapp, A.P. (2001) The making of the direction sensing system for the Howard eggmobile. *International Conference on Levels of Perception*, Toronto.
- Palmisano, S.A., Allison, R.S., and Howard, I.P. (2001) Are there temporal limits for post-matching stereoscopic processing? *International Conference on Levels of Perception*, York University, Toronto.
- Reeves, R. and Elder, J.H. (2001) Constructing more accurate terrain models from multiple DEMs and classification data, *GEOIDE Annual Meeting*, Fredericton, Canada.
- Regan D. Collision avoidance and collision achievement. *Festschrift for Bela Julesz*, Rutgers University, April 2001.
- Regan D. Hitting what one wants to hit and missing what one wants to miss. *Festschrift for Han Collewijn*, Netherlands Royal Academy, Amsterdam, October 2000.
- Regan, D. Clinical electrophysiology and clinical psychophysics. Keynote lecture. *International Society for Clinical Electrophysiology*, Montreal, 2001.
- Smith, M.A. and Crawford, J.D. (2000) Spontaneous development of parallel task modules and coordinate systems in a neural network model of the visuomotor transformation for saccades. *Southern Ontario Neuroscience Association Meeting*.

Presentations at Conferences cont'd.

- Tabet, M., Tu, N. and Hornsey, R. (2000) Modeling and Characterisation of Logarithmic CMOS Active Pixel Sensors, *J. Vac. Sci. Technol. A* 18, 1006-1009. Presented at 1999 Canadian Semiconductor Technology Conference, 10-13 August 1999, Ottawa, Canada.
- Steinbach, M. Optimizing use of data and technologies. Invited *Symposium Participant, Retina International 2000 Meeting*, Toronto.

- Steinbach, M. Crainiofacial muscle specialization and disease. Invited discussant at a workshop sponsored by the *National Eye Institute*, Bethesda, MD. March, 2001.
- Steinbach, M. Tendon end organs play an important role in supplying eye position information. Invited symposium presentation, *International Conference on Levels of Perception*, Toronto, June 2001.
- Steinbach, M. Studying the strabismus patient. Invited presentation, *Canadian Ophthalmological Society* meeting, June, 2001, Toronto.
- Tabet, M. and Hornsey, R.I. Dual-Mode Active Pixel Sensor with Focal Plane Edge Detection, *2001 IEEE Workshop on CCDs and Advanced Image Sensors*, Crystal Bay, Nevada, June 2001.
- Tsotsos, J. The Selective Tuning Model for Visual Attention and its impact on Behavior-Based Control Architectures, *AAAI Fall Symposium on Anchoring Symbols to Sensor Data*, North Falmouth, MA, November 2-4, 2001.
- Tsotsos, J. Neurobiological Models of Visual Attention. *Stockholm Workshop on Computational Vision*, Rosenon, Sweden, July 31 - August 2, 2001.
- Tsotsos, J. Neurobiological Models of Visual Attention. *International School on Neural Networks: Visual Attention*, Vietri, Italy, Oct. 23 - 28, 2000.
- Tsotsos, J. The Complexity of Search Tasks. *International School on Neural Networks: Visual Attention*, Vietri, Italy, Oct. 23-28, 2000.
- Tsotsos, J. The Selective Tuning Model. *International School on Neural Networks: Visual Attention*, Vietri, Italy, Oct. 23-28, 2000.
- Velisavljevic, L. and Elder, J.H. The processing of local and global information in natural images, *International Conference on Levels of Perception*, Toronto, June 2001.
- Vesia, M., Gorbet, D.J. and Sergio L.E (2002) The time-course of kinematic to kinetic transformations in human goal-directed motor behaviour. To be presented at the *32nd annual meeting of the Society for Neuroscience*, Orlando, FL
- Wang, H., Klier, E.M. and Crawford, J.D. (2000) 3-D gaze control and head posture deficits during reversible inactivation of the primate interstitial nucleus of Cajal (INC) *Southern Ontario Neuroscience Association Meeting*.
- Wilson, H.R., Wilkinson, F. and Loffler, G. The role of principle components in synthetic face discrimination. *Association for Research in Vision and Ophthalmology*, Ft. Lauderdale FL May 2002.
- Ye, Y., Boies, S. Huang, P. and Tsotsos, J.K. Smart Distance and WWWaware – A Multi-agent Approach, *Agent 2001*

Colloquia

Crawford

- Neuroscience Seminar Series, University of Montreal, 2002
 (Insitute for) Espace et Action, INSERM, Lyon, France, 2000
 Perspectives in Neuroscience Series, University of Western Ontario, 2000

Elder

- University of British Columbia Psychology Department, 2001.
 McGill University Computer Science Departmen, 2001.
 University of Toronto Computer Vision Seminar, 2001.
 Sarnoff Corporation, Princeton, NJ, 2000
 NEC Research Institute, Princeton, NJ, 2000

Colloquia cont'd.

Harris

- TNO, Soesterburg, The Netherlands, Sept. 2000
 Royal Canadian Institute Public Lecture, Toronto, Canada, Nov. 2000
 Dept. Neurology, Univ. Pennsylvania, Pittsburgh, USA, Nov. 2001

Howard

Howard, I.P. Invited address at the Helmholtz Institute, University of Utrecht. April 2001

Jenkin

Digifest, Toronto, 2002

Bonn, Germany, 2001

Ono

ATR Human Information Processing Research Laboratories, March 2002

Regan

University of California, Irvine, 2001

University of California, Berkeley, 2001

Smith–Kettlewell Institute, 2001

Steinbach

Toronto Western Research Institute, 2001

Nova Southeastern University College of Optometry, 2002

Stuerzlinger

University of Bonn, Germany, June 2000

University of Linz, Austria, July 2000

University of Toronto, Apr. 2001

Tsotsos

Centre for Vision Research, York University, Jan. 19, 2001

CITO Research Review, February 15, 2001

Bloorview MacMillan Rehabilitation Centre.

Dept. of Computer Science and Dept. of Electrical Engineering, McGill University, June 8, 2001

MDRobotics, Brampton, Ont, Nov. 29, 2001

Microsoft Research, March 5, 2001

University of Plymouth, Great Britain, May 17, 2001

Clinic for Neurology II, University of Magdeburg, Germany, May 14, 2001

Multimedia Systems Institute, Polytechnical University of Crete, Chania Crete Greece, July 17, 2001

Wilcox

Lake Ontario Visionary Establishment - Niagara, Ontario February, 2000.

Wildes

University of Waterloo, March, 2002

CRESTech, October, 2001

Rutgers University, March 2001

York University, March 2001

Rutgers University, October 2000

Colloquia cont'd.**Wilkinson**

Atkinson Brownbag Seminar September 2001

Dept of Psychology Halifax NS, October 2001

Department of Psychology, McMaster University, Hamilton ON

School of Kinesiology and Health Science, York University, March 2002
 Center for Vision Science, University of Rochester, Rochester NY, March 2002

Wilson

Brussels, Belgium, September, 2000
 University of Montreal, October, 2000
 Columbia University, New York, November, 2000
 Field Museum of Natural History, Chicago, IL, October, 2001

Collaborative Research

Crawford

Dr. Ravi Menon	Dept. of Radiology, University of Waterloo
Dr. Phil Servos	Dept. of Psychology, Laurier University
Dr. Mel Goodale	Dept. of Psychology, University of Waterloo
Dr. Keith Humphrey	Dept. of Psychology, University of Waterloo
Dr. Yves Rossettie	INSERM, Lyon France
Dr. Stan Gielen	Dept. Biophysics, Nijmegen, Netherlands

Elder

Dr. James Clark	McGill University
Dr. David Clausi	University of Waterloo
Dr. Geoffrey Edwards	Laval University
Dr. Frank Ferrie	McGill University
Dr. James Little	University of British Columbia
Dr. Amnon Krupnik	Technion, Israel

Harris

Conrad Wall	MIT
Chuck Oman	MIT
Michael Fetter	Tuebingen
Simon Rushton	York
Andy Smith	London, UK
David Solomon	U. Penn

Howard

Brian Rogers	Oxford University
Chuck Oman	MIT
Bob Cheung	DCIEM

Collaborative Research cont'd.

Ono

H. Kaneko	Tokyo Institute of Technology, Tokyo, Japan
Sachio Nakamizo	University of Kyushu, Furuoka, Japan
S. Ohtsuka	NTT Data Corporation, Tokyo, Japan
N. Wade	Dundee University, Scotland.

Regan

Dr. Robert Gray
Dr. Eileen Birch

Nissan Basic Vision Lab., Boston
Retina Foundation, Dallas

Rivest

Hugh Wilson
Morris Moscovitch
James Sharpe

Centre for Vision Research
U. of T & Baycrest Centre for Geriatric Care & Rotman Research Institute
University of Toronto, Toronto Western Hospital

Steinbach

Sharon Abel
Stephen Kraft
Brenda Gallie
Iain Donaldson
Elizabeth Irving

Mt. Sinai Hospital, Toronto
Hospital for Sick Children
Ontario Cancer Institute
University of Edinburgh
University of Waterloo

Stuerzlinger

Pantelis Elinas
Stefan Mueller
Sergey Parilov

Dept. of Computer Science, UBC, Vancouver
Fraunhofer GmbH, Darmstadt, Germany
Orel University, Orel, Russia

Tsotsos

Rainer Herpers
Stefan Treue
Hans-Jochen Heinze
Florin Cutu
Marc Pomplun
Sven Dickinson

Sankt-Augustin, Germany
German Primate Center, Goettingen, Germany
University of Magdeburg, Germany
University of Indiana
University of Massachusetts at Boston
University of Toronto

Wilcox

Robert Hess
Rick Wildes

McGill University
York University

Wilkinson

T. Lewis
D. Maurer
D. Elleberg

McMaster University
McMaster University
McMaster University

Collaborative Research cont'd.**Wilson**

D. Levi
D. Maurer and T. Lewis
M. Moscovitch
G. Loffler
J. Kim

UC Berkeley
McMaster University
University of Toronto
Glasgow Caledonia University, Glasgow, UK.
Korean Advanced Institute of Science and Technology

R. Sekuler	Brandeis University
R. Blake	Vanderbilt University
D. Hood	Columbia University

CVR Dedication

The formal events will take place on Friday May 24 in Lecture Hall A of our new building.

Conference on Levels of Perception

The Centre for Vision Research hosted an international conference Levels of Perception in June 2001. The next International Conference will be on Visual Processing of Spatial Form to be held on June 18-21, 2003.

Centre for Vision Research Lecture Series 2000/02

Neeraj (Raj) Gandhi	Houston	Decomposition of a single gaze command into eye and headpathways
Jonathan Marotta	CVR	Neuropsychological investigations of the dorsal and ventral streams of visual processing.
Stan Gielen	Netherlands	Control of gaze and it's implications for perception.
Ray Klein	Dalhousie	Orienting of Attention and Inhibition of Return
Richard Aslin	Rochester	Adults' and infants' extraction of higher-order structure from rapidly presented visual images
Pierre Jolicoeur	Waterloo	Central capacity demands of visual encoding. Evidence from a variety of dual-task paradigms will be used to demonstrate and study the central processing capacity demands associated with encoding visual information for nearly-immediate conscious report.
Richard Hornsey	CVR	B-eye-onics: Biological Inspiration and Applications of Electronic Cameras
Suzanna Becker	McMaster	Computing visuo-spatial maps: From visual images to spatial memories and back again
Barbara Gillam	Australia	Binocular Vision in a world of overlapping surfaces
Jay Pratt	Toronto	Inhibition of return: New answers to old questions
Hugh Wilson	CVR	Deciphering the Neural code for geometric face perception
Jim Little	UBC	Waiting for Jose: the Theory and Practice of Robot Waitering
Stefan Treue	Germany	Physiology of Attention
Stephane Rainville	Rochester	Synchrony perception: evidence for a spatial association field
Richard Murray	Toronto	Perceptually interpolated contours in shape discrimination

Centre for Vision Research Lecture Series 2000/02 cont'd.

Brendan Frey	Toronto	Learning flexible sprites in video layers
Evan Thompson	CVR	Radical embodiment: conscious experience and neural dynamics
Erich Schneider	Germany	Galvanic vestibular stimulation: Methods and mechanisms
Rochelle O'Hagan	Australia	Vision-based Gesture Interfaces to Virtual Environments

Ted Cohn		Thresholds and noise
Stan Hamstra	Toronto	Visuo-spatial Abilities Relevant to Training in Surgery
Matthias Niemeier	CVR	Object and Space Perception
Jonathan Downar		fMRI and Attention
Simon Rushton	CVR	Optic flow and perception of direction
A.G.Todman	Coventry	Visual perception and biomedical image analysis
Hugh Wilson	CVR	Dynamics of Travelling Waves in Vision: New Insights into Rivalry
Phil Duke	CVR	Vertical disparities
DM Regan	CVR	Pretor Acceptance Speech
Gunter Loffler	CVR	Detection of Shape Deformation in Pattern and Motion Perception
Allison Sekuler	McMaster	Face Recognition
Fran Wilkinson	CVR	Migraine and Vision
Josee Rivest	CVR	Prosopagnosia
Richard P. Wildes	CVR	Qualitative Analysis of Visual Spatiotemporal Information
Julio Martinez	CVR	Cortical Basis of Attention
John Tsotsos	CVR	Models of Attention
Robert Hess	McGill	The relationship between 2nd order and global processing in vision
Fadi Dornaika	Alberta	Mosaicing and image-based granulometry
Carol Westall & Adena Perron	HSC	Retinal toxicity from anticonvulsants
Keith Niall	DCIEM	A prolegomenon to ecological optics: projective geometry and visual form perception
Dora Angelaki	Washington	Merry-go-rounds and roller-coasters: How does the otolith system play?
Nick Wade	Dundee	Purkinje and Motion Illusions
Scott Adler	CVR	Infants' eye movements and cognitive expectations
Joachim Denzler	Rochester	Selection of camera parameter for state estimation
Mark Mon-Williams	St Andrews	Looking at the task in hand
Ken Nakayama	Harvard	Human face perception and recognition
Andy Smith	London UK	fMRI studies of visual cortex and attention
Yves Rossetti	Lyon, France	Parietal neglect and prisms?