



CENTRE FOR VISION RESEARCH

Annual Report

May 1, 2013 – April 30, 2014

(report due May 12)



1. Contact Information

Director	Laurence Harris
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ORU Website	http://cvr.yorku.ca

2. List Faculties that supplied active members to the ORU, indicating the number of active members from each.

Faculty of Health	18
Faculty of Science	3
Lassonde School of Engineering	7
Both Health & School of Engineering	1
Both Health & Faculty of Science	1
Glendon College	1
TOTAL:	31

3. Charter dates: first Charter **1992**; last renewal **Feb 2010**

4. Mandate

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.

5. Membership and Governance

Core faculty members	31
Adjunct faculty members	23
Postdoctoral members	31
Research Associates	3
Research assistants	18
<u>Grad Student member</u>	<u>107</u>

CVR members (York faculty; n=31)

Scott Adler	Associate Professor of Psychology <i>development of eye movement control, visual selective attention, object recognition, and visual expectations</i>
Rob Allison	Professor of Electrical Engineering & Computer Science, Grad Faculty in Psychology <i>stereoscopic vision, perceptual issues in virtual environments, eye movements</i>
Chris Bergevin	Assistant Professor in Physics <i>Auditory emissions</i>
Doug Crawford	Professor of Psychology, Biology and Kinesiology and Health Science; Canada Research Chair in Visual-Motor Neuroscience National Coordinator of the Canadian Action and Perception Network (CAPnet) <i>three-dimensional eye and head movements, eye-hand coordination, trans-saccadic perceptual integration, modeling, neurophysiology</i>
Joseph DeSouza	Associate Professor of Psychology, Biology and Neuroscience Diploma systems <i>neuroscience, frontal cortex, attention, fMRI, corollary discharge, eye position signals and oculomotor neurophysiology, dance</i>
James Elder	Professor of Electrical Engineering & Computer Science, and Psychology <i>human and computer vision</i>
Mazyar Fallah	Associate Professor of Kinesiology and Health Science, Biology and Psychology <i>visual perception and attention, object processing, concussion, oculomotor systems.</i>
Laurence Harris	Professor of Psychology, Biology and Kinesiology and Health Science; <i>multisensory processing, perception and coding of space, time, the body and self-motion</i>
Denise Henriques	Associate Professor Kinesiology and Health Science and Psychology <i>motor learning, multisensory integration, visuomotor control, eye-hand coordination</i>
Kari Hoffman	Associate Professor of Psychology <i>face processing, learning, memory and plasticity, sleep oscillations</i>
Ian Howard †	Distinguished Research Professor of Psychology and Biology <i>space perception, eye movements, binocular vision</i>
Richard Hornsey	Professor of Electrical Engineering & Computer Science, and Physics; Associate Dean, Faculty of Science and Engineering <i>integrated electronic sensors, biologically inspired image sensors, low vision enhancement systems, sensors for space applications</i>
Michael Jenkin	Professor of Electrical Engineering & Computer Science, <i>computer vision, mobile robotics, immersive visual displays</i>
Richard Murray	Associate Professor of Psychology <i>visual psychophysics, spatial vision, 3D shape perception</i>
Hiroshi Ono	Distinguished Research Professor of Psychology <i>visual perception of direction and distance, eye movement</i>
David	CAE/NSERC Industrial Research Professor; Distinguished Research Professor

Regan	of Psychology and Biology; Professor of Ophthalmology and Medicine, University of Toronto; Fellow of the Royal Society of Canada; Foreign Fellow of the Royal Netherlands Academy of Science <i>psychophysics of spatial vision, motion, stereopsis, colour vision, vision aviation, visually evoked magnetic and electrical brain activity, visual disorders, auditory psychophysics</i>
Josée Rivest	Associate Professor of Psychology, Glendon College; Department of Psychology, Baycrest Centre for Geriatric Care <i>neuropsychology, face and object recognition, rehabilitation of visual neglect</i>
Keith Schneider	Associate Professor of Biology; Facility Director of Neuroimaging Laboratory <i>neural mechanisms of attention and perception; phenomenology of attention; MRI methodology</i>
Lauren Sergio	Associate Professor of Kinesiology and Health Science <i>neural mechanisms of visually guided reaching in parietal and precentral cortex</i>
Minas Spetsakis	Associate Professor of Electrical Engineering & Computer Science, <i>computer vision and robotics</i>
Jennifer Steeves	Associate Professor of Psychology; Adjunct Scientist Neurosciences and Mental Health, The Hospital for Sick Children Research Institute; Adjunct Associate Professor, Department of Ophthalmology and Vision Sciences, Faculty of Medicine, University of Toronto <i>face and scene processing in neurological patients and one-eyed observers</i>
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 <i>eye movements, visual-motor coordination, clinical disorders of the oculomotor system</i>
Wolfgang Stuerzlinger	Professor of Electrical Engineering & Computer Science, Graduate Faculty in Psychology <i>human-computer interaction, virtual reality, computer graphics</i>
Christine Till	Associate Professor of Psychology, Adjunct Scientist Neurosciences and Mental Health, The Hospital for Sick Children Research Institute <i>Neural, clinical, and functional correlates of preserved and impaired cognition in children and adolescents with diffuse central nervous system insult; Rehabilitation strategies to enhance cognition in neurological populations; Structural and functional neuroimaging; pediatric neuropsychology</i>
John Tsotsos	Distinguished Research Professor of Vision Science; Professor of Electrical Engineering & Computer Science; Canada Research Chair in Computational Vision; Adjunct Professor, Dept. of Computer Science, University of Toronto; Adjunct Professor, Dept. of Ophthalmology, University of Toronto; Fellow, Royal Society of Canada <i>human and machine vision, computational models of attention, motion understanding, robotics</i>
Laurie Wilcox	Professor of Psychology; member of 3D Film and Innovation Consortium (3D FLIC), Sensorium, and IRLT <i>stereopsis/depth perception and 3D media</i>

Richard Wildes	Associate Professor of Electrical Engineering & Computer Science, <i>spatiotemporal analysis of visual information, motion analysis, binocular vision</i>
Frances Wilkinson	Professor of Psychology; Undergraduate Director, Department of Psychology; Affiliated Scientist, Division of Applied and Interventional Research, Toronto Western Research Institute, University Health Network, Toronto; Adjunct Professor, Department of Ophthalmology, University of Toronto. <i>Involvement of the visual system in migraine; intermediate visual form perception and face perception using psychophysical, computational and fMRI methodologies; impact of environmental lighting conditions on the visual system in normal aging.</i>
Hugh Wilson	Professor of Biology. ORDCF Chair of Biological and Computational Vision; Fellow, Canadian Institute for Advanced Research; Fellow, Optical Society of America <i>psychophysical and neural models of form vision; fMRI studies of cortical form vision, nonlinear dynamics of cortical function</i>
Thilo Womelsdorf	Associate Professor of Biology. <i>brain mechanisms of attention</i>
Georg Zoidl	Professor of Biology and Psychology Canadian Research Chair in Molecular and Cellular Neuroscience <i>Molecular and Cellular Neuroscience, Visual System, Synaptic Plasticity, Learning and Memory, Imaging, Transgenic Animals, Electrophysiology, Functional Genomics, Neurological Disorders</i>

Other members (see Guide)

ADJUNCT MEMBERS (n=23)	
Suzanna Becker	Psychology, McMaster University <i>Neural network models of learning and memory, computational neuroscience, unsupervised learning in perceptual systems, long-term priming, semantic memory organization, the role of feedback in cortical processing, involvement of the hippocampal, frontal and parietal brain regions in memory formation and retrieval. Neural networks for signal processing: image analysis and compression.</i>
Pat Bennett	Psychology, McMaster University <i>Visual Perception, spatial vision, psychophysics, perceptual learning and development, aging and vision, ideal observer theory</i>
Jennifer Campos	Toronto Rehabilitation Institute <i>Self-motion perception, multisensory integration, perception-action coupling, visuomotor control, Virtual Reality, the interactive nature of perception and action, locomotor rehabilitation</i>
Jonathan Cant	Psychology, University of Toronto
Sven Dickinson	Computer Science, University of Toronto <i>computational vision, object modeling, object recognition (both bottom-up and top- down), attention, shape recovery, and tracking, and how they may be unified under</i>

	<i>a single representational framework</i>
Cheyne Douglas	Medical Imaging, University of Toronto
Elizabeth Irving	Optometry, Waterloo
Alan Jepson	Computer Science, University of Toronto <i>low, intermediate and high level vision.</i>
Jocelyn Keillor	National Research Council, Canada
Richard Mann	Computer Science, University Waterloo <i>Computational vision (high-level vision, motion understanding, event recognition); Perception; Artificial intelligence</i>
Matthias Neimeier	Psychology, University of Toronto <i>Trans-saccadic integration, what kind of information is stored across saccadic eye movements? How is it represented in the brain? How can it be employed for perceptual tasks? Computational simulations, psychophysical methods and eye movement recordings and fMRI.</i>
Kathleen O'Craven	Psychology, University of Toronto <i>fMRI, visual attention, visual cognition, imagery, inhibitory processes, top-down effects, extra-striate cortex, perception of faces and places</i>
Jay Pratt	Psychology, University of Toronto <i>Visual Attention, Eye Movement, Motor Control, Age Related Changes in Attentional and Motor Systems</i>
Brian Rogers	Experimental Psychology, University of Oxford <i>Experimental studies of human visual perception - particularly 3-D vision: Stereopsis, structure from motion; perception of motion, visual control of locomotion, perception theory, artificial intelligence and computational studies.</i>
Allison Sekuler	Psychology, McMaster University <i>Cognitive neuroscience, visual perception, perceptual organization, face and object recognition, motion perception, aging and vision, neuroimaging</i>
Andrew Smith	Psychology, Royal Holloway University of London <i>fMRI of brain processes involved in motion perception</i>
David Shore	Psychology, MacMaster <i>Multisensory processing</i>
NikoTroje	Dept. of Psychology and School of Computing, Queen's University <i>Visual perception, biological motion perception, face recognition, cognitive neuroscience, neuroethology, computer vision.</i>
Doug Tweed	Psychology, University of Toronto <i>Sensory-motor transformations, computational models, visual and gaze-control systems. Models of binocular coordination and depth vision. My work has emphasized the importance to brain theory of nonlinear algebra and dynamics, optimization, natural selection and learning.</i>
Carol Westall	Hospital for Sick Children <i>Clinical pediatric visual electrophysiology</i>
Dave Williams	Director of South Lake Regional Health Centre <i>Ex Astronaut</i>

Agnes Wong	Ophthalmology and Vision Sciences, University of Toronto <i>Strabismus and issues in child vision</i>
Richard Zemel	Computer Science, University of Toronto <i>Machine learning and perception, using techniques from statistics and information theory, including unsupervised learning and information combination in uncertain environments, and mathematical and computational models of neural processing and representations.</i>

<i>Steering Committee members</i>	
Director	L. Harris (ex officio)
Associate director	R. Wildes
MRI facility director	K. Schneider (ex officio)
Member	James Elder
Member	Doug Crawford
Member	M. Fallah
Member	Fran Wilkinson
Seminar Coordinator	D. Henriques
<i>MRI business committee</i>	
	Laurence Harris (chair)
	Felix Moses (VPRI office)
	Keith Schneider (Facility Director)
	Jennifer Steeves
	Gary Turner
	Alison Collins
	Maz Fallah
	Joanna Rainbow (Legal Counsel)

Advisory Board members (if any) **N/A**

6. Annual Progress in Fulfilling Mandate

I. Submitted funding **proposals for large scale or team activities** (*=successful)

INITIATIVES SUBMITTED that were LED BY CVR

- NSERC CREATE “ The Brain in Action” (11 Co-Applicants at York, Queens, Western) – April 2014 – March 2020 – (Awarded \$1,650,000.00) – Peer reviewed (PI Crawford, Co-Applicants: Laurence Harris, Denise Henriques, Thilo Womelsdorf, Robert Allison, Stefan Everling, Gunnar Blohm, Mel Goodale, Jody Culham, Douglas Munoz, Nikolaus Troje.) This is in collaboration with a German initiative, the DFG/IRTG Grant “ The Brain in Action”(Bremmer PI) (\$5.5M Awarded)
- Stereo Imaging for Image-Guided Liver Surgery, USA NIH, 5 years, \$2.5M (Wildes)
- Perception of self motion in microgravity: Sensitivity to smooth and perturbed optic flow fields, Canadian Space Agency, AO-2014-Life, 6 years, \$790k, peer-reviewed, pending CSA PI Allison
- Letter of intent submitted to the Canadian Space Agency for a grant on The effect of long term hypogravity on the perception of self motion. PI Harris, also Allison and Jenkin.
- OCE-funded industry-academic partnership, May 2013 – April 2014, Partner: BrainFX Inc., Markham, ON (PI Lauren Sergio)
- Intelligent Systems for Sustainable Urban Mobility, Ontario Research Fund – Research Excellence (ORF/RE), 2015 – 2020, \$12M.
- Z-BRAIN: A Zebrafish Drug Screening Platform Targeting Brain Disorders Brain Canada, Technology and Platform Application, 3 years, \$2,620,000, Zoidl co-applicant
- CIHR “Neurophysiology of 3-D Gaze and Head Control” – October , 2013 - September,2018 – (Awarded \$1,000,935.00) Crawford
- Funding proposal submitted in 2013: CIHR, \$180,000 p.a. Translational studies of reading rehabilitation in patients with central vision loss. (Steinbach PI)
- NEXT: Harnessing Human-Machine Interaction Potential, Business-Led NCE, 5 years, \$12.5M, not funded (Stuerzlinger)
- NFL-GE Head Health Challenge 2 – co-investigator, peer review, BNA™ as a sideline biofeedback tool for reducing concussion incidence among young football players, outcome not announced yet, 2 years, awards of \$200-500k (Fallah)
- 2013-14 Parkinson’s Society of Canada (PI De Souza) \$44,999 Neural Mechanisms behind Dance Therapy for Parkinson’s Disease
- 2013-14 NSERC ENGAGE program Video Tracking of body angle behaviour correlated with multi-channel wireless muscle function imaging system (Myoguide MAP) (PI De Souza) EGP #451681-13 \$25,000

II. **conferences, workshops, exhibits or other events** hosted or organized (indicate total numbers in attendance and total number of participants from outside York University, outside Ontario and outside Canada)

- 2013 Cosmo Motor Control Summer School (G. Blohm lead organizer, Crawford on organizing committee). Dates: August 8-14, 2013 Location: Queen’s University Kingston Ontario, Canada.

- CAN-ACN / CAPnet Conference Social dates: May 23, 2013. Total number in attendance was 119
- “Quality in S3D: Perceptual and Technical Issues” and was a one-day workshop held at the Bell TIFF Lightbox, supported by the OMDC and NSERC through a Partnership Workshop grant (\$25k) to L. Wilcox, R. Allison and others. 46 attendees including approx. 5 from York.
- Workshop on “Immersive 3D Cinema” and held Dec. 12, 2013 at Cinespace Studios. Supported by the Ontario Media Development Corporation through the 3D FLIC project, the workshop was designed to identify, promote and develop Ontario know-how and strengths in immersive 3D technology and skills. Admission was free and 42 attended. The program for this event consisted of three invited speakers and demonstrations, R. Allison lead organizer.
- 2nd Toronto International Stereoscopic 3D Conference. The conference was planned and held in September 2013 at the Bell TIFF Lightbox and consisted of a multi-day program focused on advances in S3D filmmaking. Fundraising of over \$70k included \$10k from OMDC, \$10k from City of Toronto, \$10k from GRAND NCE, \$5k from Sheridan College, \$2k from OCE, \$7k from York, \$1.2 k from William F. White, \$5k from PS Production Services. L. Wilcox was Program Committee chair. Attendance was 254 including approx. 10 from York.
- Womelsdorf Organizer: **2013 (1st) Local Workshop of four York University’s Attention, Perception, and Memory Labs** (23rd of September, 2013), including 21 talks and discussion rounds involving laboratories from Psychology (Prof. Hoffman), Kinesiology (Prof. Fallah), Computer Science (Prof. Tsotsos), and Biology (Prof. Womelsdorf). These workshops will repeat and aim to prime collaborative funding efforts and joint projects.
- Womelsdorf organized **2013 Organization of a Matlab Analysis Workshop**: Attracted 45 young scientists (graduate student postdocs and PIs) from 8 Canadian and 1 US University to learn in a lecture and hands on computer programming sessions advanced analysis of brain network connectivity and brain cell synchronization using the FieldTrip toolbox. See : <http://attentionlab.ca/doku.php?id=matlab-workshop>
- York Centre for Vision Research Vision Science Summer School June 3-7, 2013 budget \$20K; funding from CVR's CREATE grant and several York departments/faculties 35 participants; 20 from outside York; 12 from outside Ontario; 6 from outside Canada co-organized by Richard Murray and Jennifer Steeves
- ACM Symposium on Spatial User Interaction, July 20-21, 2013, 65 attendees, program chair: Stuerzlinger
- Steinbach organized Research rounds for the UofT Dept of Ophthalmology & Vision Sciences
- CVR international biennial conference took place June 26-28 entitled Interactions in Vision, a celebration of the research careers of Hugh Wilson and Marty Steinbach. There were 15 talks by invited speakers. About 150 attendees.
- NSERC CREATE Bootcamp: Hosted sessions on Lighting and Vision with invited speakers Dr. Mariana Figueiro (Lighting Research Center, Renssalaer Polytechnic Institute), Dr. Tiiu Poldma (Universite de Montreal and Poldma Design) and Dr. Alex Shepherd (Birkbeck College, London UK – lighting and driving); organized the visit to the Philips Lighting Concept Centre (Joanne Emer & Tom Butters) and a lighting tour of the Life Sciences Building by lighting designer Allyson Chrysler (Consullux Lighting Consultants) 31 attendees from outside York (26 from outside Canada)
- Elder was a session organizer at Jackson Hole, Wyoming, Feb 4, 2014 Attendance 39 (outside York)
- Elder organized Autodesk Research, Toronto (Nov 12 and 21, 2013) sponsored by NSERC (\$3k) 42 attendees from outside York
- CVR held its biennial Research Day at the Drake Hotel, Toronto (20 York Attendees)
- Nov 12 & 21, 2013. Supported by a small NSERC Regional Opportunities Fund grant, Elder organized two full-day workshops under the banner Sustainable Urban Models Augmentation Consortium (SUMAC), bringing together roughly 25 people from universities, colleges, industry and government to brainstorm on collaborative opportunities for advancing intelligent systems

technologies that will lead to more sustainable cities. These workshops have in turn led to a major ORF/RE proposal titled Intelligent Systems for Sustainable Urban Environments (PI Elder).

III. **knowledge mobilization/engagement/outreach/technology transfer activities** and accomplishments

- Crawford engaged non-academic partners in new Brain in Action CREATE program. They are Blackberry, BrainFx, Leo Burnett Canada, Venture Lab, IBM, Ontario Brain Institute
- Project: Background Image Modeling for Video Analytics and Surveillance, Industry partner: Aimetis Corporation, Waterloo, ON (Wildes)
- Project: Stereo Imaging for Image-Guided Liver Surgery, Partner: Memorial Sloan Kettering Cancer Center, NY, NY & MDA Corporation, Brampton, ON (Wildes)
- Two “Engage” projects one with Dashwood Cinema Solutions and one with PhD Associates (Allison)
- The 3DFlic project involved a dozen government and industry partners (Allison)
- Wilcox and Allison were involved in successful efforts with the Ontario government to attract a major cinema technology company to establish a Toronto facility with the promise of 100’s of local jobs
- Error Behaviour in Natural User Interfaces, NSERC ENGAGE Grant with Flowton Technologies (Stuerzlinger)
- Stuerzlinger gave three invited keynotes, at the Touch Gesture Motion conference at SID Display Week 2013, at i-Society 2013, and at MHCI 2013.
- Stuerzlinger gave "Iron Man 2" talk at EPFL, the Swiss Federal Institute of Technology in Lausanne, Switzerland, at the Upper Austrian University of Applied Sciences, Hagenberg, Austria and at the Ludwig Maximilian University of Munich, Germany in May 2013. Also at the University of Toronto, Canada in June 2013.
- De Souza: Canada’s National Ballet School a Dance for Parkinson’s program starting Sept 2013 See http://www.nbs-enb.ca/media/pdfCommunityOutreachPD_info.pdf - zoom=100 <http://www.nbs-enb.ca/community/outreach/pd.aspx>
- Tutorials at Major Conferences or Specialized Schools Tsotsos, J.K., A Tutorial on Visual Attention, Int. Conference on Image Analysis and Processing, Naples, Italy, September 11-13, 2013 (invited by A. Pertossino)
- Wilkinson has relationships with both academic and industry experts in the field of lighting (Dr. Mariana Figueiro, Renssaeler; Dr. Veitch, NRC; Philips/Canlyte Canada; Dr. Tiiu Poldma, School of Industrial Design, Universite de Montreal); She continues to be an active participant in local chapter of Illuminating Engineering Society where she interacts with members from all areas of the lighting industry including design, architecture, sales etc. She drew from these contacts in organizing the lighting portion of the CREATE bootcamp which was attended by several members of the lighting industry.
- Till provided neuropsychological evaluations and cognitive rehabilitation to children, adolescents and young adults with a history of demyelination or multiple sclerosis at The Hospital for Sick Children
- Wilcox Consulting for IMAX corporation – Feb/March 2014
- Wilcox held meetings and informal consultation with Legend 3D corporation
- Schneider hosted MRI tours/demonstrations for student groups, including Biophysics Students (11/28/13), Neuroscience Association at York (11/19/13), Cognitive Science Student Association (10/17/13)
- Sergio developed a concussion baseline testing / post-concussion evaluation tool (pilot), local area youth athletes ages 9-16, playing soccer, lacrosse, ice hockey.
- Sergio developed an eye-hand coordination testing protocol for NHL Central Scouting. Used for the combine draft prospect testing (May 2013, annually).
- Sergio is a Research scientist at Southlake Regional Health Centre (1 day/week)

- May 1, 2013 - April 30, 2014. In collaboration with Ontario company Zerofootprint <http://zerofootprintsoftware.com/> and colleague Gunho Sohn from ESSE, Elder led a project titled Dynamic Carbon Activity Mapping in Urban Environments, supported by the Centre for Information Visualization and Data-Driven Design. The goal of the project is to use advanced sensing and modeling technology to better understand the carbon footprint of human activity in urban environments.
- Nov 1, 2013 – Apr 30, 2014. In collaboration with Ontario company SportRFID (now ludo) www.sportrfid.com and funded by an NSERC Engage grant, Elder led a project titled Attentive Sensing for Sports Video Applications. The goal of this project is to adapt our patented attentive sensing technology to sports videography.
- CVR installed an LCD display highlighting CVR research results to the York community (located in the Lassonde atrium, basement level).

PATENTS

- Technology Investment Agreement - the IP represented by patents #15 and 16 invested in Mocial Media Inc, Sept 30, 2013 (Tsotsos)
- Fazl-Ersi, E., Tsotsos, J.K., System And Method For Categorizing An Image, Canadian Patent Application, File No. 103/002cap, Jan. 24, 2013.(Tsotsos)
- Fazl-Ersi, E., Tsotsos, J.K., System And Method For Categorizing An Image, Provisional Patent # 61/736642, US Patent Office, Dec. 13, 2012 (Tsotsos)

MEDIA

- Ming Pao newspaper, Oct, 2013. Interviewed for expertise on brain's ability to multitask (Fallah)
- 2013.07.02 CNN mentions our lab's upcoming work with Dance for Parkinson's <http://whatsnext.blogs.cnn.com/2013/07/02/combating-disease-with-dance-a-new-approach-to-parkinsons/> (DeSouza)
- 2013.08.01 National Ballet School's pilot Dance with Parkinson's class is advertizing for first class <http://www.nbs-enb.ca/community/outreach/pd.aspx> (DeSouza)
- 2013.10.21 National Ballet School News Release http://www.nbs-enb.ca/media/Dancing%20with%20Parkinson's%20at%20NBS_Press%20Release_ENG1.pdf#zoom=100 (DeSouza)
- 2013.10.22 City News Covers Dancing with Parkinson's at the National Ballet School <http://www.citynews.ca/2013/10/22/study-with-national-ballet-school-aims-to-see-if-dance-can-help-parkinsons-patients/> (DeSouza)
- 2013.10.22 CBC News Covers Dancing with Parkinson's at the National Ballet School <http://www.cbc.ca/news/health/how-do-dance-lessons-retrain-brain-in-parkinson-s-patients-1.2158905> (DeSouza)
- 2013.10.22 CBC News Covers Dancing with Parkinson's at the National Ballet School (Video starting at 12:58) <http://www.cbc.ca/player/News/Canada/Toronto/CBC+News%3A+Toronto+at+6%3A00/ID/2413674217/> (DeSouza)
- 2013.10.22 CTV News Covers Dancing with Parkinson's at the National Ballet School <http://toronto.ctvnews.ca/video?playlistId=1.1508746#1029048> (DeSouza)
- 2013.10.22 The Huffington Post Covers Dancing with Parkinson's at the National Ballet School http://www.huffingtonpost.ca/2013/10/22/study-with-national-balle_n_4145382.html (DeSouza)
- 2013.10.22 Metro News Covers Dancing with Parkinson's at the National Ballet School (English and French) <http://metronews.ca/news/canada/831871/study-looks-at-dance-to-help-parkinsons-disease/> (DeSouza)

- 2013.10.22 The Canadian Press Covers Dancing with Parkinson's at the National Ballet School <http://ca.news.yahoo.com/video/dance-help-parkinsons-disease-193000318.html> (DeSouza)
- 2013.10.22 Winnipeg Free Press Covers Dancing with Parkinson's at the National Ballet School <http://www.winnipegfreepress.com/arts-and-life/life/health/study-with-national-ballet-school-aims-to-see-if-dance-can-help-parkinsons-patients-228846861.html> (DeSouza)
- 2013.10.23 The Windsor Star Covers Dancing with Parkinson's at the National Ballet School <http://www.windsorstar.com/health/Study+with+National+Ballet+School+aims+dance+help+Parkinsons/9068567/story.html> (DeSouza)
- 2013.10.23 The Calgary Herald Covers Dancing with Parkinson's at the National Ballet School <http://www.calgaryherald.com/health/Study+with+National+Ballet+School+aims+dance+help+Parkinsons/9068567/story.html> (DeSouza)
- 2013.10.23 Ottawa Citizen Covers Dancing with Parkinson's at the National Ballet School <http://www.montrealgazette.com/health/Study+with+National+Ballet+School+aims+dance+help+Parkinsons/9068567/story.html> (DeSouza)
- 2013.10.23 The Montreal Gazette Covers Dancing with Parkinson's at the National Ballet School <http://www.ottawacitizen.com/health/Study+with+National+Ballet+School+aims+dance+help+Parkinsons/9068567/story.html> (DeSouza)
- 2013.10.23 Kiah Welsh Humber's Radio Show (96.9 FM) Interview (DeSouza)
- 2013.10.24 The Vancouver Sun Covers Dancing with Parkinson's at the National Ballet School <http://www.vancouver.sun.com/health/study+with+national+ballet+school+aims+dance+help+parkinsons/9068567/story.html> (DeSouza)
- 2013.10.24 The Goan Voice reports on Dancing with Parkinson's at the National Ballet School media coverage <http://www.goanvoice.org.uk/printerfile.php?link=2013-10-24> (DeSouza)
- 2013.10.24 The Globe and Mail Covers Dancing with Parkinson's at the National Ballet School <http://www.theglobeandmail.com/life/health-and-fitness/health/dance-appears-to-help-parkinsons-patients-now-scientists-aim-to-find-out-why/article15041909/> (DeSouza)
- 2013.10.24 The Globe and Mail Covers Dancing with Parkinson's at the National Ballet School (video) <http://www.theglobeandmail.com/life/life-video/video-can-dance-help-parkinsons-disease/article15025810/> (DeSouza)
- 2013.11.19 Parkinson Society News Media Release [http://www.cno.parkinson.ca/atf/cf/%7B7ed31649-7286-42cc-b7d1-9743d23563f0%7D/MEDIA_CNORESEARCHEVENTNEWSRLEEASE%20FOR%202013%20\(1\)%20EDITED.PDF](http://www.cno.parkinson.ca/atf/cf/%7B7ed31649-7286-42cc-b7d1-9743d23563f0%7D/MEDIA_CNORESEARCHEVENTNEWSRLEEASE%20FOR%202013%20(1)%20EDITED.PDF) (DeSouza)
- 2013.11.27 Parkinson's Study at Centre Stage <http://www.rbnonline.ca/media/28264/> (DeSouza)
- 2014.04.07 Our lab and group dances at City Hall <http://www.citynews.ca/2014/04/09/hope-in-bloom-tulip-campaign-for-parkinsons-underway/> (DeSouza)
- CBC news Toronto interview (CBC television, CBC radio). Concussion baseline testing, interviewed by Jeff Semple, Air date Friday September 6, 2013 (Sergio)
- Excaliber September 19 2013, <http://www.excal.on.ca/scitech/york-program-helps-athletes-recover-through-video-games/> (Sergio)

INVITED RESEARCH TALKS

- Association for Psychological Science, San Francisco, USA (Steeves)
- Ebbinghaus Empire Meeting, University of Toronto (Steeves)
- Radboud University, Nijmegen, the Netherlands (Hoffman)
- Symposium at Winter Conference on Plasticity, April 2014 (Hoffman)
- Still Revisiting Visual Routines, Annual Interdisciplinary Conference, Jackson Hole WY, Jan 30 - Feb 3, 2013 (invited by Z. Pizlo and G. Sperling) (Tsotsos)

- The Rise of Applied Vision, American Association for Artificial Intelligence (AAAI) 2012, Sub-Area Spotlights Track, (invited by conference chairs) Toronto July 23, 2012.(Tsotsos)
- International Gap Junction Conference 2013, July 13-18, Charleston, SC, USA (Zoidl)
- Toronto Western Research Seminar Series, April 8, 2014 (Zoidl)

OUTREACH TALKS

- York Circle public lecture, April 23, 2014 (Hoffman)
- York University Retirees – Aging Vision Lecture (Steinbach)
- CVR Summer School lecture and lab demos, June 2013
- Invited panel member, speaker, NSF "Computations Linking Language and Cognition to Neuroscience via Computation" (Hoffman)
- Wilson was the invited speaker at the Georgian Triangle Lifetime Learning Institute in Collingwood on April 4. This was a general talk on fMRI for an educated lay audience entitled “Watching Brains Think: Brain Imaging, Face Recognition & Deception”. There were over 300 people who paid to hear the talk.
- Meeting of Canadian Vision Health Researchers at ARVO, May 2013 (85 people) (Steinbach)
- Tutorials at Major Conferences or Specialized Schools Tsotsos, J.K., A Tutorial on Visual Attention, Int. Conference on Image Analysis and Processing, Naples, Italy, September 11-13, 2013 (invited by A. Pertossino)
- Sergio was the keynote speaker at the Nurse Practitioner’s Association of Ontario annual meeting. November 8, 2013, Toronto, ON, Brilliant Idea to Brilliant Study: Bringing your research ideas to life.
- Southlake Nurse Practitioner Research Symposium, Sergio ran a workshop on abstract manuscript writing, Sept.20, 2013, Southlake regional health centre. Invited by Jane Harrison, NP.
- CIHR University delegate for York University, gave information sessions to York community, organized by VPRI and Off. Res. Services, represented York at annual CIHR meeting in Ottawa

IV. **Facilitating faculty or student research** through mentorship, development or support programs or services (*e.g., in-house workshops, grant preparation support. Include a list of all the students (graduate and undergraduate).*).

- Crawford Canadian leader and NSERC CREATE PI a new international research training group ‘The Brain in Action’ with Marburg (Germany), Giessen (Germany), York, Western, and Queens.
- Steeves provided NSERC grant writing workshop support
- Oct 21-22, 2013 CREATE graduate student field trip to Ottawa including NRC Lighting Laboratory (Dr. J. Veitch), Neptec Technologies, NRC Flight Research lab, 11 graduate students and postdoctoral fellows attended.

V. contributions to **teaching** (*e.g., delivery or creation of certificate, diploma, graduate, or continuing education programs*)

York University graduate courses directed by CVR members:

- BIOL 5148, Introduction to functional magnetic resonance imaging (Schneider)
- CSE 5323 Computer Vision (Wildes)
- CSE 5327A Introduction to Machine Learning and Pattern Recognition (Elder)
- CSE 5331 Advanced Topics in 3D Computer Graphics (Stuerzlinger)

- CSE 5442 Real-Time Systems Practice, (Allison)
- CSE 6323 Advanced Topics in Computer Vision (Wildes)
- CSE 6326 Principles of Human Perception and Performance in Human Computer Interaction, (Allison)
- CSE 6335 Topics In Virtual Reality (Stuerzlinger)
- CSE 6340 Embodied Intelligence (Tsotsos)
- Interdisciplinary Studies 5010 3.0 Creative Authoring Systems for Intelligent Agents (Allison)
- KAHS 6152/ PSYC 6277 Shaping action (Henriques)
- KAHS 6153 Brain and Behavior: Cognitive Systems (Fallah)
- KAHS 6155 Fundamentals of Neuroscience I (Fallah)
- PSYC 4360 / 6260 - Visuospatial Memory and Goal Directed Action (Crawford)
- PSYC 6228 Applications in Vision Science (Course Director, Richard Murray, team taught by CVR members)
- PSYC 6253 Fundamentals of Neuroscience II (team taught by CVR members)
- PSYC 6254 Abnormal Visual Development (Steeves)
- PSYC 6273, Computer programming for experimental psychology (Murray)
- PSYC 6710 Reading Course: Attention and audiovisual identity (Steeves)
- PSYC 6710 Reading Course: Scene processing (Steeves)
- PSYC 6710 Readings in Visual/Vestibular Interactions (Allison)

Murray developed a new graduate course: PSYC 6229, Statistical modelling for perception and cognition; to be taught for the first time in 2014-2015

Several CVR members are involved in the Neuroscience Program creation team

- Steering Committee for CAN-ACT CREATE Program (Crawford)
- Steering Committee for CREATE IRTG “Brain in Action” Program (Crawford)
- Wilkinson gave guest lecture at University of Toronto – Institute of Medical Sciences – module in “Ophthalmology and Vision Science” for U of T graduate students “Migraine and the Visual System”.

VI. other **research leadership activities** during reporting period

- Crawford National Coordinator Canadian Action and Perception Network
- Crawford Canadian Director ‘Brain in Action’ International Research Training Group
- Crawford Chaired “*Eye Hand Coordination (Chair)*” July 7-12 2013 Easton, Massachusetts. Gordon conference

EDITORIAL BOARDS

- Allison, ACM Computers and Entertainment (Ass Ed)
- Elder, ACM Transactions on Applied Perception
- Elder, Journal of Vision
- Harris. Multisensory Research (Editor in Chief)
- Steinbach Snell Scientific Updates in Ophthalmology (Editor)
- Steinbach. Canadian Journal of Ophthalmology (Contributing Editor)
- Steinbach: Binocular Vision and Strabismus Quarterly (Editor)
- Tsotsos. Computational Imaging and Vision, Springer
- Tsotsos. Computer Vision and Image Processing (Area Editor),

- Tsotsos. Image and Vision Computing (Advisory Board),
- Zoidl. Associate Editor: Frontiers in Physiology
- Zoidl. Senior Editor: International Journal of Biochemistry and Molecular Biology

RESEARCH COMMITTEES AND BOARDS

- Allison, Assessor for the Australian Research Council
- Allison, MITACS college of reviewers
- Harris. NASA review panel (Washington)
- Steinbach Member, Research Council, Toronto Western Hospital Research Institute
- Steinbach Board Member, 20/20 NSERC Ophthalmic Materials Network
- Steinbach Board Member, Ontario Research Fund Retinal Blood Flow and Imaging Network
- Steinbach Chair, Search Committee, D.K. Johnson Chair in Retinal Research, University Health Network, Toronto Western Research Institute
- Steinbach Director, Vision Science Research Fellowships, a \$17.25 Million Endowment joint University of Toronto-University Health Network Program
- Steinbach Executive Committee, Department of Ophthalmology and Vision Sciences, University of Toronto
- Steinbach Executive Member, National Coalition for Vision Health
- Steinbach member of the Advisory Council, University of Toronto Neuroscience Program
- Steinbach member Research Committee, Kensington Eye Institute, Toronto
- Steinbach Member, Canadian Public Health Task Force for Vision and Ophthalmology
- Steinbach Member, Ontario Stem Cell Initiative
- Steinbach of the Board: Smith Kettlewell Eye Research Institute, San Francisco
- Steinbach President, Vision Health Research Council of Canada
- Steinbach Research Committee, CNIB/Baker Foundation for the Prevention of Blindness
- Stuerzlinger: board of directors of GRAND Network Centres of Excellence
- Tsotsos Member, Hellenic Quality Assurance Agency for Higher Ed. Greece
- Tsotsos. Evaluation Committee 7th EU Framework Programme for research and technology development (FP7) – Information and Communication Technologies (Cognitive Systems and Robotics)
- Tsotsos. National Science Foundation, USA, College of Reviewers
- Zoidl. CIHR - Cell Biology and Mechanisms of Disease (CBM) Peer Review Committee
- Zoidl. Early Research Award Committee – Life Sciences Non Clinical Proposals
- Zoidl. FWF – Austrian Science Fund
- Zoidl. NSERC 1502 – Biological Systems and Functions

VII. Research grants and contracts active during the reporting period.

- A list of all the grants and contracts obtained by CVR members is provided as appendix 3 below. The total amount of grants brought to York University by CVR members during the reporting period is \$6,127,919 from individual and CVR-led group grants, including \$2,038,116 (NSERC) and \$675,485 (CIHR); in addition CVR members have facilitated \$7,796,978 in non-CVR-led group grants.

7. Financial Accountability
(reported separately)

8. Objectives for Upcoming Year

a. **funding proposals anticipated** for submission by April 30, 2015

CFI

- “3Space”, \$4.5million (Allison, Stuerzlinger)

CFL Players Association

- contract, \$15k, submitted (Fallah)

CIHR

- Crawford \$217,747/yr
- De Souza \$50k/2yrs

CRC

- Crawford is applying for renewal of his CRC (Sept 2013) chair valued at \$200,000.00/yr

ElMindA, Inc,

- contract, continued use of equipment and free test analyses, to be extended September 2014 (Fallah)

GOOGLE

- Faculty research award \$50k (Murray)

GRAND NCE

- renewal, \$30million (Allison)

HEART AND STROKE FOUNDATION

- Steeves
- Harris in association with Toronto Rehab (Campos, Mansfield)

KILLAM

- Crawford

MICHAEL J FOX FOUNDATION

- De Souza \$100k/3yrs

MINISTRY OF TRANSPORTATION

- Ontario Infrastructure Innovation Funding Program, Automatic 3D Traffic Analysis from COMPASS Highway Camera Data (\$50,625 over 1 year) – Application under review (Elder)

MITACS

- Mitacs Globalink Research Intern, value \$10k to the student, Attentional Mechanisms, starts June 2014 (Fallah)

MS SOCIETY OF CANADA

- Till will be applying for an Operating Grant (fall 2014)

NSERC

- Strategic NSERC grant around next generation user interfaces, \$5 million (Stuerzlinger)
- Engage Industry/Academic partnership: Sergio \$50k/yr
- CREATE Program in Data Analytics & Visualization. Letter of Intent submitted May 1, 2014. (\$1,650,000 over 6 years, PI Elder)

- Discover grants: CVR members are all eligible for NSERC funding. Those whose grants finish this year will be applying for renewal
 - Adler (\$50k)
 - Allison
 - De Souza (\$25k)
 - Fallah (\$50k/yr)
 - Harris (\$50k/yr)
 - Murray (RTI) \$30k
 - Schneider (\$150k over 4 yrs)
 - Wilkinson

NIH National Institutes of Health (USA)

- Wildes \$2.5M over 5 years
- Adler (RO1) \$500,000 over 5 years

ORF

- ORF/RE Project Intelligent Systems for Sustainable Urban Mobility. Notice of Intent submitted Feb 8, 2014. (PI Elder: \$12,000,000 over 5 years)

ONTARIO CENTRES OF EXCELLENCE

- De Souza

SSHRC

- De Souza \$75k/2yrs

b. **conferences, workshops, exhibits** or other events to be hosted or organized by you by April 30, 2015, and target audience

- CVR biennial international conference June 2015. Expecting 100-200 delegates about half of whom are likely to be from outside Canada.
- CAPnet/CAN satellite
- IRTG meeting in Bavaria
- Fall workshop with CREATE non-academic partners (for partners and students)
- ACM Symposium on Spatial User Interaction 2014, Stuerzlinger program chair.
- Proposing symposium at annual Neural Control of Movement meeting, Cognitive-motor integration, April 2015 (Sergio)
- Symposium at International Multisensory Research Forum (Harris), June 2014

c. **knowledge mobilization/engagement/outreach/technology transfer activities** planned

- Arrange non-academic internships for students in CREATE-IRG program
- Sergio will complete project with BrainFX, start (if funded) project with PhD Associates (NSERC Engage application, following up on Engage grant of Rob Allison.)
- Elder is planning a joint demonstration with Brican Flight Systems <http://bricanflightsystems.com/> at the OCE Discovery meeting May 12, 2014. The demonstration will showcase our attentive sensing technology mounted in our of their UAVs.
- Elder is also working with the Ministry of Transportation Ontario to deliver several versions of his attentive sensor technology for evaluation on several of their highway applications.

d. **visitors** invited or anticipated

- The Ian Howard series will be hosting Dr Glyn Humphrey (Oxford University) as distinguished lecturer (Sept 2014).
- Dr. Philip Grove, Summer 2014 (Ono)
- We expect a number of faculty and student visitors from Universities at Marburg and Giessen universities related to NSERC IRTG
- Prof. Bremmer will be visiting for 3 weeks (July-August)
- Debbie Giaschi (UBC) July 2014 (Wilcox)
- The CVR will be hosting the Canadian Science Writers Association in June 2014. We anticipate about 100 visitors as part of their Annual Meeting.
- The CVR will be running its biennial International conference in June 2015. Visitors have yet to be invited.
- Post-doctoral fellow, 2014-2016, Marc Dalecki (Germany)

e. **knowledge mobilization** planned

- Murray plans to develop a research collaboration with Autodesk Research, Inc. on machine interpretation of line drawings.
- Murray plans to develop a research collaboration with Philips on a light measuring device.

9. **Other relevant items the Director wishes to report**

The CVR mourned the passing of its founding member, Ian Howard, who died on 1 June 2013.

The CVR has maintained its extremely successful granting history during the reporting period bringing in a total of over six million dollars this year (see appendix) and facilitating non-CVR led group grants totaling nearly eight million dollars. Many large initiatives are actively being planned for next year (see section 8a). CVR is operating an internal mentoring system and is actively encouraging members to take advantage of our extensive collective experience and other advice systems, especially as pertains to CIHR, available at York.

The CVR is pleased to announce the election of its 31st member: Georg Zoidl, CRC Chair in Molecular Neuroscience.

The CVR is critically aware that it is not a hiring unit. However, as an important part of the fabric of York, we are anxious to cover our mandate as comprehensively as possible and are well aware that several of our more senior members may be retiring from the unit in the near future. I have contacted the chairs of the stakeholder departments to express CVR's willingness to be involved in future hires.

APPENDIX 1

List of all visitors hosted by CVR. May 1, 2013 - April 30, 2014:

Visitor	Affiliation	Country	Status	Duration of visit	Space provided?
Barnd Hengstebeck	Philipps-University	Germany	faculty	Till June2014	Crawford lab
John Richards,	University of California at Davis	USA	faculty	1 week	Steeves lab
Lili Shen	unknown	China	Visiting fellow	unknown	Allison lab
Kazutake Uehira	Kanagawa Institute of Technology	Japan	Faculty	March 2013	Allison lab
Stephen Palmisano	University of Wollongong	Australia	Faculty	3 months	Allison lab
Michael Langer	McGill	Canada	Faculty	6 months	Allison lab
Naseem Al-Aidroos	U Guelph	Canada	Faculty	speaker at NGDP	Hoffman hosted
Mieke Verfaellie	Boston U	USA	Faculty	Speaker at NGDP	Hoffman hosted
Mallar Chakravarty	CAMH	Canada	Faculty	Speaker at NGDP	Hoffman hosted
Peter Calen	U of T	Canada	Faculty	Speaker at NGDP	Hoffman hosted
Kaori Takehara-Nishiuchi	U of T	Canada	Faculty	Speaker at NGDP	Hoffman hosted
Chris Honey	Princeton Univ	USA	Faculty	Speaker at NGDP	Hoffman hosted
Simon Rushton	Cardiff Univ	UK	Faculty	1 wk	Harris lab
N. Frosst	U Toronto	Canada	Visiting student	1 month	Tsotsos
E. Fassbender	Bonn-Rhein-Sieg	Germany	Visiting student	4 months	Tsotsos
Kenzo Sakurai	Tohoku Gakuin University,	Japan	Faculty	1 month (July)	Ono
Makoto Ichikawa	Chiba University	Japan	Faculty	1 month (July)	Ono
Philip Grove	University of Queensland	Australia	Faculty	1 month (August)	Ono
Denis Pelli	NYU	USA	Faculty	3 days	Wilcox
Frank Tong	Vanderbilt	USA	Faculty	1 day	Wilson
Doug Bowman	Virginia Tech	USA	Faculty	1 day	Stuerzlinger
Andrea Gomez Palacio	Lethbridge	Canada	Faculty	1 day	Womelsdorf

Nathaniel Twarog	MIT	USA	Post doc	1 day	Murray
Hans van deer Steen	Erasmus	Netherlands	Faculty	1 day	Henriques
John Wilder	Rutgers	USA	Post doc	1 day	Murray
Naseem Al-Aidroos	Guelph	Canada	Faculty	1 day	Wilson
Pat Bennett	MacMaster	Canada	Faculty	1 day	Harris
Mieke Verfaellie	Boston University	USA	Faculty	1 day	Steeves
Mohan Matthen	U of T	Canada	Faculty	1 day	Harris
Michael Langer	McGill	Canada	Faculty	1 day	Elder
Jonathan Cant	U of T	Canada	Faculty	1 day	Steeves
Richard Zemel	U of T	Canada	Faculty	1 day	Elder
Philippe Chouinard	Western	Canada	Faculty	1 day	Harris
Markus Brubaker	U of T	Canada	Faculty	1 day	Wildes
Sylvain Moreno	Baycrest	Canada	Faculty	1 day	Henriques
Liana Brown	Trent	Canada	Faculty	1 day	Henriques
Andy Lee	U of T	Canada	Faculty	1 day	Henriques
Lucilla Cardinalli	Western	Canada	Faculty	1 day	Henriques
Sue Becker	MacMaster	Canada	Faculty	1 day	Henriques
Chris Honey	U of T	Canada	Faculty	1 day	Steeves
Colin Blakemore	U London	UK	Faculty	1 wk	Harris
Anitha Pasupathy	U Washington	USA	Faculty	1 wk	Wilson
Gunter Loffler	Glasgow Caledonian	UK	Faculty	1 wk	Wilson
Vince Ferrera	Columbia	USA	Faculty	1 wk	Wilson
Randolph Blake	Vanderbilt	USA	Faculty	1 wk	Wilson
Julie Harris	St Andrews	UK	Faculty	1 wk	Wilson/Wilcox
David Zee	Johns Hopkins	USA	Faculty	1 wk	Steinbach
Harold Bedell	U Houston	USA	Faculty	1 wk	Steinbach
Rich Krauzlis	NIH	USA	Faculty	1 wk	Steinbach
Mary Lou Jackson	Harvard	USA	Faculty	1 wk	Steinbach
Gordon Legge	Minnesota	USA	Faculty	1 wk	Steinbach
Maarten Kamermans	Royal Netherlands Academy of Arts and Sciences	Netherlands	Faculty	1 day	Zoidl

APPENDIX 2

<h1 style="margin: 0;">CVR members (BEST FIVE THINGS)</h1> <p style="margin: 0;"><i>(entries not including items above)</i></p>	
Rob Allison	<ul style="list-style-type: none"> • 3D Flic project (OMDC Grant) • 2nd Toronto International Stereoscopic 3D Conference • CU-I2I with Sheridan Christie • JSPS Fellowship • Tomkins, L., Benzeroual, T., Milner, A., Zacher, J. E., Ballagh, M., McAlpine, R., Doig, T., Jennings, S., Craig, G., & Allison, R. S. International Journal of Wildland Fire
Chris Bergevin	<ul style="list-style-type: none"> • Successful research collaboration with Carl von Ossietzky University of Oldenburg studying auditory biomechanics of barn owl (should result in 2 journal articles) • Successful research collaboration with the University of California (Los Angeles) studying auditory biomechanics of bullfrog (should result in 1-2 journal articles) • Developing novel collaboration with Western University to study peripheral mechanisms associated with absolute pitch • Further development of collaboration with University of Nottingham studying auditory biomechanics and psychoacoustics in ferrets (should result in 1 journal articles) • Affiliated with graduate programs in Psychology and Biology at York University (should help foster interdepartmental collaborations/ties)
Doug Crawford	<ul style="list-style-type: none"> • Promoted to 'Distinguished Research Professor in Neuroscience' July 1 2013. • CIHR Grant funded • CREATE / IRTG grant funded • Initiated Brain in Action Program
Joseph DeSouza	<ul style="list-style-type: none"> • Our lab is began with the Canada's National Ballet School a Dance for Parkinson's program starting Sept 2013 See http://www.nbs-enb.ca/media/pdfCommunityOutreachPD_info.pdf - zoom=100 Or http://www.nbs-enb.ca/community/outreach/pd.aspx • 2013-14 Parkinson's Society of Canada (PI) \$44,999 grant • 2013.10.22 CTV News Covers Dancing with Parkinson's at the National Ballet School http://toronto.ctvnews.ca/video?playlistId=1.1508746-1029048 • DeSouza JFX, Bar RJ & Tehrani H (2013) Brain networks involved in dance: a model mechanism for examining plasticity during dance therapy. World Parkinson Congress. Journal of Parkinson's Disease, Vol. 3, Supplement 1, 2013 • 2013-14 NSERC ENGAGE program (PI) EGP #451681-13 \$25,000 (Video Tracking of body angle behaviour correlated with multi-channel wireless muscle function imaging system (Myoguide MAP))
James Elder	<ul style="list-style-type: none"> • Adams, W.J. & Elder, J.H. (2014). Effects of specular highlights on perceived surface curvature. PLOS Computational Biology, In Press (Accepted for Publication March 2014). • Elder, J.H., Oleskiw, T.D., Yakubovich, A. & Peyré, G. (2013). On growth and formlets: Sparse multi-scale coding of planar shape. Image and Vision Computing vol. 31, 1-13. (Editor's Choice Paper) • Elder, J.H. (2013). Bridging the dimensional gap: Perceptual organization of

	<p>contour into two-dimensional shape. In J. Wagemans, ed., Oxford Handbook of Perceptual Organization, Oxford University Press, Oxford UK. In press.</p> <ul style="list-style-type: none"> • Running the Visual Applications CREATE program • Organizing Autodesk Research, Toronto
Mazyar Fallah	<ul style="list-style-type: none"> • ElMindA contract • Advancement fund for concussion research • Publication: Perry, Tahiri & Fallah • Funding proposal for NFL-GE Head Health Challenge 2
Laurence Harris	<ul style="list-style-type: none"> • Received President's Excellence in Research Award • Implementing CFI funded infrastructure • Supervised 5 grad students • Published 6 articles • Advanced the journal Multisensory Research to serve the multisensory community.
Denise Henriques	<ul style="list-style-type: none"> • NSERC Operating grant renewed • NSERC CREATE (where I'm an Assoc Director), and responsible for the educational program and contact person between Canadian and German PI's • 7 published articles including: Thompson, A.A., Bryne, P.A., Henriques, D.Y.P. Visual targets aren't irreversibly converted to motor coordinates: eye-centered updating of visuospatial memory in online reach control. PLoS One, 18, e92455, 2014. • Supervising 4 Master students, 2 PhD students and a postdoctoral fellow
Kari Hoffman	<ul style="list-style-type: none"> • Publication that included comparative electrophysiology in non-human primates and epilepsy patients, which I believe is 1st of its kind. • New translational aspect of research, the basic-research component of which was funded by 3 groups: the Alzheimer's Association (US) the Alzheimer's Society (CAN) and the Krembil Foundation. • My talk at York Circle was sold-out and got a good reception. This lecture series promotes science research at York. • NSERC renewed.
Richard Hornsey	<ul style="list-style-type: none"> • NSERC DG of \$22k/year • Started a new faculty at York University
Michael Jenkin	<ul style="list-style-type: none"> • NSERC Strategic Network in Field Robotics (NCFRN) launched • Supervised 5 graduate students • NCFRN field trials held at York University summer 2013
Richard Murray	<ul style="list-style-type: none"> • book chapter: Murray, R. F. (2013). The statistics of shape, reflectance, and lighting in real-world scenes. In S. Dickinson and Z. Pizlo (Eds.), Shape perception in human and computer vision: an interdisciplinary perspective, pp. 225-235. New York: Springer. • co-organized York CVR Vision Science Summer School, June 2013 • new graduate course added to curriculum: PSYC 6229, Statistical modelling for perception and cognition; to be taught for the first time in 2014-2015 • taught a new course, PSYC 6228, Applications in vision science • 5. supervised one postdoc, one Ph.D. minor paper student, and eight undergraduate students
Hiroshi Ono	<ul style="list-style-type: none"> • Ono, H., Lillakas, L., Kapoor, A., & Wong, I. (2013). Replicating and extending Bourdon's (1902) experiment on motion parallax. Perception, 42, 45-59. • Grove, P., M., Finlayson, N. J. & Ono, H. (2014). The effect of stimulus size on

	<p>stereoscopic fusion limits and response criteria, <i>Perception</i>, 43, pages 155–177.</p> <ul style="list-style-type: none"> • Ono, H. González, E G., & Lillakas, L. (2014). Psychophysical point: A disc tends to become a point when Weber’s law fails. <i>Attention, Perception, & Psychophysics</i>. 76, 894–901. • Ono, H. Chornenkyy, Y., & D’Amour, S. (2013). Simple 3-D stimulus for motion parallax and its simulation. <i>Perception</i>, 42, 577–579. • van Tonder, G., Zavagno, D., Sakurai, K., Ono, H. (2013). Seeing further than your nose. <i>Perception</i>, 42, 481–487.
Keith Schneider	<ul style="list-style-type: none"> • Supervised 3 Masters and 4 PhD students. • NSERC Discovery Grant (\$33,750/year), “Structural and functional imaging of the human thalamus” • McKetton L, Kelly KR, Schneider KA. In press. Abnormal lateral geniculate nucleus and optic chiasm in human albinism. <i>Journal of Comparative Neurology</i>.
Lauren Sergio	<ul style="list-style-type: none"> • Operating Grant - principal investigator (Alison Macpherson – Co-investigator), April 2013 - March 2018 \$472,549 Canadian Institutes of Health Research, Title: “Assessing functional ability following mild brain insult using cognitive-motor integration” • Granek JA, Pisella L, Vighetto A, Stemburger J, Rossetti Y, Sergio LE. (2013) Decoupled visually-guided reaching in optic ataxia: differences in motor control between canonical and non-canonical orientations in space. <i>PLoS ONE</i> 8(12): e86138.. • Sayegh P, Hawkins KL, Hoffman KL, Sergio LE (2013) Differences in spectral profiles between rostral and caudal premotor cortex when hand-eye actions are decoupled. <i>J. Neurophysiol.</i> Aug:110(2):952-963. • Hawkins KM, Sayegh P, Yan X, Crawford JD, Sergio LE (2013) Neural activity in superior parietal cortex during rule-based visual-motor transformations. <i>J.Cogn.Neurosci.</i> Mar;25(3):436-54. • Community Outreach: Numerous local youth hockey, lacrosse, soccer associations (380 athletes tested to date), concussion education provided
Wolfgang Stuerzlinger	<ul style="list-style-type: none"> • I gave three invited keynotes, at the Touch Gesture Motion conference at SID Display Week 2013, at i-Society 2013, and at MHCI 2013. • Our paper Pseudo-Pressure Detection and Its Use in Predictive Text Entry on Touchscreens got a best paper award at OzCHI 2013. • I am a founder and the first program chair for the ACM Symposium on Spatial User Interaction 2013. SUI 2013 took place at ICT in Los Angeles, just before SIGGRAPH 2013. • C. Zeidler, C. Lutteroth, W. Stuerzlinger, G. Weber, <i>The Auckland Layout Editor: An Improved GUI Layout Specification Process</i>, UIST 2013, ISBN 978-145032268-3, 343-352, Oct. 2013. • I have been chosen as one of the 50 principal network investigators for the renewal application for the GRAND NCE.
Christine Till	<ul style="list-style-type: none"> • Continued MRI scanning of neurologic patients at the York University Neuroimaging Laboratory and development of new research collaborations related to my lab’s neuroimaging work • Supervised three PhD students and one MA student • Publishing three journal articles in the year 2013
Laurie Wilcox	<ul style="list-style-type: none"> • Lugtigheid AJ, Wilcox LM, Allison RS and Howard IP (2014) Vergence eye movements are not required for stereoscopic depth. <i>Proceedings of the Royal Society B</i>, v281, no 1776.

	<ul style="list-style-type: none"> • Our successful (PI-Allison) College University I2I NSERC grant – a real collaboration between University, College (SIRT) and Industry (Christie Digital) • The 2nd Toronto International S3D conference (Sept 2013) head at the TIFF Bell Lightbox, was a very successful event and provided a unique venue for communication between academics, industry partners and artists. • The Partnerships Workshop grant obtained from NSERC supported a very effective meeting on Quality in S3D, and brought together many industry leaders and academics.
Richard Wildes	<ul style="list-style-type: none"> • K. J. Cannons and R. P. Wildes, The applicability of spatiotemporal oriented energy features to region tracking, IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI), 36 (4), 784-796, 2014. • C. Feichtenhofer, A. Pinz and R. P. Wildes, Spacetime forests with complementary features for dynamic scene recognition. In Proceedings of the British Machine Vision Conference (BMVC), 2013. • H. Zhong and R. P. Wildes, Egomotion estimation using binocular spatiotemporal oriented energy. In Proceedings of the British Machine Vision Conference (BMVC), 2013. • Technology Transfer Project: Background Image Modeling for Video Analytics and Surveillance; Industry partner: Aimetis Corporation, Waterloo, ON • Technology Transfer Project: Stereo Imaging for Image-Guided Liver Surgery; Partners: Memorial Sloan Kettering Cancer Center, NY, NY & MDA Corporation, Brampton, ON
Frances Wilkinson	<ul style="list-style-type: none"> • Contributions to CREATE Bootcamp (July 2013) where I hosted sessions on Lighting and Vision • Wilson, H.R., & Wilkinson, F. (2013). Configural pooling in the ventral visual pathway. In 2nd edition of The New Visual Neurosciences. J.S. Werner & L.M. Chalupa (Eds). MIT Press: Cambridge, MA, Pp. 617–626. • Gorbet, D., Wilkinson, F., & Wilson, H.R. (2014). Neural correlates of radial frequency trajectory perception in the human brain. Journal of Vision, 14(1): 11; doi 10.1167/14.1.11 • Thabet, M., Wilkinson, F., Wilson, H.R., & Karanovic, O. (2013). The locus of flicker adaptation in the migraine visual system: A dichoptic study. Cephalalgia, 33(1), 5–19; • Gao, X., Wilkinson, F., & Wilson, H.R. Implicit learning of geometric eigenfaces: evidence for the formation of face space dimensions. Vision Science Society, Naples FL. May 2012. Journal of Vision, 2012;12(9): 974;
Hugh Wilson	<ul style="list-style-type: none"> • Organizing one day of the CVR International Vision Conference • Gao, X. & Wilson, H. R. (2014) Implicit learning of geometric eigenfaces. Vision Res. In press • Wilson, H. R. & Wilkinson, F. (2013) Configural pooling in the ventral pathway. In The New Visual Sciences, ed. by J. Werner & L. Chalupa, MIT Press, Cambridge, MA. • Vida, M. D., Wilson, H. R. & Maurer, D. (2014) Bandwidths for the perception of head orientation decrease during childhood. Vision Res. In press. • Invited speaker at the Georgian Triangle Lifetime Learning Institute (outreach).
Georg Zoidl	<ul style="list-style-type: none"> • Organized Research Topic on “Gap Junctions in Health and Disease,” with a total of 12 contributions • Co-Organized Z-BRAIN: A Zebrafish Drug Screening Platform Targeting Brain Disorders Brain Canada, Technology and Platform Application

	<ul style="list-style-type: none">• Invited to CIHR - Cell Biology and Mechanisms of Disease (CBM) and NSERC 1502 – Biological Systems and Functions Peer Review Committees• Affiliation with Toronto Western Research Hospital• Invited Speaker at International Gap Junction Conference 2013, July 13-18, Charleston, SC, USA
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Appendix 3 – Individual Member Contributions

List of publications, HQP and grants

Active members (PUBLICATIONS)	
<i>(note: collaborative papers may appear multiple times)</i>	
Scott Adler	<ul style="list-style-type: none"> Adler, S. A. & Gallego, P. (2014). Search asymmetry and eye movements in infants and adults. <i>Attention, Perception, & Psychophysics</i>. doi:10.3758/s13414-014-0667-6
Rob Allison	<ul style="list-style-type: none"> Tomkins, L., Benzeroual, T., Milner, A., Zacher, J. E., Ballagh, M., McAlpine, R., Doig, T., Jennings, S., Craig, G., & Allison, R. S. (in press (accepted Mar 7, 2014)). Use of Night-Vision Devices for Aerial Forest Fire Detection. <i>International Journal of Wildland Fire</i>. Howard, I. P., Fujii, Y., & Allison, R. S. (2014). Interactions between cues to visual motion in depth. <i>Journal of Vision</i>, 14(2), Article 14: 1–16. doi:10.1167/14.2.14 Howard, I. P., Fujii, Y., Allison, R. S., & Kirolos, R. (2014). Shape constancy measured by a canonical-shape method. <i>Vision Research</i>, 94, 33–40. doi:10.1016/j.visres.2013.10.021 Lutigheid, A. J., Wilcox, L. M., Allison, R. S., & Howard, I. P. (2014). Vergence eye movements are not required for stereoscopic depth perception. <i>Proceedings of the Royal Society B</i>, 281(1776), 20132118.1–20132118.7. doi:10.1098/rspb.2013.2118 Stransky, D., Wilcox, L. M., & Allison, R. S. (2014). Effects of long-term exposure on sensitivity and comfort with stereoscopic displays. <i>ACM Transactions on Applied Perception</i>, 11(1), Article 2, 1–14. doi:10.1145/2536810 Allison, R. S., Macuda, T., & Jennings, S. (2013). Detection and Discrimination of Motion-Defined Form in the Presence of Additive Noise: Implications for Motion Processing and Use of Night Vision Devices. <i>IEEE Transactions on Human Machine Systems</i>, 43(6), 558–569. doi:10.1109/THMS.2013.2284911 Allison, R. S., Wilcox, L. M., & Kazimi, A. (2013). Perceptual artefacts, suspension of disbelief and realism in stereoscopic 3D film. <i>Public</i>, 47 (Parallax: Stereoscopic 3D), 149–160. doi:10.1386/public.24.47.149_1 Ash, A., Palmisano, S., Apthorp, D., & Allison, R. S. (2013). Vection In Depth During Treadmill Walking. <i>Perception</i>, 42, 562 –576. doi:10.1068/p7449 Chen, J., & Allison, R. S. (2013). Shape Perception of Thin Transparent Objects with Stereoscopic Viewing. <i>ACM Transactions on Applied Perception (TAP)</i>, 10(3, Article 15), 1–15. doi:10.1145/2506206.2506208 Howard, I. P., Fukuda, K., & Allison, R. S. (2013). The dichoptiscope: An instrument for investigating cues to motion in depth. <i>Journal of Vision</i>, 13(14: Article 1), 1–11. doi:10.1167/13.14.1 Rushton, S., & Allison, R. (2013). Biologically-inspired heuristics for human-like walking trajectories toward targets and around obstacles. <i>Displays</i>, 34(2), 105–113. doi:10.1016/j.displa.2012.10.006 Vinnikov, M., & Allison, R. S. (2014). Gaze-Contingent Depth of Field in Realistic Scenes: The User Experience. In <i>ACM Eye Tracking Research and</i>

	<p><i>Applications 2014</i> (pp. 119–126). doi:10.1145/2578153.2578170</p> <ul style="list-style-type: none"> • Benzeroual, K., & Allison, R. S. (2013). Cyber (Motion) Sickness In Active Stereoscopic 3d Gaming. In <i>IEEE International Conference on 3D Imaging (IC3D)</i> (pp. 1–7). IEEE. doi:10.1109/IC3D.2013.6732090 • Chen, J., Benzeroual, K., & Allison, R. S. (2013). Robust Homography for Real-time Image Un-distortion. In <i>IEEE International Conference on 3D Imaging (IC3D)</i>. (Pp. 1–8). IEEE. doi:10.1109/IC3D.2013.6732075 • Allison, R. S. (2013). [Invited Talk] The perceptual consequences of vergence eye movements: A brief review. In <i>Proceedings of the IEICE-HIP technical committee conference, Technical Report of IEICE</i>. HIP2013-55: 29-34, Kyoto, Japan, Sept 12-13, 2013. • Deas, L., Wilcox, L. M., Kazimi, A., & Allison, R. S. (2013). Audio-Visual Integration in Stereoscopic 3D. In <i>Proceedings of the ACM Symposium on Applied Perception</i>, Dublin, Ireland (pp. 83–89). • Vinnikov, M., & Allison, R. S. (2013). Gaze-Contingent Simulations of Visual Defects in Virtual Environment: Challenges and Limitations. In <i>ACM CHI 2013 Workshop "Gaze Interaction in the Post-WIMP World</i> (pp. VA13 1–4). Paris, France.
Chris Bergevin	<ul style="list-style-type: none"> • Bergevin C & Olson E External and middle ear sound pressure distribution and acoustic coupling to the tympanic membrane. <i>J. Acoust. Soc. Am.</i> (2014)135:1294–1312
Doug Crawford	<ul style="list-style-type: none"> • Sayegh, P., Hawkins, K., Neagu, B., Crawford, J. D, Hoffman, K., & Sergio, L.E (2013). Decoupling the actions of the eyes from the hand alters beta and gamma synchrony within SPL. <i>Journal of Neurophysiology</i> [Epub ahead of print] • Alikhanian, H., Crawford, J.D., DeSouza, J. F. X., Cheyne, D. O., Blohm, G. (2013) Adaptive cluster analysis approach for functional localization using magnetoencephalography. <i>Frontiers in Brain Imaging Methods</i>. 2013 May 14;7:73. • Le, A., Vesia, M., Yan, X., Niemeier, M., & Crawford, J. D. (2013). The Right Anterior Intraparietal Sulcus is Critical for Bimanual Grasping: A TMS study. <i>Cerebral Cortex</i> [Epub ahead of pub] • Monteon, J.A., Wang, H., Martinez-Trujillo, J., & Crawford, J. D. (2013). Frames of reference for eye-head gaze shifts evoked during frontal eye field stimulation. <i>Eur J Neurosci</i>. 2013 Jun;37(11):1754-65.
Joseph DeSouza	<ul style="list-style-type: none"> • Todorow M, DeSouza JFX, Banwell B & Till C. (2014). Interhemispheric Cooperation in Global-Local Visual Processing in Pediatric Multiple Sclerosis. <i>Journal of Clinical and Experimental Neuropsychology</i>, doi: 10.1080/13803395.2013.867013 • Alikhanian H, Crawford JD, DeSouza JFX, Cheyne DO & Blohm G. (2013) Machine learning approach for localizing active brain areas using magnetoencephalography. <i>Frontiers in Neuroscience</i>, 7, 13. doi: 10.3389/fnins.2013.00073
James Elder	<ul style="list-style-type: none"> • Adams, W.J. & Elder, J.H. (2014). Effects of specular highlights on perceived surface curvature. <i>PLOS Computational Biology</i>, In Press (Accepted for Publication March 2014). • T. McLeod, C. Samson, M. Labrie, K. Shehata, J. Mah, P. Lai, L. Wang, and J.H. Elder. (2013) Using video data acquired from an unmanned aerial vehicle to measure fracture orientation in an open pit mine. <i>Geomatica</i> vol. 67, No. 3, 2013. • Elder, J.H., Oleskiw, T.D., Yakubovich, A. & Peyré, G. (2013). On growth and formlets: Sparse multi-scale coding of planar shape. <i>Image and Vision Computing</i> vol. 31, 1-13. (Editor's Choice Paper)

	<ul style="list-style-type: none"> • Elder, J.H. (2013). Bridging the dimensional gap: Perceptual organization of contour into two-dimensional shape. In J. Wagemans, ed., Oxford Handbook of Perceptual Organization, Oxford University Press, Oxford UK. In press. • Elder, J.H. (2013). Perceptual organization of shape. In S. Dickinson & Z. Pizlo, ed., Shape Perception in Human and Computer Vision: An Interdisciplinary Perspective, Springer. • Yakubovich, A. & Elder, J.H. (2014) Building better formlet codes for planar shape, Proceedings of the Conference on Computer and Robot Vision, In Press. • Movahedi, V. & Elder, J.H. (2013) Combining local and global cues for closed contour extraction, Proceedings of the British Machine Vision Conference, BMVA Press.
Mazyar Fallah	<ul style="list-style-type: none"> • Perry CJ, Tahiri A, Fallah M (2013) Feature integration within and across visual streams occurs at different visual processing stages. Journal of Vision (2014) 14(2):10, 1–8
Laurence Harris	<ul style="list-style-type: none"> • Barnett-Cowan M, Jenkin HL, Jenkin MR, Harris LR. (2013) Asymmetrical representation of body orientation Journal of Vision 13(2): 3 http://www.journalofvision.org/content/13/2/3 • Harrar V, Pritchett LM, Harris LR. (2013) Segmented space: Measuring tactile localisation in body coordinates. Multisensory Research 26 (1-2): 3-18 • Harris LR, Jenkin M. The effect of blur on the perception of up Optometry and Visual Science 91(1) 103-110 • Preuss N, Harris LR, Mast FW Allocentric visual cues influence spatial embodiment J Vis 2013;13 14 http://www.journalofvision.org/cgi/content/abstract/13/12/14 • D'Amour SAO, Harris LR (2014) Contralateral tactile masking between the forearms Experimental Brain Research 323: 821-826 • D'Amour SAO, Harris LR Vibrotactile masking through the body Experimental Brain Research (in press)
Denise Henriques	<ul style="list-style-type: none"> • Thompson, A.A., Bryne, P.A., Henriques, D.Y.P. Visual targets aren't irreversibly converted to motor coordinates: eye-centered updating of visuospatial memory in online reach control. PLoS One, 18, e92455, 2014. • Clayton, H.A., Cressman, E.K., Henriques, D.Y.P. The effect of visuomotor adaptation on proprioceptive localization: the contributions of perceptual and motor changes. [Epub], 2014. • Mostafa, A.A., Salomonczyk, D., Cressman, E.K., Henriques, D.Y.P. Intermanual transfer and proprioceptive recalibration following training with translated visual feedback of the hand. Exp Brain Res, [Epub], 2014. • Lee, D., Poizner, H., Corcos, D.M., Henriques D.Y.P. Unconstrained reaching modulates eye-hand coupling. Exp Brain Res, 232, 211-23, 2014. • Clayton, H.A., Cressman, E.K., Henriques, D.Y.P. Proprioceptive sensitivity in Ehlers-Danlos syndrome patients, Exp Brain Res, 230, 311-321, 2013. • Schütz, I., Henriques, D.Y.P., Fiehler, K. Gaze-centered spatial updating in delayed reaching even in the presence of landmarks, Vision Res, 87, 46-52, 2013. • Salomonczyk, D., Cressman, E.K., Henriques, D.Y.P. The role of the cross-sensory error signal in visuomotor adaptation, Exp Brain Res, 228, 313-325, 2013. • Martin, B.C., Dehghan, K., Henriques, D.Y.P. Bias and sensitivity of proprioception of a passively felt hand path with and without a secondary task, Exp Brain Res, 228, 385-396, 2013. • Baldeo, R., Henriques, D.Y.P. Dual adaptation to opposing visuomotor rotations

	<p>with similar hand movement trajectories, <i>Exp Brain Res</i>, 227, 231-241, 2013.</p> <ul style="list-style-type: none"> • Lee, D., Henriques, D.Y.P., Snider, J., Song, D., Poizner, H. Reaching to proprioceptively defined targets in Parkinson's disease: Effects of deep brain stimulation therapy, <i>Neuroscience</i>, 244:99-112, 2013.
Kari Hoffman	<ul style="list-style-type: none"> • Sayegh PF, Hawkins KM, Neagu B, Crawford JD, Hoffman KL, and Sergio LE (2014) Decoupling the actions of the eyes from the hand alters beta and gamma synchrony within SPL. <i>Journal of Neurophysiology</i>. • Hoffman KL, Dragan M, Micheli C, Leonard T, Montefusco Siegmund R, and Valiante T (2013) Saccades during visual exploration align hippocampal 3-8 Hz oscillation in human and non-human primates. <i>Frontiers in Systems Neuroscience</i>. doi: 10.3389/fnsys.2013.00043 • Sayegh PF, Hawkins KM, Hoffman KL and Sergio LE (2013) Differences in spectral profiles between rostral and caudal premotor cortex when hand-eye actions are decoupled. <i>Journal of Neurophysiology</i>. doi:10.1152/jn.00764.2012.
Ian Howard	<ul style="list-style-type: none"> • Howard, I. P., Fujii, Y., & Allison, R. S. (2014). Interactions between cues to visual motion in depth. <i>Journal of Vision</i>, 14(2), Article 14: 1–16. doi:10.1167/14.2.14 • Howard, I. P., Fujii, Y., Allison, R. S., & Kirolos, R. (2014). Shape constancy measured by a canonical-shape method. <i>Vision Research</i>, 94, 33–40. doi:10.1016/j.visres.2013.10.021 • Lutgheid, A. J., Wilcox, L. M., Allison, R. S., & Howard, I. P. (2014). Vergence eye movements are not required for stereoscopic depth perception. <i>Proceedings of the Royal Society B</i>, 281(1776), 20132118.1–20132118.7. doi:10.1098/rspb.2013.2118 • Howard, I. P., Fukuda, K., & Allison, R. S. (2013). The dichoptoscope: An instrument for investigating cues to motion in depth. <i>Journal of Vision</i>, 13(14: Article 1), 1–11. doi:10.1167/13.14.1
Michael Jenkin	<ul style="list-style-type: none"> • Harris, L. and Jenkin, M. The effect of blur on the perception of up. <i>Optometry and Vision Science</i>, i91: 103-1110, 2014 • Barnett-Cowan, M., Jenkin, H. L., Jenkin, M. R., and Harris, L. R., Asymmetrical representation of body orientation, <i>J. of Vision</i>, 13: 1-11, 2013. • Speers, A., Forooshani, P., Dicke, M. and Jenkin, M. Lightweight tablet devices for command and control of ROS-enabled robots. <i>Proc. ICAR 2013</i>, Montevideo, Uruguay, 2013. • Speers, A. and Jenkin, M. Diver-based control of a tethered unmanned underwater vehicle. <i>Proc. ICINCO</i>, Reykjavik, Iceland, 2013. • Wang, H., Jenkin, M. and Dymond, P. Enhancing exploration in topological worlds with a directional immovable marker. <i>Proc. Canadian Conference on Computer and Robot Vision</i>. Regina, Canada. 2013. • Yang, J., Codd-Downey, R., Dymond, P., Xu, J. and Jenkin, M. Planning practical paths for tentacle robots. <i>Proc. ICAART 2013</i>, Barcelona, Spain, 2013. • Calce, A., Mojiri Forooshani, P., Speers, A., Watters, K., Young, T. and Jenkin, M. Autonomous underwater agents. <i>Proc. ICAART 2013</i>, Barcelona, Spain, 2013.
Richard Murray	<ul style="list-style-type: none"> • Murray, R. F. (2013). The statistics of shape, reflectance, and lighting in real-world scenes. In S. Dickinson and Z. Pizlo (Eds.), <i>Shape perception in human and computer vision: an interdisciplinary perspective</i>, pp. 225-235. New York: Springer.
Hiroshi Ono	<ul style="list-style-type: none"> • Ono, H., Lillakas, L., Kapoor, A., & Wong, I. (2013). Replicating and extending Bourdon's (1902) experiment on motion parallax. <i>Perception</i>, 42, 45–59.

	<ul style="list-style-type: none"> • Ono, H. Chornenkyy, Y., & D'Amour, S. (2013). Simple 3-D stimulus for motion parallax and its simulation. <i>Perception</i>, 42, 577–579. • van Tonder, G., Zavagno, D., Sakurai, K., Ono, H. (2013). Seeing further than your nose. <i>Perception</i>, 42, 481–487. • Ono, H. González, E G., & Lillakas, L. (2014). Psychophysical point: A disc tends to become a point when Weber's law fails. <i>Attention, Perception, & Psychophysics</i>. 76, 894–901. • Grove, P., M., Finlayson, N. J. & Ono, H. (2014). The effect of stimulus size on stereoscopic fusion limits and response criteria, <i>Perception</i>, 43, pages 155–177.
Keith Schneider	<ul style="list-style-type: none"> • McKetton L, Kelly KR, Schneider KA. In press. Abnormal lateral geniculate nucleus and optic chiasm in human albinism. <i>Journal of Comparative Neurology</i>. • Kelly KR, McKetton L, Schneider KA, Gallie BL, Steeves JKE. In press. Altered anterior visual system development following early monocular enucleation. <i>Neuroimage: Clinical</i>.
Lauren Sergio	<ul style="list-style-type: none"> • Granek JA, Pisella L, Vighetto A, Stemberger J, Rossetti Y, Sergio LE. (2013) Decoupled visually-guided reaching in optic ataxia: differences in motor control between canonical and non-canonical orientations in space. <i>PLoS ONE</i> 8(12): e86138.. • Sayegh P, Hawkins KL, Hoffman KL, Sergio LE (2013) Differences in spectral profiles between rostral and caudal premotor cortex when hand-eye actions are decoupled. <i>J. Neurophysiol.</i> Aug:110(2):952-963. • Hawkins KM, Sayegh P, Yan X, Crawford JD, Sergio LE (2013) Neural activity in superior parietal cortex during rule-based visual-motor transformations. <i>J.Cogn.Neurosci.</i> Mar;25(3):436-54.
Jennifer Steeves	<ul style="list-style-type: none"> • Kelly, K.R., McKetton, L., Schneider, K.A., Gallie, B.L. & Steeves, J.K.E. (2014). Altered anterior visual system development following early monocular enucleation. <i>Neuroimage: Clinical</i>, 1(4), 72-81. • Mullin, C. & Steeves, J.K.E. (2013). Consecutive TMS-fMRI reveals an inverse relationship in BOLD signal. <i>Journal of Neuroscience</i>, 33(49), 19243-9. • Moro, S.S. & Steeves, J. K. E. (2013). No Colavita effect: Increasing temporal load maintains equal auditory and visual processing in people with one eye, <i>Neuroscience Letters</i>, 556, 186-90. • Solomon-Harris, L., Mullin, C.R. & Steeves, J.K.E. (2013). TMS to the “occipital face area” affects face recognition but not categorization. <i>Brain and Cognition</i>. 83(3), 245-51. • Verdichevski, M. & Steeves, J.K.E (2013). Own-age and own-sex biases in recognition of aged faces. <i>Acta Psychologica</i>. 144(2):418-23. • Kelly, K.R., Zohar, S., Gallie, B.L. & Steeves, J.K.E. (2013). Spared contrast discrimination but impaired contrast detection and speed discrimination in people with one eye. <i>Investigative Ophthalmology and Vision Science</i>, 54(4), 3058-64. • Ganaden, R., Mullin, C.R. & Steeves, J.K.E. (2013). TMS to the TOS impairs scene but not object categorization. <i>Journal of Cognitive Neuroscience</i>, (6):961-8.
Martin Steinbach	<ul style="list-style-type: none"> • Tarita-Nistor, L., Hadavi, S., Steinbach, M. J., Markowitz, S. N., & Gonzalez, E. G. (2014) Vection in patients with glaucoma. <i>Optometry and Vision Science</i> in press.. • Tarita-Nistor, L., Brent, M. H., Steinbach, M. J., Markowitz, S. N., & González, E. G. (2014). Reading training with threshold stimuli in people with central vision loss. <i>Optometry and Vision Science</i>, 91, 86-96. • González, E. G., Lillakas, L., Lam, A., Gallie, B. L. & Steinbach, M. J. (2013).

	<p>Horizontal saccade dynamics after childhood monocular enucleation. <i>Investigative Ophthalmology & Visual Science</i>, 54, 6463-6471.</p> <ul style="list-style-type: none"> • Tarita-Nistor, L., Brent, M. H., Markowitz, S. N., Steinbach, M. J., & González, E. G. (2013). Maximum reading speed and binocular summation in patients with central vision loss. <i>Canadian Journal of Ophthalmology</i> 48, 443-449. • Tarita-Nistor, L., Lam, D., Brent, M. H., Steinbach, M. J. & González, E. G. (2013) Courier: A better font for reading with age-related macular degeneration. <i>Canadian Journal of Ophthalmology</i>, 48, 56-62. • Tarita-Nistor, L., Mandelcorn, M. S., Steinbach, M. J., Mandelcorn, E. D., & González, E. G. (2013) Fixation stability and location in patients with unilateral idiopathic epiretinal membrane. <i>Ophthalmic Surgery, Lasers & Imaging Retina</i>, 44, 46-49. • Steinbach, M. J. (2014). Cyclops: Update on progress in vision science. Invited column for <i>Canadian Journal of Ophthalmology</i>, 49, in press • Steinbach, M. J. (2014). Cyclops: Update on progress in vision science. Invited column for <i>Canadian Journal of Ophthalmology</i>, 49, 5. • Steinbach, M. J. (2013). Cyclops: Update on progress in vision science. Invited column for <i>Canadian Journal of Ophthalmology</i>, 48, 457. • Steinbach, M. J. (2013). Cyclops: Update on progress in vision science. Invited column for <i>Canadian Journal of Ophthalmology</i>, 48, 349. • Steinbach, M. J. (2013). Cyclops: Update on progress in vision science. Invited column for <i>Canadian Journal of Ophthalmology</i>, 48, 226. • Steinbach, M. J. (2013). Cyclops: Update on progress in vision science. Invited column for <i>Canadian Journal of Ophthalmology</i>, 48, 140. • Steinbach, M. J. (2013). Cyclops: Update on progress in vision science. Invited column for <i>Canadian Journal of Ophthalmology</i>, 48, 82. • Steinbach, M. J. (2013). Cyclops: Update on progress in vision science. Invited column for <i>Canadian Journal of Ophthalmology</i>, 48, 2. • Steinbach, M. J. (2013) Grandmother cells. <i>Scientific American</i>. June, p. 10.
<p>Wolfgang Stuerzlinger</p>	<ul style="list-style-type: none"> • H.-N. Liang, C. Williams, M. Semegen, W. Stuerzlinger, P. Irani, An Investigation of Suitable Interactions for 3D Manipulation of Distant Objects Through a Mobile Device, <i>International Journal on Innovative Computing, Information and Control</i>, 9(12), ISSN 1349-4198, 4737-4752, Dec. 2013. • A. S. Arif, W. Stuerzlinger, Pseudo-Pressure Detection and Its Use in Predictive Text Entry on Touchscreens, <i>OzCHI 2013</i>, ISBN 978-145032525-7, 383-392, Nov. 2013. {This paper got a best paper award} • A. S. Arif, W. Stuerzlinger, Evaluation of a New Error Prevention Technique for Mobile Touchscreen Text Entry, <i>OzCHI 2013</i>, ISBN 978-145032525-7, 397-400, Nov. 2013. • D. Lindlbauer, M. Haller, M. Hancock, S. Scott, W. Stuerzlinger, Perceptual Grouping: Selection Assistance for Digital Sketching, <i>ITS 2013</i>, ISBN 978-145032271-3, 51-60, Oct. 2013. • C. Zeidler, C. Lutteroth, W. Stuerzlinger, G. Weber, The Auckland Layout Editor: An Improved GUI Layout Specification Process, <i>UIST 2013</i>, ISBN 978-145032268-3, 343-352, Oct. 2013. • S. Zabramski, S. Shrestha, W. Stuerzlinger, Easy vs. Tricky: The Shape Effect in Drawing and Steering, <i>Mindtrek 2013</i>, ISBN 978-145031992-8, 99-103, Oct. 2013. • B. Agarwal, W. Stuerzlinger, WidgetLens: A System for Adaptive Content Magnification of Widgets, <i>British HCI 2013</i>, 1-10, Sept. 2013

	<ul style="list-style-type: none"> • S. Zabramski, W. Stuerzlinger, Did We Miss Something? Correspondence Analysis of Usability Data, INTERACT 2013, ISBN 978-364240497-9, 272-279, Sept. 2013. • G. Bruder, F. Steinicke, W. Stuerzlinger, Touching the Void Revisited: Analyses of Touch Behavior On and Above Tabletop Surfaces, INTERACT 2013, ISBN 978-364240482-5, 278-296, Sept 2013 • D. Scheurich, W. Stuerzlinger, A One-Handed Multi-Touch Method for 3D Rotations, INTERACT 2013, ISBN 978-364240482-5, 56-69, Sept 2013. • C. Zeidler, C. Lutteroth, W. Stuerzlinger, G. Weber, Evaluating Direct Manipulation Operations for Constraint-Based Layout, INTERACT 2013, ISBN 978-364240479-5, 513-529, Sept 2013. • A. Das, W. Stuerzlinger, Unified Modeling of Proactive Interference and Memorization Effort: A new mathematical perspective within ACT-R theory, CogSci 2013, ISBN 978-097683189-1, 358-363, July 2013. • W. Stuerzlinger, F. Steinicke, Proceedings ACM Symposium on Spatial User Interaction, ACM, ISBN 978-145032141-9, July 2013. • S. Zabramski, W. Stuerzlinger, Activity or Product? - Drawing and HCI, Multimedia, Interaction, Design and Innovation (MIDI) 2013, ISBN 978-145032303-1, 29-38, June 2013. • G. Bruder, F. Steinicke, W. Stürzlinger, To Touch or not to Touch? Comparing 2D Touch and 3D Mid-Air Interaction on Stereoscopic Tabletop Surfaces, ACM Symposium on Spatial User Interaction (SUI) 2013, ISBN 978-145032141-9, 9-16, July 2013.
Christine Till	<ul style="list-style-type: none"> • Todorow M, DeSouza J, Banwell B, Till C. (2014). Interhemispheric cooperation in a global-local visual processing task in pediatric multiple sclerosis, <i>Journal of Clinical and Experimental Neuropsychology</i>, 36(2): 111 - 126, 2014. • Till C. Racine N, Araujo D, Narayanan S, Collins L, Aubert-Broche B, Arnold DL, Banwell B. (2013) Changes in cognitive performance over a one-year period in children and adolescents with multiple sclerosis, <i>Neuropsychology</i>, 27(2), 210-219. • Marin S, Banwell B, Till C. (2013) Serial neuropsychological assessment over 10 years in four pediatric-onset multiple sclerosis patients, <i>Journal of Child Neurology</i>, 28 (12) : 1577 - 1586.
John Tsotsos	<ul style="list-style-type: none"> • Andreopoulos, A., Tsotsos, J.K., 50 Years of Object Recognition: Directions Forward, <i>Computer Vision and Image Understanding</i> , Vol.117, Issue 8, August 2013, Pages 827–891. • Wang, B., Tu, Z., Tsotsos, J.K., Dynamic Label Propagation for Semi-supervised Multi-class Multi-label Classification, <i>Proc. Int. Conference on Computer Vision</i>, Dec. 12, 2013, Sydney. • Rodriguez-Sanchez, A., Tsotsos, JK., The roles of endstopped and curvature tuned computations in a hierarchical representation of 2D shape, <i>Developing and Applying Biologically-Inspired Vision Systems: Interdisciplinary Concepts</i>, edited by M. Pomplun and J. Suzuki, IGI Global, 2013, p184-207. • Bruce, N.D.B., Tsotsos, J.K. Attention in Stereo Vision: Implications for Computational Models of Attention. In Pomplun, M. & Suzuki, J. <i>Developing and Applying Biologically-Inspired Vision Systems: Interdisciplinary Concepts</i>. IGI Global, 2013, p65-88. • Rodriguez-Sanchez, A., Dudek, G., Tsotsos, J.K. Curvature and Shape Processes in Vision, in <i>Shape Perception in Human and Computer Vision: An Interdisciplinary Perspective</i>, ed. by S. Dickinson and Z. Pizlo, Springer, 2013, p. 429 - 442.

Laurie Wilcox	<ul style="list-style-type: none"> • Lughtigheid AJ, Wilcox LM, Allison RS and Howard IP (2014) Vergence eye movements are not required for stereoscopic depth. <i>Proceedings of the Royal Society B</i>, v281, no 1776. • Stransky D, Wilcox LM and Allison RS. Effects of long-term exposure on sensitivity and comfort with stereoscopic displays. In press <i>ACM Transactions on Applied Perception</i>. • Allison RS, Wilcox LM, Kazimi A (2013) Perceptual artefacts, suspension of disbelief and realism in stereoscopic 3D film. <i>Public</i>, Vol 47. • Giaschi DE, Lo R, Narasimhan S, Lyons C, Wilcox LM (2013) Sparing of coarse stereopsis in stereodeficient children with a history of amblyopia, <i>Journal of Vision</i> 13(10):17, 1–15 • Giaschi DE, Narasimhan S, Solski A, Harrison E, Wilcox LM (2013) On the Development of stereopsis: Fine and coarse processing. <i>Vision Research</i>, 89, 65-71.
Richard Wildes	<ul style="list-style-type: none"> • K. J. Cannons and R. P. Wildes, The applicability of spatiotemporal oriented energy features to region tracking, <i>IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)</i>, 36 (4), 784-796, 2014. • C. Feichtenhofer, A. Pinz and R. P. Wildes, Spacetime forests with complementary features for dynamic scene recognition. In <i>Proceedings of the British Machine Vision Conference (BMVC)</i>, 2013. • M. Sizintsev and R. P. Wildes, Stereoscopic Datasets and Algorithm Evaluation for Driving Scenarios, York University Technical Report CSE-2013-06, June 10, 2013. • S. Vosoughi, E. Ameli and R. P. Wildes, Evaluation of Computer Vision Stereo Algorithms for Surgical Applications, York University Technical Report EECS-2014-01, February 10, 2014. • H. Zhong and R. P. Wildes, Egomotion estimation using binocular spatiotemporal oriented energy. In <i>Proceedings of the British Machine Vision Conference (BMVC)</i>, 2013.
Frances Wilkinson	<ul style="list-style-type: none"> • Wilson, H.R., & Wilkinson, F. (2013). Configural pooling in the ventral visual pathway. In 2nd edition of <i>The New Visual Neurosciences</i>. J.S. Werner & L.M. Chalupa (Eds). MIT Press: Cambridge, MA, Pp. 617–626. • Thabet, M., Wilkinson, F., Wilson, H.R., & Karanovic, O. (2013). The locus of flicker adaptation in the migraine visual system: A dichoptic study. <i>Cephalalgia</i>, 33(1), 5–19; doi: 10.1177/0333102412462640 • Gorbet, D., Wilkinson, F., & Wilson, H.R. (2014). Neural correlates of radial frequency trajectory perception in the human brain. <i>Journal of Vision</i>, 14(1): 11; doi 10.1167/14.1.11
Hugh Wilson	<ul style="list-style-type: none"> • Thabet, M., Wilkinson, F., Wilson, H.R. & Karanovic, O. (2013) The locus of flicker adaptation in the migraine visual system: A dichoptic study. <i>Cephalalgia</i>, 33, 5-20. • van Vugt, M. K., Sekuler, R., Wilson, H. R. & Kahana, M. J. (2013) An electrophysiological signature of summed similarity in visual working memory. <i>J. Exp. Psych: Gen.</i> 142, 412-425. • Wilson, H. R. & Wilkinson, F. (2013) Configural pooling in the ventral pathway. In <i>The New Visual Sciences</i>, ed. by J. Werner & L. Chalupa, MIT Press, Cambridge, MA. • Wilson, H. R. (2013) Binocular rivalry: cooperation, competition, and decisions. In <i>The Constitution of Visual Consciousness: Lessons from Binocular Rivalry</i>, ed. by S. M. Miller. John Benjamins Publishing, Philadelphia, 281-303.

	<ul style="list-style-type: none"> • Or, C-F & Wilson, H. R. (2013) Implicit face prototype learning from geometric information. <i>Vision Res.</i> 82, 1-12. • Vesker, M. & Wilson, H. R. (2013) Face Context Advantage Explained by Vernier and Separation Discrimination Acuity. <i>Frontiers in Psychology</i>. DOI=10.3389/fpsyg.2012.00617. • Gao, X. & Wilson, H. R. (2013) The neural representation of face space dimensions. <i>Neuropsychologia</i>. 51, 1787-1793. • Gorbet, D. J., Wilkinson, F. & Wilson, H. R. (2014) Neural correlates of radial frequency trajectory perception in the human brain. <i>Journal of Vision</i> 14(1):11, 1-19. • Vida, M. D., Wilson, H. R. & Maurer, D. (2014) Bandwidths for the perception of head orientation decrease during childhood. <i>Vision Res.</i> In press. • Gao, X. & Wilson, H. R. (2014) Implicit learning of geometric eigenfaces. <i>Vision Res.</i> In press. • Wilson, H. R. (2014) Large-scale neural networks: vision. in <i>Encyclopedia of Computational Neuroscience</i>, ed. J. Milton. Springer, New York. In press.
Thilo Womelsdorf	<ul style="list-style-type: none"> • Womelsdorf, T., Bosman, C.A., Fries, P. (2013) Selective Neuronal Synchronization and Attentional Stimulus Selection in Visual Cortex. In: <i>The New Visual Neurosciences</i>. Ed. J.S. Werner & L.M. Chalupa. MIT Press. • Vinck, M., Womelsdorf, T. & Fries, P. (2013) Gamma oscillations and information transmission. Chapter 23. In: <i>Principles of Neural Coding</i>; Eds: Quiroga, R.Q. & Panzeri, S. • Shen C., Ardid, S., Kaping, D., Westendorff, S., Everling, S., Womelsdorf, T. (2014). Anterior Cingulate Cortex Cells Identify Process-Specific Errors of Attentional Control prior to transient Prefrontal-Cingulate Inhibition. <i>Cerebral Cortex</i>. (doi:10.1093/cercor/bhu028). • Lipsman, N., Kaping, D., Westendorff, S., Lozano, A.M., Womelsdorf, T. (2014) Beta coherence within human ventromedial prefrontal cortex precedes affective value-based choices. <i>NeuroImage</i> (doi: 10.1016/j.neuroimage.2013.05.104). 85(2): 769-778. • Vinck, M., Womelsdorf, T., Buffalo, E., Desimone, R., Fries, P. (2013) Attentional modulation of cell-class specific gamma-band synchronization in awake monkey area V4. <i>Neuron</i>. 80(4):1077-89, • Brunet, N., Bosman, C., Roberts, M., Oostenveld, R., Womelsdorf, T., de Weerd, P., Fries, P. (2013) Visual cortical gamma band activity during free viewing of natural images. <i>Cerebral Cortex</i> (doi:10.1093/cercor/bht280). • Womelsdorf, T., Westendorff, S., Ardid, S. (2013) Subnetwork selection in deep cortical layers is mediated by beta-oscillation dependent firing. <i>Frontiers in Systems Neuroscience</i> (doi: 10.3389/fnsys.2013.00025). • Hutchison RM, Womelsdorf T, Allen EA, Bandettini PA, Calhoun V, Corbetta M, Della Penna S, Duyn J, Glover G, Gonzalez-Castillo J, Handwerker DA, Keilholz S, Kiviniemi V, Leopold DG, de Pasquale F, Sporns O, Walter M, Chang C (2013) Dynamic functional connectivity: Promises, issues, and interpretations. <i>NeuroImage</i>. doi: 10.1016/j.neuroimage.2013.05.079. • Phillips J, Vinck M, Everling S, Womelsdorf T (2013) A long-range fronto-parietal 5-10Hz network predicts 'top-down' controlled guidance in a task-switch paradigm. <i>Cerebral Cortex</i>.(doi:10.1093/cercor/bht050).. • Laxton, AW, Neimat, JS, Davis, KD, Womelsdorf, T, Hutchison, WD, Dostrovsky, JO, Hamani, C, Mayberg, HS, Lozano, AM (2013) Neuronal Coding of Implicit Emotion Categories in Human Subgenual Prefrontal Cortex. <i>Biological Psychiatry</i>

	<p>(doi:10.1016/j.biopsych.2013.03.029).</p> <ul style="list-style-type: none"> • Maris, E., Womelsdorf, T., Desimone, R. & Fries, P. (2013) Rhythmic neuronal synchronization in visual cortex entails spatial phase relation diversity that is modulated by stimulation and attention. <i>NeuroImage</i>. doi:pii: S1053-8119(13)00127-4.
Georg Zoidl	<ul style="list-style-type: none"> • Mahboob ul Hussain, Stephan Olk, Bodo Schoenebeck, Bianca Wasilevsky, Carola Meier, Georg Zoidl, Rolf Dermietzel. IRES mediated generation of endogenously expressed carboxy-terminal domains of Cx43 and its implication in hypoxic conditions. <i>J Biol Chem</i>. accepted February 2014. • Morosan-Puopolo G, Balakrishnan-Renuka A, Yusuf F, Chen J, Dai F, Zoidl G, Lüdtke TH, Kispert A, Theiss C, Abdelsabour-Khalaf M, Brand-Saberi B. Wnt11 is required for oriented migration of dermogenic progenitor cells from the dorsomedial lip of the avian dermomyotome. <i>PLoS One</i>. 2014 Mar 26;9(3):e92679.doi: 10.1371/journal.pone.0092679. • Kurtenbach S, Kurtenbach S, Zoidl G. Gap junction modulation and its implications for heart function. <i>Front Physiol</i>. 2014 Feb 27;5:82. • Kurtenbach S, Kurtenbach S, Zoidl G. Array data extractor (ADE): a LabVIEW program to extract and merge gene array data. <i>BMC Res Notes</i>. 2013 Dec 1;6:496 doi: 10.1186/1756-0500-6-496 • Kurtenbach S, Prochnow N, Kurtenbach S, Klooster J, Zoidl C, Dermietzel R, Kamermans M, Zoidl G. Pannexin1 channel proteins in the zebrafish retina have shared and unique properties. <i>PLoS One</i>. 2013 Oct 23;8(10):e77722. doi: 10.1371/journal.pone.0077722. • Balakrishnan-Renuka A, Morosan-Puopolo G, Yusuf F, Abduekmula A, Chen J, Zoidl G, Philippi S, Dai F, Brand-Saberi B. ATOH8, a regulator of skeletal myogenesis in the hypaxial myotome of the trunk. <i>Histochem Cell Biol</i>. 2014 Mar; 141(3):289-300. doi: 10.1007/s00418-013-1155-0. • Turchinovich A, Zoidl G, Dermietzel R (2013). <i>RNAi in Ocular Diseases</i>, In: "Advanced Delivery and Therapeutic Applications of RNAi," Editors: Kun Cheng and Ram Mahato, ISBN: 978-1-119-97686-8, 534 pages, May 2013 Publisher: John Wiley & Sons, Inc.

<h2>Active members (STUDENTS and HQP)</h2> <p>107 grad students 31 postdoctoral fellows 70 undergrads (incl 18 RAs) 2 exchange students</p>	
Scott Adler	<ul style="list-style-type: none"> • Audrey W.K. You Ph.D student. • Christine Fuda Ph.D. student, currently on leave. • Alan Yee (Undergraduate) • Arnold Ganeswaran (Undergraduate)
Rob Allison	<ul style="list-style-type: none"> • Sidrah Laldin (Master's) • Jianhui Chen (Master's) • Ramy Kirolos (Master's)

	<ul style="list-style-type: none"> • Andrew Roth (Master's) • Margarita Vinnikov (PhD) • Pearl Guterman (PhD) • Karim Benzeroual (PDF with Wilcox) • Arthur Lugtigheid (PDF with Wilcox) • Yoshitake Fujii (PDF) • Carly Hylton (undergraduate) • June Li (undergraduate) • Mariam Sardar (Undergraduate) • Anas Araf (Undergraduate) • Suzette Fernandes (undergraduate) • Jacob Perron (undergraduate) • Ed Shen (research associate) • Christos Giotis (3D Flic project director)
Chris Bergevin	<ul style="list-style-type: none"> • Ebrahimikhonacha, Homa (PhD) • Salerno, Anthony (undergrad) • May, Max (undergrad) • Tibrewala, Radhika (undergrad) • Ni, Chris (high school) • Johns, Jessica (high school)
Doug Crawford	<ul style="list-style-type: none"> • David Cappadocia; PhD; Kin 06/11- Present • Mehdi Daemi; PhD; Biol; 09/10- Present • Morteza Sadeh; MSc; Kin 09/10- Present • Noura Al-Omawi; PhD; Kin 09/10- Present • Amirsaman Sajad; PhD; Bio 09/11- Present • Ying Chen; PhD; Kin 04/10- Present • Bianca-Ruxandra Baltaretu; MSc Biol; 09/13 - Present • Tasneem Barakat; Independent Study Kin 09/13 - Present • Simona Monaco; Post Doc 11/13 - Present • Yalda Mohsenzadeh; Post Doc 02/14 - Present • Benjamin Dunkley; Post Doc 11/11-08/13 • Minou Behboudi; Work Study Student 09/13-Present • Jay Gajiwala; Work Study Student 09/13-Present • Pankhuri Malik; MSc; Bio 09/11- 04/14 • Leiko Tanaka; MA; Psych 09/10- 08/13 • Khashayar Gharavi; Independent Study Psychology 09/11-08/13 • Sina Alipour-Nazari; honours thesis student (PSYC 4000) 05/12 – 08/13
Joseph DeSouza	<ul style="list-style-type: none"> • Larissa Vingilis-Jaremko (post doctoral fellow) • Paula Di Noto (PhD candidate) psych • Diana Arsenyan (MSc candidate) bio • Michael Olshansky (MA candidate) psych • Charles Leger (MA candidate) psych • Gabriela Levkov (MSc candidate) bio • Nevena Savija (MSc candidate) bio • Samantha Leung (MSc candidate) bio co-supervised Colin Steel • Prabhjot Dhani (MSc candidate) bio co-supervised Sylvain Moreno (Baycrest) • Hedieh Tehrani (research assistant) psych • Katherine McDonald (undergrad) psych • Michael Wiland (undergrad) psych

	<ul style="list-style-type: none"> • Ruth-Anne Andrews (undergrad) psych • Gregorio Escobar (RAY research assistant) eng • Sonal Ranjit (RAY research assistant) geo-eng • Karin Kantarovich (RAY research assistant) psych • Michelle Gaudio (undergrad) nursing • Fadi Ibrahim (undergrad) bio • Jennifer Thunem (undergrad – Queen’s Univ) psych/life sci
James Elder	<ul style="list-style-type: none"> • Nada el Assal Research Assistant • Yuen Lau, Marcin Matynia BSc student • Yuping Lin NSERC Undergraduate student • Ruozhu Li Visiting student from Univ. Electronic Sci and Tech of China • Galina Goren MA Student, York • Ying Li MSc Student, York • Alex Yakubovich MA Student, York • Paria Mehrani PhD Candidate, York • Eduardo Corral Soto PhD Candidate, York • Vida Movahedi PhD Candidate, York U • Ingo Frund (post doctoral fellow) • Yuqian (Bob) Hou Senior Research Scientist, York University
Mazyar Fallah	<ul style="list-style-type: none"> • Carolyn J. Perry (PhD) • Sang-Ah Yoo (PhD) • Puneet Arora (MSc) • Sara Pardisnia (MSc) • Massie Rahim (Undergraduate) • Abdullah Tahiri (Undergraduate) • Ravi Chaudhari (Undergraduate) • Prakash Amarasooriya (Undergraduate) • Paul Dhami (Undergraduate) • Henna Asrar (Undergraduate)
Laurence Harris	<ul style="list-style-type: none"> • Sarah D’Amour (MA) • Michael Carnevale (MA) • Lindsey Fraser (MA) • Lisa Pritchett (PhD) • Adria Hoover (PhD) • Patrick Byrne (PDF) • Bobbak Makooie (undergrad) • Yasmeenah Elzein (undergrad)
Denise Henriques	<ul style="list-style-type: none"> • Simona Monaco Postdoctoral fellow • Holly Clayton PhD candidate, • Victoria Barkley MA candidate, • Nilufer Nourouzpour MSc candidate, • Ahmed Mostafo PhD candidate, • Maria Ayala MA candidate, • Steve Jesin MSc candidate
Kari Hoffman	<ul style="list-style-type: none"> • Tim Leonard (PhD candidate) • Ben Cassidy (MA graduated August 2013) • Michelle Dragan (Masters candidate) • Jonathan Mikkila (Masters Candidate) • Roman Skybin (Research Technician)

	<ul style="list-style-type: none"> • Rodrigo Montefusco (post-doctoral fellow) • Andrea Gomez Palacio Schjetnan (Research Scientist) • Omri Arbiv (Undergraduate, NSERC USRA, Honors Thesis) • Sonya Chand (Undergraduate, Honors Thesis)
Michael Jenkin	<ul style="list-style-type: none"> • Robert Codd-Downey MSC Computer Science. • Andrew German PhD Computer Science • Parisa Majori MASc Computer Engineering • Jing Yang PhD Computer Science • Hui Wang PhD Computer Science
Richard Murray	<ul style="list-style-type: none"> • John Wilder postdoctoral fellow • Khushbu Patel work-study • Minoos Abbaslou undergrad • Andrew McColl undergrad • Alan Yee volunteer, work-study • Naail Khan volunteer, independent study • Cozy Kumaria volunteer • Amandeep Garcha volunteer • Niusha Amiri volunteer
Hiroshi Ono	<ul style="list-style-type: none"> • Linda Lillakas, Research Assistant, (1998 - current) • Faraz Honarparvar, 2013 Summer RAY (undergraduate) • Teodora Dundjerovic, 2013 Summer Ray (undergraduate) • Yosuf Saquib, 2013/2014 Workstudy Program (undergraduate) • Patrick Malihin, 2013/2014 Workstudy Program (undergraduate) • Ashwinjar Amalraj, 2013/2014 Workstudy Program (undergraduate)
Keith Schneider	<ul style="list-style-type: none"> • Larissa McKetton, PhD candidate, Biology • Monica Giraldo, visiting PhD candidate • Scott Munro, MA candidate, Psychology • Joseph Viviano, MSc, Biology (defended, now PhD candidate) • Debra Soh, PhD candidate, Psychology • Kevin DeSimone, PhD candidate, Psychology • Anahit Grigorian, MSc candidate, Biology • Miguel Sanchez, Biology undergrad • Bryan Paget, Biology undergrad • Roshan Boodram, Biology, undergrad senior thesis
Lauren Sergio	<ul style="list-style-type: none"> • Joshua Granek (defended PhD August 2013) • Patricia Sayegh (PhD4) • Kara Hawkins (PhD 3) • David Albines (MSc1) • Zahra Moghei, Winter 2013 (undergrad,,Southlake/YorkU), • Fatemah Gholami, Summer 2013 (undergrad, Southlake/YorkU), • Mani Kang, Summer 2013, (undergrad, Southlake/YorkU), • Yehyah Hamadi, Summer 2013, (undergrad) • Alissa Moody, Fall/Winter 2013/14, (undergrad) • Karen Ng, Fall/Winter 2013/14,(undergrad, St. Michaels Hospital, Toronto)
Jennifer Steeves	<ul style="list-style-type: none"> • Sara Rafique, Psychology, MA program, enrolled Sept 2013 • Stefania Moro, Psychology, PhD program, enrolled Sept 2013 • Alexandre Giffard, Psychology, MA program, enrolled Sept 2012 • Lily Solomon-Harris, Psychology, MA program, enrolled Sept 2012 • Rachel Ganaden, Psychology, MA, Sept 2011-2013 • Laura Zeno (Work study)

	<ul style="list-style-type: none"> • Jonathan Cipoletta (RAY) • Neda Niknami (RAY) • Ali Helmi (NSERC USRA)
Wolfgang Stuerzlinger	<ul style="list-style-type: none"> • Andriy Pavlovych, postdoc • Rob Teather, PhD student, graduated • Ahmed Arif, PhD student, graduated • Arindam Das, PhD student, defended • Loutfouz Zaman, PhD student • Navid Mohaghegh, PhD student • Junwei Sun, PhD student • Doug Scheurich, MSc student, graduated • Michelle Brown, MSc student • Domokos Papoi, MSc student • Paul Bergmanis, MSc student • Goldie Srulovich, undergrad student (NSERC USRA)
Christine Till	<ul style="list-style-type: none"> • Katrin Weier, M.D. (Research fellow, McConnel Brain Imaging Center, Montreal Neurological Institute and Hospital) • Magdalena Lysenko, MA 2 • Bravina Bala, PhD 3 • Ameeta Dudani, PhD 3 • Nadine Akbar, PhD 2 • Mahsa Sadeghi, 2nd year undergraduate RAY student
John Tsotsos	<ul style="list-style-type: none"> • Poirier, F., Apr. 2013 - Aug 2014 (PDF) • Simine, E., Jan. 2007 – present (RA) • Leung, E., Jan, 2005 - present. (PhD) • Shi, X., Sept. 2006 - present. (PhD) • Wloka, C., Jan. 2012 – present (PhD) • Biparva, M., Sept. 2013 – present (PhD) • Yoo, S-A., Sept. 2013 - present (PhD co-supervised by Fallah) • Kotseruba, I., Sept, 2012 – present (MSc) • Rasouli, A., Sept. 2012 – present (MSc) • Voland, S., May 2012 - present (MSc co-supervised by J. Edmonds) • Wu, Y., Sept. 2013 – present (MSc) • Halatchev, V., Sept. 2013 - present (MSc)
Laurie Wilcox	<ul style="list-style-type: none"> • Karim Benzeroural (PDF with Allison) • Arthur Lugtigheid (PDF with Allison) • Yoshitaka Fujii (PDF with Allison) • Debi Stransky (PhD) • Inna Tsirlin (PhD) • Lesley Deas (PhD) • Matthew Cutone (MA) • Sarah Zohar (MA) • Brittney Hartle (Research assistant, undergrad) • Parmis Gouzardi (Research assistant, undergrad) • Megan Goel (Research assistant, undergrad) • Adam Fath (Undergraduate Honours)
Richard Wildes	<ul style="list-style-type: none"> • Elle Ameli (Undergrad RA) • MSc students: Hang Gao (MA) • Sepehr Vosoughi (MA) • Hao Zhong (MA)

	<ul style="list-style-type: none"> • Chris Feichtenhofer (PhD) • Soo Min Kang (PhD)
Frances Wilkinson	<ul style="list-style-type: none"> • Diana Gorbet (Post-doctoral fellow) • Alexandra Markham (Graduate student) • Clayton Lightfoot (Undergraduate student) • Linda Lillakas (Research assistant)
Hugh Wilson	<ul style="list-style-type: none"> • Xiaoqing Gao, Postdoc • Marwan Daar, Ph.D. student • Jeffrey Fung, undergraduate honors student • Roni Propp, undergraduate research practicum student
Thilo Womelsdorf	<ul style="list-style-type: none"> • Chen Shen (MSc) • Matthew Balcarras (PhD) • Mariann Oemisch (PhD) • Benjamin Volloh (MSc) • Co-Supervision: Tobias Möhler (candidate Dr. rer. nat) • Dr. Cristiano Micheli (PDF) • Dr. Stephanie Westendorff (PDF) • Dr. Salva Ardid (PDF) • Hongying Wang (Lab Manager)
Georg Zoidl	<ul style="list-style-type: none"> • Dr. Sarah Kurtenbach (nee Hoffmann), Postdoctoral Fellow (since April 1) University of Miami Medical School, USA) • Dr. Stefan Kurtenbach, Postdoctoral Fellow (since April 1, University of Miami Medical School, USA) • Christiane Zoidl (Research Assistant) • Cherie Brown, MSc candidate (1st year) • Paige Whyte-Fagundes, MSc candidate (1st year) • Carla Mejia-Bustes (BSc completed) • Ryan Siu (BSc completed) • Jasminder Singh (BSc completed) • Shelby Stanojev (BSc completed) • Tomasz Charubin (BSc in progress) • Felicia Gullacci (summer student) • Emerson Brasil (Canada-Brasil Exchange Program)

CVR members (GRANTS)

TOTALS: \$6,127,919 from individual and CVR-led group grants during the reporting period including \$2,038,116 (NSERC), \$675,485 (CIHR); in addition CVR members have facilitated \$7,796,978 in non-CVR-led group grants.

Group grants:

- CFI Leading Edge Fund, (\$1,977,278) “Full field vision and spatial orientation” (PI Harris and 9 others including Allison, Wilcox, Jenkin)
- Allison, R.S. (with Wilcox) 3D High Frame Rate Movie-making: Creative and Technical Foundations for Widespread Commercial Adoption NSERC CUI I2I 2013-2015 \$429,648 with Sheridan College and Christie Digital

<ul style="list-style-type: none"> • OMDC \$100,000/yr (PI Allison plus 5 others including Wilcox) Entertainment and Creative Cluster Partnerships Fund, The 3D Film Innovation Consortium (3D FLIC): Phase II Including CVR members (PI non-CVR) • 2014-2019 NSERC \$1.65M Crawford (9) Collaborative Research and Training Experience (CREATE), IRTG: The Brain in Action • NSERC CREATE (PI Wilson) (10), “Vision Science and Applications”, \$1,650,000 • GRAND NCE \$42,000 Allison GRAND NCE, Artistic & Technical Approaches to Content Creation & Display for Stereo 3D and Other Novel Media <p>Externally led</p> <ul style="list-style-type: none"> • 2014–2020 NSERC CREATE \$300,000.00 “ The Brain in Action” (9 Co-Applicants at York, Queens, Western) NSERC \$300,000/yr CREATE Program in Computational Approaches to Sensorimotor Transformations for the Control of Action (Goodale PI) 	
Rob Allison	<ul style="list-style-type: none"> • NSERC \$170,000 (34,000 pa) R. Allison Discovery Grant (\$34k pa) Stereoscopic surface perception in real and virtual environments • 2010-2015 ORF/RE \$3,844,824 (768,965) A. Asif (15) Ontario Research Fund/Research Excellence, Centre for Innovation in Information Visualization and Data Driven Design (CIV/DDD) • 2011-2015 NSERC\$1.65M H. Wilson (9)Collaborative Research and Training Experience (CREATE), Vision Science and Applications • OMDC 200,000 (\$100k) R. Allison (5) Entertainment and Creative Cluster Partnerships Fund, The 3D Film Innovation Consortium (3D FLIC): Phase II • CFI & ORF \$1.7 M Harris (7) Leading Edge Fund, Full field vision and spatial orientation • 2013NSERC \$24,049Wilcox (3)Partnership Workshops Grant, Quality in Stereoscopic 3D: Perceptual and Technical Issues • 2013NSERC \$25,000Allison Engage: Solving stereoscopic camera calibration from markers • 2013NSERC \$25,000Allison Engage: Computer vision technology for a human mobility assessment system • 2013-2016 NSERC\$429,648 (143,216) Allison (2) CUI I2I: 3D High Frame Rate Movie-making: Creative and Technical Foundations for Widespread Commercial Adoption
Chris Bergevin	<ul style="list-style-type: none"> • NSERC Discovery Grant (5 years, \$29000/year) • York Junior Faculty Fund (\$1200, one time award)
Doug Crawford	<ul style="list-style-type: none"> • 2011-2016 NSERC Discovery \$110,000/yr “Cortical Mechanisms for Trans-Saccadic Integration and Memory in the Human” • 2009-2014 CIHR \$150,170/yr “Mechanisms for Eye-hand Coordination in the Human” • 2007-2014 Tier I CRC (CIHR) \$200,000/yr “CRC in Visual-Motor Neuroscience” • 2013-2018 CIHR \$200,187/yr “Neurophysiology of 3-D Gaze and Head Control”
Joseph DeSouza	<ul style="list-style-type: none"> • 2012-13 NSERC Discovery program Attentional signals during visuomotor tasks (PI) \$25,000 • 2012-13 Faculty of Health Minor Research Grant Does encoding a motor habit from a sound stimulus involve basal ganglia: the putative role of music in Parkinson’s disease \$3000 • 2012-13 Irapina Club Implications of Dance for Parkinson’s research \$21,000 • 2013-14 Faculty of Health Junior Faculty Funds Circadian rhythms and

	<p>prefrontal cortex functioning: a double-blind study examining melatonin and cognitive control \$2000</p> <ul style="list-style-type: none"> • 2013-14 Parkinson’s Society of Canada \$44,999 Neural Mechanisms behind Dance Therapy for Parkinson’s Disease • 2013-14 NSERC ENGAGE program Video Tracking of body angle behaviour correlated with multi-channel wireless muscle function imaging system (Myoguide MAP) (PI) EGP #451681-13 \$25,000
James Elder	<ul style="list-style-type: none"> • 2013-2014 Principal Investigator, NSERC Engage Grant, Attentive Sensing for Sports Video Applications (\$25,000 over 6 months) • 2013-2014 Principal Investigator, NSERC Regional Opportunities Fund, 3D Urban Sustainability Workshop (\$3,000 over 2 months) • 2014-2015 Research Team Lead, Centre for Innovation in Information Visualization and Data-Driven Design, Dynamic Carbon Activity Mapping in Urban Environments (\$40,000 over 1 year) • 2013-2014 Research Team Lead, Centre for Innovation in Information Visualization and Data-Driven Design, Dynamic Carbon Activity Mapping in Urban Environments (\$20,000 over 1 year) • 2010-2015 Principal Investigator, Natural Sciences and Engineering Research Council (NSERC) Discovery Grant Hierarchical systems for visual shape perception (\$42,000 during reporting period)
Mazyar Fallah	<ul style="list-style-type: none"> • EIMindA contract, equipment & test analysis, PI • EIMindA contract, operating costs \$541.92, PI • Advancement/D.Greenberg, \$25,500, PI, Concussion research • Infrastructure Operating Fund, CFI, \$15,500 PI
Laurence Harris	<ul style="list-style-type: none"> • NSERC discovery \$50,000/yr • Human Stroke Catalyst (PI Mansfield) \$69,067 • CFI \$1,977,227
Denise Henriques	<ul style="list-style-type: none"> • NSERC Discovery Grant Sensory and motor plasticity in learning (PI) \$200,000
Kari Hoffman	<ul style="list-style-type: none"> • Krembil Foundation gift \$450,000 • Alzheimer’s Society, operations \$75,000 • NSERC Discovery Grant, operations \$30,000 • Alzheimer’s Association New Investigator Research Grant \$50,000
Richard Hornsey	<ul style="list-style-type: none"> • NSERC DG of \$22k/year
Michael Jenkin	<ul style="list-style-type: none"> • 2013 ¥670,000,000 Shizuoka University Cooperative Research Projects Grant “Promoting collaborative interprofessional education for critical care teams with a table-top computer-based virtual e-learning environment engaging advanced imaging devices. (PI B. Kapralos UOIT and many others). • 2012 \$1,000,000/yr 5 year NSERC Network Grant “NSERC Field Robotics Network (NCFRN)”. (PI G. Dudek and many others.) The grant also includes an additional \$1.6M in cash/in-kind support from the partners over five years. • 2012 \$29,414 NSERC RTI “6DOF Virtual Reality Tracker” • 2011 \$29,000/yr 5 year NSERC Discovery Grant “Perception for Mobile Agents”.
Richard Murray	<ul style="list-style-type: none"> • NSERC Discovery Grant, Statistical properties of natural 3D scenes and their role in visual perception, \$24K/year, PI

Hiroshi Ono	<ul style="list-style-type: none"> • NSERC Discovery Grant, PI, \$25,000.00
David Regan	<ul style="list-style-type: none"> • NSERC Discovery Grant, PI, \$31,000.00
Keith Schneider	<ul style="list-style-type: none"> • NSERC Discovery (PI), “Structural and functional imaging of the human thalamus” (2012-2016), \$33,750/year
Lauren Sergio	<ul style="list-style-type: none"> • April 2013 \$10,000 Mitacs Accelerate internship, with Aim2Walk rehabilitation clinic; Awarded to David Albines (MSc1), "Neuroanatomical changes following chronic post-stroke therapy using novel assistive devices" • Operating Grant - principal investigator (Alison Macpherson – Co-investigator), April 2013 - March 2018 \$472,549 Canadian Institutes of Health Research, Title: “Assessing functional ability following mild brain insult using cognitive-motor integration” • Operating Grant - principal investigator, October 2012- August 2013 \$30,120 Ontario Centres for Excellence Technical Problem Solving Industry/Academia collaboration, “BrainFx 360 Assessment: Clinical Validation” • Outreach Grant – principal investigator, September 2012-April 2013, \$3000 CIHR Café Scientifique, “Can your cellphone save the healthcare system” (with Paul Ritvo, Gord Flett, and Southlake Regional Health Centre) • Operating Grant - principal investigator, Apr 2011 Mar 2016 \$155,000 Natural Sciences & Engineering Research Council Discovery “Brain mechanisms for eye-hand coordination: Experience- and sex-related differences”
Jennifer Steeves	<ul style="list-style-type: none"> • The role of object and scene areas in object and scene processing, NSERC Discovery, \$31,000 pa • Scene and face processing: Behaviour and neural correlates, Ontario Research Fund, Infrastructure Operating Funds, \$43,200
Martin Steinbach	<ul style="list-style-type: none"> • 2013 Glaucoma Research Society of Canada (w/UHN match) \$30,000 Operating grant: Vection in patients with glaucoma (Steinbach PI)
Wolfgang Stuerzlinger	<ul style="list-style-type: none"> • Error Behaviour in Natural User Interfaces, NSERC ENGAGE Grant, \$25,000, 2013. • Touch the Third Dimension: Simple-To-Use Three-Dimensional User Interfaces, NSERC Discover Grant, , CA \$14,000, 2012-2013. • Graphics, Animation, and New Media (GRAND), Network of Centres of Excellence, PI: K. Booth and 49 others, CA \$23,250,000 over 7 years, 2010-2015. • Centre for Innovation in Information Visualization and Data Driven Design (CIV/DDD), Ontario Research Excellence Fund, PI: J. Tsotsos and 37 others, CA \$3,844,826 over 5 years, 2010-2015. • NSERC CREATE Program in Computational Approaches to Sensorimotor Transformations for the Control of Action, renamed to "CAN-ACT: Computational Approaches in Neuroscience - Action, Control & Transformations", NSERC Collaborative Research and Training Experience, PI: M. Goodale, 10 co-applicants, CA\$ 300,000/year (1st year 150k), 2009-2015.

Christine Till	<ul style="list-style-type: none"> • Scottish Rite Charitable Foundation (SRCF) of Canada <i>Title:</i> Structural and functional neuroimaging correlates of cognitive impairment in childhood-onset multiple sclerosis. <i>PI C. Till</i> \$104,996 over 3 years • Multiple Sclerosis (MS) Scientific Research Foundation <i>Title:</i> The clinical-demographic, epidemiology, pathobiology and neuroimaging features of acute demyelination in Canadian children <i>Principal Investigator (lead):</i> Banwell, B <i>Other Principal Investigators:</i> Bar-Or, A, Sadovnick, D, Marie, R.A., Arnold, D <i>Co-investigators:</i> C. Till F. Costello \$4.653 million over 3 years
John Tsotsos	<ul style="list-style-type: none"> • NSERC Discovery Grant Amount: \$60,500 PI • Canada Research Chair in Computational Vision \$200,000: PI • NSERC Canadian Field Robotics Network \$41,000 • York University CRC Supplement \$40,000 PI • York University NSERC Canadian Field Robotics Network Supplement \$ 31,000 PI • OCE Expert Resource Program \$15,000 PI • OCE Market Readiness Program \$25,000 PI • NSERC Strategic Network Grant in Field Robotics.(NFRN). \$1M/year x 5 years. Dudek PI; Jenkin and Tsotsos co-Is.
Laurie Wilcox	<ul style="list-style-type: none"> • NSERC College University I2I \$420,648 Co-applicant (1 of 3) • GRAND NCE \$22,000 NCI • NSERC Partnerships Workshop\$25,000 PI • NSERC Discovery \$200,000 PI
Richard Wildes	<ul style="list-style-type: none"> • Data Acquisition and Analysis for 3D Computer Vision Surgical Robotics; Funded by CIV-DDD ORF; \$20,000; PI. • Background Image Modeling for Video Analytics and Surveillance; Funded by NSERC; \$25,000; PI. • Early Representation and Analysis of Visual Spacetime; Funded by NSERC; \$22,000; PI.
Frances Wilkinson	<ul style="list-style-type: none"> • NSERC Behavioural and Imaging Studies of Face and Object Perception, Discovery Grant, PI, \$39,936/yr. • CIHR Face recognition across head orientations: Perception, brain imaging, and modeling, Operating Grant, co-I, \$90,968/yr.
Hugh Wilson	<ul style="list-style-type: none"> • CIHR Operating Grant (7/2007 to 7/2014) PI “Face Recognition Across Head Orientations: Perception & Brain Imaging” \$80,000 • NSERC Operating Grant (4/2010 to 4/2015) PI “Visual Discrimination and Learning of Motion Trajectories” \$64,100 • NSERC CREATE Training Grant (4/2011 to 4/2017) “Vision Science and Applications \$300,000 • Canadian Institute for Advanced Research (6/2009-6/2014)) Fellow, Program in Neural Computation and Perception \$30,000
Thilo Womelsdorf	<ul style="list-style-type: none"> • Attentional Control Functions in Neuronal Microcircuits and Large Scale Brain Networks. CFI (Canada Foundation for Innovation), Leaders Opportunity Fund \$317.000 CAD • Neuronal mechanisms underlying the emergence of selective attentional control. CIHR New Investigator, Canadian Institutes of Health Research \$300.000 CAD [01.07.2012-30.06.2017]. • Dissociating the functional contributions of striatal and fronto-cingulate subdivisions for learning the value of stimuli and actions. NSERC Discovery

	<p>Grant \$160.000 CAD (\$32k per annum)</p> <ul style="list-style-type: none"> • Measuring functional networks of multiple brain cells with a fine-scale triade electrode system during higher attentional task performance. NSERC RTI Equipment grant \$60.750 CAD • Elucidating how attention is controlled by networks of brain cells - Identifying the cellular mechanisms that decide what we attend. Granting body: Early Researcher Award (ER11-08-140), Ontario Ministry of Economic Development and Innovation (MEDI) \$140.000 CAD • Neuronal mechanisms underlying the emergence of selective attentional control. CIHR Operating Grant, \$855.800 • Real-time graph dynamics from fMRI, MEG and electrophysiological measurements. IBM and the Southern Ontario Smart Computing Innovation Platform (SOSCIP). Main PI: Prof. Mark Daley (Computer Science, Western University). Collaborators: Prof. Thilo Womelsdorf (York University), Prof. Randy McIntosh (Rotman-Baycrest Research Institute, University of Toronto), Prof. Rhodri Cusack (Western University).
Georg Zoidl	<ul style="list-style-type: none"> • CIHR/CRC (Tier I) \$200,000y (PI) • NSERC-DG \$31,000y (PI) • CFI-LOF \$268,000 (PI)