

Oct 5th, 2020

Curriculum Vitae - J. Douglas Crawford

GENERAL INFORMATION:

Name: John Douglas Crawford

York Address: York Centre for Vision Research,
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York University,
4700 Keele Street
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Education:

<u>Degree/Title</u>	<u>Location (Supervisor)</u>	<u>Discipline</u>	<u>Completed</u>
MRC Fellow	MNI (D. Guitton)	Neurology & Neurosurgery	Dec. 1994
Ph.D.	Western (T. Vilis)	Physiology	Feb. 1993
B.Sc.	Western (G. Mogenson)	Physiology & Psychology	Apr. 1987

Current Appointments:

- Scientific Director for VISTA (Vision: Science to Applications)
- Canada Research Chair in Visuomotor Neuroscience (Tier 1)
- Distinguished Research Professor in Neuroscience; Departments of Psychology, Biology, and Kinesiology & Health Science
- Member and Steering Committee member, York Centre for Vision Research
- Member, Graduate Diploma Program in Neuroscience, Faculty of Health, York.
- Member, Brain in Action International Research Training Group.
- Member, Canadian Action and Perception Network (<http://www.cap-net.ca/>)
- Member, Canadian Brain Research Strategy Neuroscience Leaders Group

Previous Positions:

<u>Year</u>	<u>Position</u>	<u>Institution</u>	<u>Department</u>
2007-2016	National Coordinator	York University	CAPnet
2014-2016	Director	York University	Brain in Action Program
2009-2015	York Coordinator	York University	CAN-ACT CREATE Prog.
2008-2010	Coordinator	York University	Neurosci. Grad. Dipl. Prog.
2005-2013	Professor	York University	Psych, Bio, Kin
2003-2009	Co-PI	York University	CIHR Vision Health Prog.
2003-2005	Associate Director	York University	Centre for Vision Research
2001-2007	Tier 2 CIHR CRC	York University	Centre for Vision Research
2000-2005	Associate Professor	York University	Kinesiology Grand Program
1999-2009	Toronto Coordinator	York University	CIHR Group Action & Perc.
1999-2005	Associate Professor	York University	Psychology and Biology
1996-2001	MRC Scholar	York University	Psychology and Biology
1996-1998	Sloan Fellow	York University	Psychology and Biology
1995-2012	Founding Chair	York University	Primate Physiology Labs
1995-1999	Assistant Professor	York University	Biology Grad Program
1995-1999	Assistant Professor	York University	Psychology
1993-1994	MRC Fellow	McGill University	Neurology & Neurosurgery
1987-1993	MRC Student	U. Western Ontario	Physiology
1987-1992	Teaching Assistant	U. Western Ontario	Physiology
1986	NSERC Student	U. Western Ontario	Zoology

Honours and Awards:

- 2019 Post-Doctoral Fellow Supervisor of the Year Award, York U
- 2018 President's Research Excellence Award (\$10,000.00)
- 2016 Dean's Research Award (Established Career) for 2015-16 York University
- 2016 Sarrazin Award Lectureship from the Canadian Physiological Society
- 2014 Tier 1 CRC Renewal (\$200,000/yr)
- 2014 York Research Leadership Award
- 2013 Distinguished Research Professorship in Neuroscience
- 2011 York Faculty of Health Merit Award (\$3000)
- 2010 York Faculty of Health Merit Award (\$3000)
- 2009 York Faculty of Health Merit Award (\$3000)
- 2008 York Faculty of Health Merit Award (\$3000)
- 2007 Canada Research Chair (CIHR Tier I) \$200,000/yr + 54,148/yr matching funds
- 2007 UWO School of Medicine and Dentistry Dean's Award of Excellence in Research in the Team Category (for CIHR Group for Action and Perception)
- 2006 Canada Research Chair (CIHR Tier II) renewal \$100,000/yr
- 2004 The Steacie Prize. "\$15,000 presented once a year to a scientist or engineer of 40 years of age or less for outstanding scientific research carried out in Canada."
- 2003 Faculty of Graduate Studies Teaching Award (York U.)
For supervision, curriculum development & teaching
- 2002 CIAR Young Explorer Award "Top 20 Young Canadian Investigators" \$2000
- 2001-06 Canada Research Chair (CIHR Tier II) \$100,000/yr + 80,000/yr matching funds.
- 2000 Premier's Research Excellence Award (Government of Ontario) \$150,000
- 1999 Dean's Award for Outstanding Research (York University) \$500

- 1996-01 Medical Research Council of Canada Scholarship \$50,000 / year + benefits.
- 1996-98 Alfred P. Sloan Neuroscience Fellowship \$35,000 USD
- 1995 John Charles Polanyi Prize In Physiology / Medicine (Government of Ont.) \$15,000
- 1994 Lindsey Prize Finalist (Society for Neuroscience) Best behavioural neuroscience Ph.D.
- 1993-96 Medical Research Council of Canada Fellowship \$30,000 / yr.
- 1993 Governor General Gold Medal (U.W.O)
- 1993 Esme Walker Award (U.W.O) \$750 for best graduating physiology Ph.D. Student.
- 1991 J.A.F Stevenson Memorial Scholarship (U.W.O.) \$1,000.
- 1991 G. J. Mogenson Award (U.W.O.) \$1,000, Physiology Ph.D. with best research potential
- 1991 Graduate Research Award (U.W.O.) \$1500 for research achievements & potential.
- 1989-92 Medical Research Council of Canada Studentship \$15,000 / yr.
- 1987-89 Ontario Graduate Scholarship \$12,000 / yr.
- 1987-91 Graduate Teaching Award (U.W.O.) \$3,000 / yr. scholarship for teaching.
- 1986-87 Dean's Honour List - Uni. of Western Ontario (U.W.O.) Science faculty.

PROFESSIONAL CONTRIBUTION AND STANDING:

Citation Stats (Google): h-index = 50; i10-index = 113; citations = 7663

PUBLICATIONS:

Refereed Journal Articles (Submitted)

Baltaretu, B.R, Dunkley, B., Stevens, W.D, Crawford, J.D. (in revision) Parietal Mechanisms for Transsaccadic Spatial Frequency Perception: An fMRI Study. *Scientific Reports (bioRxiv, 203190)*

Ghaderi, A.H and Crawford, J.D. (in revision) Linear vector models of time perception account for saccade – stimulus novelty interactions. *Scientific Reports (bioRxiv, 201087)*

Bharmauria, V., Sajad, A., Xiaogang, Y., Hongwing, W., & Crawford, J.D. (Submitted). Spatiotemporal coding in the macaque supplementary eye fields: Landmark influence in the target-to-gaze transformation. *eNeuro*. REF # JN-RM-1654-20 / bioRxiv, 172031.

Tomou, G., Yan, X., & Crawford, J.D. (Submitted). Allocentric landmarks enhance transsaccadic memory of multiple objects. *Journal of Vision*.

Velji-Ibrahim, J., Crawford, J. D Luigi Cattaneo, L., & Monaco, S. (Submitted). Action intention modulates the representation of object features in early visual cortex *Neuroimage / bioRxiv 480574*

Monaco S, Chen Y, Crawford JD. (Submitted). Action-Specific Feature Processing in Human Visual Cortex. *Cerebral Cortex / bioRxiv, 420760*

Refereed Journal Articles (Published or Accepted):

Baltaretu, B. R, Monaco, S., Velji-Ibrahim, J., Luabeya, G. N. & Crawford, J. D. (2020). Parietal cortex integrates saccade and object orientation signals to update grasp plans. *The Journal of Neuroscience*, 40(23) 4525-4535.

Bharmauria, V., Sajad, A., Li, J., Yan, X., Wang, H., & Crawford, J. D. (2020). Integration of eye-centered and landmark-centered codes in frontal eye field gaze responses. *Cerebral Cortex*. <https://doi.org/10.1093/cercor/bhaa090>

Schmitt, C., Baltaretu, B.R., Crawford, J.D. & Bremmer, F. (2020). TMS-induced disturbance of self-motion perception in humans. *Cerebral Cortex Comm. Volume 1, Issue 1, tga042*.

- Sajad, A., Sadeh, M., & Crawford, J.D. (2020). Spatiotemporal transformations for gaze control. *Physiological Reports*. 8 (e14533)
- Sadeh, M., Sajad, A., Wang, H., Yan, X., & Crawford, J. D. (2020). Timing Determines Tuning: a Rapid Spatiotemporal Transformation in Superior Colliculus Neurons During Reactive Gaze Shifts. *eNeuro*. eN-NWR-0359-18R2
- Chen, Y., & Crawford, J. D. (2020). Allocentric representations for target memory and reaching in human cortex. *Annals of the New York Academy of Sciences*, 1464(1), 142-155.
- Arora, H., Bharmauria, V., Yan, X., Sun, S., Wang, H. & Crawford, J. D. (2019). Eye-head-hand coordination during visually guided reaches in head-unrestrained macaques. *Journal of Neurophysiology*. 122(5), 1946-1961.
- Blohm, G., Alikhanian, H., Gaetz, W., Goltz, H. C., DeSouza, J. F., Cheyne, D. O., & Crawford, J. D. (2019). Neuromagnetic signatures of the spatiotemporal transformation for manual pointing. *NeuroImage*, 197, 306-319.
- Sedov, A., Semenova, U., Usova, S., Tomskiy, A., Crawford, J. D., Jinnah, H.A., & Shaikh, A.G. (2019). The role of pallidum in the neural integrator model of cervical dystonia. *Neurobiology of Disease*. 125, 45-54.
- Sedov A., Semenova, U., Usova, U., Tomskiy, A., Crawford, J. D., Jinnah, H. A. & Shaikh, A. G. (2019). Implications of asymmetric neural activity patterns in the basal ganglia outflow in the integrative neural network model for cervical dystonia. *Progress in Brain Research*. 249, 261-268.
- Sadeh, M., Sajad, A., Wang, H., Yan, X., & Crawford, J. D (2018). The influence of a memory delay on spatial coding in the superior colliculus: is visual always visual and motor always motor? *Frontiers in Neural Circuits*. Manuscript ID: 393696
- Chen, Y., Monaco S, & Crawford, J. D (2018) Neural Substrates for Allocentric-to-Egocentric Conversion of Remembered Reach Targets in Humans. *European Journal of Neuroscience*. 47(8):901-917
- Chen, Y., & Crawford, J. D (2017) Cortical Activation during Landmark-Centered vs. Gaze-Centered Memory of Saccade Targets in the Human: An fMRI Study *Frontiers in Systems Neuroscience*. 2017 Jun 23;11:44. doi: 10.3389/fnsys.2017.00044.
- Li, J., Sajad, A., Marino, R., Yan, X., Sun, S., Wang, H., & Crawford, J. D. (2017). Effect of allocentric landmarks on primate gaze behavior in a cue conflict task. *Journal of Vision*. 17(5):20. doi: 10.1167/17.5.20.

- Le, A., Vesia, M., Yan, X., Crawford, J. D., & Niemeier, M. (2017). Parietal Area BA7 Selectively Integrates Motor Programs for Reaching, Grasping, and Bimanual Coordination. *Journal of Neurophysiology* 117(2) 624-636
- Heuer A., Crawford, J. D, & Schubö A. (2017). Action-relevance induces an attentional weighting of representations in visual working memory. *Memory & Cognition* 45(3):413-427.
- Cappadocia, D. C., Monaco, S., Chen, Y., Blohm, G.,& Crawford, J. D (2017). Temporal evolution of target representation, movement direction planning, and reach execution in occipital-parietal-frontal cortex: an fMRI study *Cerebral Cortex* 27(11) 5242–5260
- Daemi, M., Harris, L. R., & Crawford, J. D. (2016). Reaction-Time Variability of Gaze-Shifts towards Cross-Modal Stimuli: A Computational Study in a Decision Making Framework. *Frontiers in Computational Neuroscience*. 10(179):1-16.
- Shaikh, A.G., Zee, D.S., Crawford, J. D., & Jinnah, H.A. (2016). Contributions of visual and motor signals in cervical dystonia. *Brain* 140(1):e5
- Shaikh, A. G., Zee, D. S., Crawford, J. D, & Jinnah, H. A. (2016). Cervical Dystonia: a neural integrator disorder. *Brain* 2016 Jun 20. 139(Pt 10):2590-2599
- Dunkley, B., Baltaretu, B., & Crawford, J. D (2016). Trans-saccadic Interactions in human parietal and occipital cortex during the retention and comparison of object orientation. *Cortex* 82:263-276.
- Daemi, M., Harris, L. R., & Crawford, J. D. (2016). Causal Inference for Cross-Modal Action Selection: A Computational Study in a Decision Making Framework. *Frontiers in Computational Neuroscience* 23;10:62
- Heuer A., Crawford, J. D, & Schubö A. (2016). Different cortical mechanisms for spatial vs. feature-based attentional selection in visual working memory. *Frontiers in Human Neuroscience* 10: 415
- Monaco, S., Buckingham, G., Sperandio, I., & Crawford, J. D. (2016) Editorial: Perceiving and Acting in the real world: from neural activity to behavior *Frontiers in Human Neuroscience* 10, 179, 2016
- Mohsenzadeh, Y, Dash S & Crawford, J. D. (2016). A state space model for spatial updating of remembered visual targets during eye movements. *Frontiers in Human Neuroscience* 2016 May 12;10:39. doi: 10.3389/fnhum.2016.00039
- Dash, S., Alipour-Nazari, S., Yan, X., Wang, H., & Crawford, J. D (2016). Superior colliculus responses to attended, unattended, and spatially updated saccade targets during smooth pursuit eye movement. *Frontiers in Systems Neuroscience* 2016 Apr 12;10:34. doi: 10.3389/fnsys.2016.00034.

- Sajad, A., Sadeh, M., Yan, X., Wang, H., & Crawford, J. D. (2016). Transition from Target to Gaze Coding in Primate Frontal Eye Field During Memory Delay and Memory-Motor Transformation. *eNeuro* 3 (2), ENEURO. 0040-16.2016
- Sadeh, M., Sajad, A., Wang, H., Keith, G. P., Yan, X., & Crawford, J. D. (2015) Spatial transformations between superior colliculus visual and motor responses during head-unrestrained gaze shifts. *European Journal of Neuroscience* EJN-2014-12-22318.
- Malik, P., Dessing, J., & Crawford, J. D. (2015) Role of Early Visual Cortex in Trans-Saccadic Memory of Object Features *Journal of Vision* JOV-04547-2014
- Daemi M., & Crawford, J. D. (2015) A Kinematic Model for 3-D Head-Free Gaze-Shifts *Frontiers in Computational Neuroscience*. Article ID: 118183
- Perry, C.J., Sergio, L.E., Crawford, J.D., Fallah, M. (2015) Hand placement near the visual stimulus improves orientation selectivity in area V2 neurons. *Journal of Neurophysiology*. 113(7):2859-70
- Dash, S., Yan, X., Wang, H., & Crawford, J. D (2015). Continuous updating of visuospatial memory in superior colliculus during slow eye movements. *Current Biology*. 2;25(3):267-74
- Sajad, A., Sadeh, M., Keith, G. P., Yan, X., Wang, H., Crawford, J. D.(2015) Visual-Motor Transformations within Frontal Eye Fields During Head-Unrestrained Gaze Shifts in the Monkey *Cerebral Cortex* 2015 Oct;25(10):3932-52.
- Tanaka, L., Dessing, J.C., Malik, P., Prime, S.L., & Crawford J.D. (2014) The effects of TMS over dorsolateral prefrontal cortex on Trans-Saccadic memory of multiple objects *Neuropsychologia* 63:185-93
- Chen, Y., Monaco, S., Byrne, P., Yan, X., Henriques, D. Y. P & Crawford, J. D. (2014) Allocentric vs. Egocentric Representation of Remembered Reach Targets in Human Cortex *Journal of Neuroscience* 34(37):12515-26
- Monaco, S., Chen, Y., Medendorp, W. P., Crawford, J. D, Fiehler, K., & Henriques, D. Y. P (2014). Functional magnetic resonance imaging adaptation reveals the cortical networks for processing grasp-relevant object properties. *Journal of Cerebral Cortex*. 24(6):1540-54.
- Sayegh, P., Hawkins, K., Neagu, B., Crawford, J. D, Hoffman, K., & Sergio, L.E (2014). Decoupling the actions of the eyes from the hand alters beta and gamma synchrony within SPL. *Journal of Neurophysiology* 111(11):2210-21
- Alikhanian, H., Crawford, J.D., DeSouza, J. F. X., Cheyne, D. O., Blohm, G. (2013) Adaptive cluster analysis approach for functional localization using magnetoencephalography. *Frontiers in Brain Imaging Methods*. 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. *Cerebral Cortex* 24(10):2591-603.
- Dessing, J., Vesia, M & Crawford, J. D. (2013). The role of areas MT+/V5 and SPOC in spatial and temporal control of manual interception: an rTMS study. *Frontiers in Behavioral Neuroscience*. 2013 March 5;7:15 doi: 0.3389/fnbeh.2013.00015.
- Monteon, J. A., Wang, H., Martinez-Trujillo, J. C., & Crawford, J. D. (2013). Frames of reference for eye-head gaze shifts evoked during stimulation of the primate frontal eye fields. *European Journal of Neuroscience*. 37(11):1754-65
- Hawkins, K., Sayegh, P., Crawford, J.D., & Sergio, L.E. (2013). Neural activity in Superior Parietal Cortex during rule-based Visual- Motor Transformations. *Journal of Cognitive Neuroscience*. 25(3):436-54
- Dessing, J., Abadeh, A., Byrne, P., & Crawford, J. D. (2012). Hand-related, rather than goal-related, source of gaze-dependent errors in memory-guided reaching. *Journal of Vision* 2012 Oct 22;12(11).
- Farshadmanesh, F.1,2, Byrne, P.1,2, Wang, H.1,2, Corneil, B. D.2,3, & Crawford, J. D 1,2. (2012) Relationships between neck muscle electromyography and three-dimensional head kinematics during centrally-induced torsional head perturbations. *Journal of Neurophysiology* 108(11):2867-83
- Monteon, J. A., Avillac, M., Yan, X., Wang, H., & Crawford, J. D. (2012) Neural Mechanisms for Predictive Head Movement Strategies During Sequential Gaze Shifts. *Journal of Neurophysiology* 108(10):2689-707
- Vesia, M & Crawford, J.D. (2012). Specialization of reach function in human posterior parietal cortex. *Experimental Brain Research* 221(1):1-18.
- DeSouza, J. F. X., Keith, G. P., Yan, X., Blohm, G., Wang, H. & Crawford, J. D. (2011) Intrinsic reference frames of superior colliculus visuomotor receptive fields during head-unrestrained gaze shifts. *Journal of Neuroscience* 31(50): 18313-26.
- Farshadmanesh, F., Byrne, P., Keith, G. P., Wang, H., Corneil, B. D., & Crawford, J.D. (2011). Cross-validated models of the relationships between neck muscle electromyography and three-dimensional head kinematics during gaze behavior. *Journal of Neurophysiology* 107(2): 573 – 90.
- Dessing, J., Crawford, J. D. & Medendorp, W. P. (2011). Spatial updating across saccades during manual interception. *Journal of Vision* 11(10): 4, 1-18
- Niechwiej, E., Goltz, H. C., Chandrakumar, M., Hirji, Z., Crawford, J. D., Wong, A. (2011) Effects of Anisometric Amblyopia on Visuomotor Behavior, part 2:

Visually Guided Reaching. *Investigative Ophthalmology & Visual Science* 52(2): 795-803

Crawford, J. D., Henriques, D. Y. P. & Medendorp, W. P. (2011). Three-Dimensional Transformations for Goal Directed Action. *Annual Review of Neuroscience*, 34:309-31.

Prime, S., Vesia, M., & Crawford, J. D. (2011) Cortical Mechanisms for Trans-saccadic Memory and Integration of Multiple Object Features. *Philosophical Transactions of the Royal Society B: Biological Sciences* 366(1564), 540-553

Chen, Y., Byrne, P., Crawford, J. D. (2011) Time course of allocentric decay, egocentric decay, and allocentric-to-egocentric conversion in memory-guided reach. *Neuropsychologia* 49(1): 49-60

Monteon, J. A., Constantin, A. G., Wang, H., Martinez-Trujillo, J. C., & Crawford, J. D. (2010) Electrical Stimulation of the Frontal Eye Fields in the Head-Free Macaque Evokes Kinetically Normal Gaze Shifts. *Journal of Neurophysiology* 104(6): 3462-3475

Byrne, P., Cappadocia, D. C. & Crawford, J. D. (2010) Interactions between gaze-centered and allocentric representations of reach target location in the presence of spatial updating. *Vision Research* 50(24): 2661-2670

Vesia, M., Prime, S., Yan, X. G., Sergio, L., & Crawford, J. D. (2010) Specificity of human parietal saccade and reach regions during transcranial magnetic stimulation. *Journal of Neuroscience* 30(39): 13053-13065

Byrne, P. & Crawford, J. D. (2010) Cue reliability and a landmark stability heuristic determine relative weighting between egocentric and allocentric visual information in memory-guided reach. *Journal of Neurophysiology* 103(6): 3054-3069

Prime, S., Vesia, M. & Crawford, J. D. (2010). TMS Over Human Frontal Eye Fields Disrupts Trans-saccadic Memory of Multiple Objects. *Cerebral Cortex* 20(4): 759-72.

Blohm, G., & Crawford, J. D. (2009) Fields of gain in the brain. *Neuron*, 10;64(5): 598-600.

Keith, G. P., Blohm, G., & Crawford, J. D. (2009) Influence of saccade efference copy on the spatiotemporal properties of remapping: A neural network study. *Journal of Neurophysiology* 103(1):117-139.

Constantin, A. G., Wang, H., Monteon, J. A., Martinez-Trujillo, J., Crawford, J. D. (2009) 3-D eye-head coordination in gaze shifts evoked during stimulation of the lateral intraparietal cortex (LIP). *Neuroscience* 164(3): 1284-1302.

- Blohm, G., Keith, G. P., & Crawford, J. D. (2009). Decoding the cortical transformations for visually guided reaching in 3D space. *Cerebral Cortex*, 19(6): 1372-93.
- Keith, G. P., Desouza, J. F. X., Yan, X., Wang, H., & Crawford, J. D. (2009). A method for mapping response fields and determining intrinsic reference frames of single-unit activity: Applied to 3-D head unrestrained gaze shifts. *Journal of Neuroscience Methods*, 180(1): 171-84.
- Ren, L., & Crawford, J. D. (2009). Coordinate transformation for hand-guided saccades. *Experimental Brain Research*, 195(3): 455-65.
- Blohm, G., Khan, A. Z., Ren, L., Schreiber, K. M. & Crawford, J. D. (2008). Depth estimation from retinal disparity requires eye and head orientation signals. *Journal of Vision*, 8(16): 1-23.
- Vesia, M., Yan, X., Henriques, D. Y., Sergio, L. E., & Crawford, J. D., (2008). TMS over human dorsal-lateral posterior parietal cortex disrupts integration of hand position signals into the reach plan. *Journal of Neurophysiology*, 100(4): 2005-14.
- Farshadmanesh, F., Chang, P., Wang, H., Yan, X., Corneil, B. D., & Crawford, J. D. (2008). Neck muscle synergies during stimulation and inactivation of the interstitial nucleus of cajal (INC). *Journal of Neurophysiology*, 100(3): 1677-85.
- Prime, S., Vesia, M., & Crawford, J. D. (2008). Transcranial magnetic stimulation (TMS) over posterior parietal cortex disrupts transsaccadic memory of multiple objects. *Journal of Neuroscience*. 28(27): 6938-49.
- Keith, G. & Crawford, J. D. (2008) Saccade-related remapping of target representations between topographic maps: A neural network study. *Journal of Computational Neuroscience*. 24(2): 157-78.
- Fernandez-Ruiz, J., Goltz, H. C., DeSouza J. F, Vilis, T. & Crawford, J. D. (2007) Human parietal 'reach region' primarily encodes intrinsic visual direction, not extrinsic movement direction, in a visual-motor dissociation task. *Cerebral Cortex*, 17(10): 2283-92.
- Ren, L., Blohm, G., & Crawford, J. D. (2007) Comparing limb proprioception and oculomotor signals during hand-guided saccades. *Experimental Brain Research*, 182(2): 189-98.
- Constantin, A. G., Martinez-Trujillo, J., Wang, H. & Crawford, J. D. (2007) Frames of reference for gaze saccades evoked during stimulation of lateral intraparietal cortex. *Journal of Neurophysiology*, 98(2): 696-709.
- Khan, A. Z., Crawford, J. D., Blohm, G., Urquizar, C., Rossetti, Y., & Pisella, L. (2007). Influence of initial hand and target position on reach errors in optic ataxic and normal subjects. *Journal of Vision*. 7(5): 8.1-16.

- Prime, S. L., Tsotsos, L., Keith, G. P. & Crawford, J. D. (2007). Visual memory capacity in transsaccadic integration. *Experimental Brain Research*, 180(4): 609-28.
- Blohm, G., & Crawford, J. D. (2007). Computations for geometrically accurate visually guided reaching in 3-D space. *Journal of Vision*. 7(5): 4.1-22.
- Niemeier, M., Crawford J. D., Tweed D. B. (2007) Optimal inference explains dimension-specific contractions of spatial perception. *Experimental Brain Research*, 179(2): 313-23.
- Keith, G. P., Smith, M. A., & Crawford, J. D. (2007) Functional organization within a neural network trained to update target representations across 3-D saccades. *Journal of Computational Neuroscience*, 22(2): 191-209.
- Farshadmanesh, F., Klier, E. M., Chang, P., Wang, H., Crawford, J. D. (2007) Three-dimensional eye-head coordination after injection of muscimol into the interstitial nucleus of Cajal (INC). *Journal of Neurophysiology*, 97(3): 2322-38.
- Klier, E. M., Wang, H. & Crawford, J. D. (2007). The interstitial nucleus of Cajal encodes three-dimensional head orientations in Fick-like coordinates. *Journal of Neurophysiology*, 97(1): 604-17.
- Vesia, M., Monteon, J. A., Sergio, L. E., & Crawford, J. D. (2006) Hemispheric asymmetry in memory-guided pointing during single-pulse transcranial magnetic stimulation of human parietal cortex. *Journal of Neurophysiology*, 96(6): 3016-27.
- Ren, L., Khan, A. Z., Blohm, G., Henriques, D. Y., Sergio, L. E., & Crawford, J. D. (2006) Proprioceptive guidance of saccades in eye-hand coordination. *Journal of Neurophysiology*, 96(3): 1464-1477
- Prime, S., Niemeier, M. & Crawford, J. D. (2006) Transsaccadic integration of visual features in a line intersection task. *Experimental Brain Research*, 169(4): 532-548
- Khan, A. Z., Rossetti, Y., Pisella, L., Vighetto, A., & Crawford, J. D. (2005) Impairment of gaze-centred updating of reach targets in bilateral parietal-occipital damaged patients. *Cerebral Cortex*. 15(10): 1547-60
- Monteon, J. A., Martinez-Trujillo, J. C., Wang, H., & Crawford, J. D. (2005) Cross-coupled adaptation of eye and head position commands in the primate gaze control system. *Neuroreport* 16(11): 1189-92
- Khan A. Z., Pisella, L., Vighetto, A., Cotton F., Luauté, J., Boisson, D., Salemme, R. Crawford*, J. D., Rossetti*, Y. (* equal authors) (2005) Optic ataxia errors depend on remapped, not viewed target location. *Nature Neuroscience*. 8(4): 418-20.

- Smith, M. A. & Crawford, J. D. (2005). A distributed population mechanism for the 3-D oculomotor reference frame transformation. *Journal of Neurophysiology* 93(3): 1742-61
- Marotta, J. J., Keith G., & Crawford J. D. (2005) Task-specific sensorimotor adaptation to reversing prisms. *Journal of Neurophysiology* 93(2): 1104-10.
- Medendorp, W. P., Goltz, H. C., Crawford, J. D., & Vilis, T. (2005) Integration of target and effector information in human posterior parietal cortex for the planning of action. *Journal of Neurophysiology*. 93(2): 954-962.
- Martinez-Trujillo, J. C., Medendorp, W. P., Wang, H., & Crawford, J. D. (2004). Frames of reference for eye-head gaze commands in primate supplementary eye fields. *Neuron*, 44(6):1057-66.
- Constantin, A. G., Wang, H. & Crawford J. D. (2004). Role of the Superior Colliculus in adaptive eye-head coordination during gaze shifts. *Journal of Neurophysiology*. 92:2168 – 84.
- Crawford, J. D., Medendorp, W. P., & Marotta, J. J. (2004) Spatial transformations for eye-hand coordination. *Journal of Neurophysiology*. 92: 10-19.
- Crawford, J. D., Martinez-Trujillo, J. C., & Klier, E. M. (2003). Neural control of three-dimensional eye movements. *Current Opinion in Neurobiology*, 13(6):655-62.
- Marotta, J. J., Medendorp, W. P., & Crawford, J. D. (2003). Kinematic rules for upper and lower arm contributions to grasp orientation. *Journal of Neurophysiology*, 90, 2770-6.
- Crawford, J. D., Tweed, D. B., & Vilis, T. (2003). Static ocular counterroll is implemented through the 3-D neural integrator. *Journal of Neurophysiology*, 90, 2777-2784.
- Martinez-Trujillo, J. C., Klier, E. M., Wang, H., & Crawford, J. D. (2003). Contribution of head movement to gaze command coding in monkey frontal cortex and superior colliculus. *Journal of Neurophysiology*, 90, 2770-2776.
- Medendorp, W. P., Tweed, D. B., & Crawford, J. D. (2003). Motion parallax is computed in the updating of human spatial memory. *Journal of Neuroscience*, 23, 8135-8142.
- Henriques, D. Y. P., Medendorp, W. P., Gielen, S., & Crawford, J. D. (2003). Geometric computations underlying eye-hand coordination: orientations of the two eyes and the head. *Experimental Brain Research*, 152, 70-8.
- Medendorp, W. P., Goltz, H. C., Vilis, T., & Crawford, J. D. (2003). Gaze-centered updating of visual space in human parietal cortex. *Journal of Neuroscience*, 23, 6209-6214.

- Martinez-Trujillo, J. C., Wang, H., & Crawford, J. D. (2003). Electrical stimulation of the supplementary eye fields in the head-free macaque evokes kinematically normal gaze shifts. *Journal of Neurophysiology*, *89*, 2961-2974.
- Klier, E., Wang, H., & Crawford, J. D. (2003). Three-dimensional eye-head coordination is implemented downstream from the superior colliculus. *Journal of Neurophysiology*, *89*, 2839-2853.
- Niemeier, M., Crawford, J. D., & Tweed, D. (2003). Optimal transsaccadic integration explains suppression of displacement and distortions of space. *Nature*, *422*, 76-80.
- Khan, A. Z., & Crawford, J. D. (2003). Coordinating one hand with two eyes: Optimizing for field of view in a pointing task. *Vision Research*, *43*, 409-417.
- Medendorp, W. P., & Crawford, J. D. (2002). Visuospatial updating of reaching targets in near and far space. *Neuroreport*, *13*, 633-636.
- Henriques, D. Y. P., & Crawford, J. D. (2002). Role of eye-head-shoulder geometry in the planning of accurate arm movements. *Journal of Neurophysiology*, *87*, 1677-1685.
- Klier, E., Wang, H., Constantin, A. G., & Crawford, J. D. (2002). Midbrain control of three-dimensional head orientation. *Science*, *295*, 1314-1316.
- Medendorp, W. P., Smith, M. A., Tweed, D. B., & Crawford, J. D. (2002). Rotational remapping in human spatial memory during eye and head motion. *Journal of Neuroscience*, *22*, RC 196.
- Crawford, J. D. (2002). Everything old is new again? Response. *Science*, *297*, 335-336.
- Henriques, D. Y. P., & Crawford, J. D. (2001). Testing the three-dimensional reference frame transformation for express and memory-delay saccades. *Neurocomputing*, *38*, 1267-1280.
- Smith, M. A., & Crawford, J. D. (2001). Implications of Ocular Kinematics for the internal updating of visual space. *Journal of Neurophysiology*, *86*, 2112-2117.
- Klier, E., Wang, H., & Crawford, J. D. (2001). The superior colliculus codes gaze commands in retinal coordinates. *Nature Neuroscience*, *4*, 627-632.
- Khan, A. Z., & Crawford, J. D. (2001). Ocular dominance reverses as a function of horizontal gaze angle. *Vision Research*, *41*, 1743-1748.
- Schreiber, K., Crawford, J. D., Fetter, M., & Tweed, D. (2001). The motor side of depth perception. *Nature*, *410*, 819-822.
- Smith, M. A., & Crawford, J. D. (2001). Self-organizing task modules and explicit

- coordinate systems in a neural network model for 3-D saccades. *Journal of Computational Neuroscience*, *10*, 127-150.
- Medendorp, P., Crawford, J. D., Henriques, D., van Gisbergen, J. A. M., & Gielen, C. C. A. M. (2000). Kinematic strategies for upper arm-forearm coordination in three dimensions. *Journal of Neurophysiology*, *84*, 2302-2316.
- Henriques, D. Y. P., & Crawford, J. D. (2000). Direction-dependent distortions of retinocentric space in the visuomotor transformation for pointing. *Experimental Brain Research*, *132*, 179-194.
- Ceylan, M. Z., Henriques, D. Y. P., Tweed, D. B., & Crawford, J. D. (2000). Task-dependent constraints in motor control: pinhole goggles make the head move like an eye. *Journal of Neuroscience*, *20*, 2719-2730.
- Crawford, J. D., Henriques, D. Y. P., & Vilis, T. (2000). Curvature of visual space under vertical eye rotation: implications for spatial vision and visuomotor control. *Journal of Neuroscience*, *20*, 2360-2368.
- Crawford, J. D., Ceylan, M. Z., Klier, E. M., & Guitton, D. (1999). Three-dimensional eye-head coordination during gaze saccades in the primate. *Journal of Neurophysiology*, *81*, 1760-1782.
- Smith, M. A., & Crawford, J. D. (1998). Neural control of rotational kinematics within realistic vestibulo-ocular coordinate systems. *Journal of Neurophysiology*, *80*, 2295-2315.
- Klier, E. M., & Crawford, J. D. (1998). The human oculomotor system accounts for 3-D eye orientation in the visual-motor transformation for saccades. *Journal of Neurophysiology*, *80*, 2274-2294.
- Henriques, D. Y. P., Klier, E. M., Smith, M. A., Lowy, D., & Crawford, J. D. (1998). Gaze-centered remapping of remembered visual space in an open-loop pointing task. *Journal of Neuroscience*, *18*, 1583-1594.
- Crawford, J. D., & Guitton, D. (1997). Primate head-free saccade generator implements a desired (post-VOR) eye position command by anticipating intended head motion. *Journal of Neurophysiology*, *78*, 2811-2816.
- Crawford, J. D., & Guitton, D. (1997). Visuomotor transformations required for accurate and kinematically correct saccades. *Journal of Neurophysiology*, *78*, 1447-1467.
- Crawford, J. D., & Vilis, T. (1995). How do motor systems deal with the problems of controlling three-dimensional rotations? *Journal of Motor Behaviour*, *27*, 89-99.
- Crawford, J. D. (1994). The oculomotor neural integrator uses a behavior-related

coordinate system. *Journal of Neuroscience*, 14, 6911-6923.

Crawford, J. D., & Vilis, T. (1993). Modularity and parallel processing in the oculomotor integrator. *Experimental Brain Research*, 96, 443-456.

Mok, D., Ro, A., Crawford, J. D., & Vilis, T. (1992). Rotation of Listing's plane during vergence. *Vision Research*, 32, 2055-2064.

Bains, R. A., Crawford, J. D., Cadera, W., & Vilis, T. (1992). The conjugacy of human saccadic eye movements. *Vision Research*, 32, 1677-1684.

Crawford, J. D., & Vilis, T. (1992). Symmetry of oculomotor burst neurons coordinates about Listing's plane. *Journal of Neurophysiology*, 68, 432-448.

Crawford, J. D., Cadera, W., & Vilis, T. (1991). Generation of torsional and vertical eye position signals by the interstitial nucleus of Cajal. *Science*, 252(5012):1551-3.

Crawford, J. D., & Vilis, T. (1991). Axes of eye rotation and Listing's law during rotations of the head. *Journal of Neurophysiology*, 65, 407-423.

Non Refereed Articles:

Baltaretu, B., Dunkley, B., Monaco, S., Chen, Y., & Crawford, J. D. (Submitted). Transsaccadic feature interactions in multiple reference frames: an fMRIa study. *BioRxiv*. 413815.

Cappadocia, D.C., Monaco, S., Chen, Y. & Crawford, J.D. (2018) Cortical Mechanisms for Reaches Versus Saccades: Progression of Effector-Specificity Through Target Memory to Movement Planning and Execution. *bioRxiv*, 41556

Chen, Y., & Crawford J.D. (2014) How understanding athletes aim could help rehabilitate patients with brain damage. *The Conversation*.

Crawford, J.D. (1993) Brainstem Control Of Three-dimensional Eye Movements (PhD Thesis) *Scholarship@Western* <http://ir.lib.uwo.ca/digitizedtheses/2208/>

Books:

Monaco et al. 2016 Perceiving and Acting in the real world: from neural activity to behavior. Frontiers. Editors: Simona Monaco, Gavin Buckingham, Irene Sperandio and J. Doug Crawford. <http://journal.frontiersin.org/researchtopic/1815/perceiving-and-acting-in-the-real-world-from-neural-activity-to-behavior> (Ebook)

Book Chapters and Published Conference Proceedings:

- Klier, E.M., Blohm, G., & Crawford, J.D. (2012). Neural mechanisms of eye movements: three-dimensional control and perceptual consequences. *The New Visual Neurosciences*. Pp. 879-892
- Crawford, J.D., & Klier E.M. (2011). Neural control of three-dimensional gaze shifts. *Everling et al. Eds., Oxford Handbook on Eye Movements*.
- Byrne, P. & Crawford, J.D. (2010) Eye and limb tracking. In E. Bruce Goldstein (Ed.), *Encyclopedia of perception (1): 416-421*. Thousand Oaks, CA: Sage Publications, Inc.
- Klier, E., & Crawford, J.D. (2009). Visual processing: Subcortical mechanisms for gaze control. *Encyclopaedia of Perception (1): 1104-1107*. Thousand Oaks, CA: Sage Publications, Inc.
- Feloui, F. D., Marotta, J. J., Vesia, M., Black, S. E., & Crawford, J.D. (2009). 7 Left-to-right reversal of hemispatial neglect symptoms following adaptation to reversal prisms. *Cortical Mechanisms of Vision*, (3): 35-50. Cambridge, UK: Cambridge University Press.
- Blohm, G., Khan, A.Z. & Crawford, J.D. (2008) Spatial transformation for eye-hand control. *New Encyclopedia of Neuroscience*, (9): 203-211
- Khan, A. Z., Pisella, L., Blangero, A., Rossetti, Y, & Crawford, J.D. (2007). Sensorimotor aspects of reach deficits in optic ataxia. *Cortical Mechanisms of Vision*, (4): 53-80
- Prime, S. L., Niemeier, M. & Crawford, J.D. (2007). Transsaccadic memory of visual features. Chapter in L. Harris & M. Jenkins, *Computational Vision in Neural and Machine Systems*, Cambridge University Press, (3): 167-182
- Crawford, J. D., Henriques, D. Y. P., Medendorp, M. D., & Khan, A. Z. (2003). Ocular kinematics and eye-hand coordination. *Strabismus*, 1, 33-47.
- Klier, E. M., Martinez-Trujillo, J. C., Medendorp, W. P., Smith, M. A., & Crawford, J. D. (2003). Neural control of 3-D gaze shifts in the primate. *Progress in Brain Research*, 142, 109-124.
- Klier, E., & Crawford, J. D. (2003). Neural Control of 3-D eye and head Posture. *Annals of the New York Academy of Sciences*, 1004: 122-131.
- Klier, E. M., Henriques, D. Y. P., Crawford, J. D. (2002). Visual-motor transformations account for 3-D eye orientation. *Archives Italiennes Biologie*, 140, 193-201.
- Niemeier, M., Crawford, J. D., & Tweed, D. B. (2002). A Bayesian approach to change blindness. *Annals of the New York Academy of Sciences*, 956, 474-475.

- Henriques, D. Y. P., Vilis, T., & Crawford, J. D. (2002). The visuomotor transformation accounts for 3-D eye orientation and retinal geometry. *Annals of the New York Academy of Sciences*, 956, 515-519.
- Henriques, D. Y. P., Medendorp, W. P., Khan, A. Z., & Crawford, J. D. (2002). Visuomotor transformations for eye-hand coordination. *Progress in Brain Research*, 140, 329-40.
- Klier, E. M, Wang, H., & Crawford, J. D. (2002). Neural mechanisms of three-dimensional eye and head movements. *Annals of the New York Academy of Sciences*. 956: 512-514, 2002.
- Crawford, J. D. (1998). Listing's law: What's all the hubbub? In L Harris and M Jenkins (Eds.), *Vision and Action* (pp. 139-162). Cambridge University Press.
- Crawford, J. D. (1997). Visuomotor codes for three-dimensional saccades. In L Harris, & M Jenkins (Eds.), *Computational and Psychophysical Mechanisms of Visual Coding* (pp. 74-102). Cambridge University Press.
- Crawford, J. D., Vilis, T., & Guitton, D. (1997). Neural coordinate systems for head-fixed and head-free gaze shifts. In: M Fetter, H Misslisch, & D Tweed (Eds.), *Three-Dimensional Kinematic Principles of Eye, Head, and Limb Movements in Health and Disease* (pp. 43-56). Harwood: Amsterdam.
- Crawford, J. D. (1997). Geometric transformations in the visual-motor interface for saccades. In M Fetter, H Misslisch, & D Tweed (Eds.), *Three-Dimensional Kinematic Principles of Eye, Head, and Limb Movements in Health and Disease* (pp.85-100). Harwood: Amsterdam.

Abstracts and Conference Presentations

- Bharmauria, V., Sajad, A., Schutz, A., Yan, X., Wang, H., Bremmer, F., & Crawford, J.D. (Submitted). Integration of the egocentric and landmark-centered visual codes in frontal cortex for gaze control. *Federation of European Neuroscience Societies*. Abstract.
- Bharmauria, V., Sajad, A., Schutz, A., Yan, X., Wang, H., Bremmer, F., & Crawford, J.D. (Submitted). Predictive integration of egocentric/allocentric gaze codes in the supplementary eye fields of macaques. *Canadian Association for Neuroscience*. Abstract.
- Musa, L., & Crawford, J.D. (Submitted). Explicit attention to allocentric visual landmarks improves memory-guided reaching. *Vision Sciences Society Annual Conference, St. Pete's Beach, Florida, USA*.

- Ghaderi, A., Niemeier, M., & Crawford, J.D. (Submitted). Cortical network hubs for perisaccadic visual processing: evidence from high resolution EEG and graph theory analysis. *Vision Sciences Society Annual Conference, St. Pete's Beach, Florida, USA.*
- Baltaretu, B., & Crawford, J.D. (Submitted). Separate systems for transsaccadic comparisons of object orientation vs. identity in human cortex: An fMRI paradigm. *Vision Sciences Society Annual Conference, St. Pete's Beach, Florida, USA.*
- Gaëlle, L.N., Yan, X., & Crawford, J.D. (Submitted). Influence of gaze direction and saccades on hand location and orientation errors in a memory-guided alignment task. *Vision Sciences Society Annual Conference, St. Pete's Beach, Florida, USA.*
- Bharmauria, V., Sajad, A., Schuetz, A., Yan, X., Wang, H., & Crawford, J.D. (Submitted). Distinct roles of monkey frontal and supplementary eye fields for egocentric/allocentric integration: prediction versus transformation. *Neural Control of Movement, Dubrovnik, Croatia.*
- Bharmauria, V., Sajad, A., Schuetz, A., Yan, X., Wang, H., & Crawford, J.D. (Accepted). Predictive role of supplementary eye fields for egocentric/allocentric integration. *Vision Sciences Society Annual Conference, St. Pete's Beach, Florida, USA.*
- Bharmauria, V., Sajad, A., Yan, X., Wang, H., & Crawford, J.D. (2019). Spatiotemporal evolution of egocentric and allocentric multiplexing in frontal eye field (FEF) and supplementary eye field (SEF) neurons in rhesus macaques. *Society for Neuroscience, Oct 2019, Chicago, USA*
- Ghaderi, A. H. & Crawford, J. D. Linear vector models of time perception accurately and specifically simulate temporal distortions associated with stimulus novelty and saccades. *Society for Neuroscience. October 19-23, 2019. Chicago, USA.*
- Schütz A, Bharmauria, V., Yan, X., Wang, H., Bremmer, F., Crawford, J.D. (2019): Influence of visual landmarks on predictive and visual responses in frontal eye field (FEF) and supplementary eye field (SEF). *Society for Neuroscience, Oct 2019, Chicago, USA*
- Nacher, V., Arora, H., Bharmauria, V., Yan, X., Sun, S., Wang, H., Crawford, J.D. *, (2019): Rapid visuomotor transformation and multiple gain field effects in primate ventral premotor (PMv) cortex during head-unrestrained reaches. *Society for Neuroscience, Oct 2019, Chicago, USA*
- Bharmauria, V., Sajad, A., Yan, X., Wang, H. & Crawford, J. D. (2019). Neural mechanisms for Allocentric vs Egocentric Gaze coding in the frontal eye fields (FEF) of rhesus macaques. *Gordon research Conference (Eye Movements), Lewiston, USA*

- Baltaretu, B., Monaco, S., Velji-Ibrahim, J., Luabeya, G.N., & Crawford, J.D. (2019, July). Functional network for the updating of grasp plans for oriented objects across saccades: An fMRIa study. *Gordon Research Conferences: Eye Movements, Lewiston, ME, USA.*
- Baltaretu, B., Monaco, S., Velji-Ibrahim, J., Luabeya, G.N., & Crawford, J.D. (2019, June). “Updating grasp plans for oriented objects across saccades: An fMRIa functional connectivity study.” *York Centre for Vision Research Conference, Toronto, ON, CAN.*
- Baltaretu, B., Monaco, S., Velji-Ibrahim, J., Luabeya, G.N., & Crawford, J.D. (2019, July). “Functional network for the updating of grasp plans for oriented objects across saccades: An fMRIa study.” *Gordon Research Seminar: Eye Movements, Lewiston, ME, USA.*
- Bharmauria, V., Sajad, A., Yan, X., Wang, H. & Crawford, J. D. (2019). Neural mechanisms for Allocentric vs Egocentric Gaze coding in the frontal eye fields (FEF) of rhesus macaques. *Gordon research Seminar (Eye Movements), Lewiston, USA*
- Nacher, V., Arora, H., Bharmauria, V., Yan, X., Sun, S., Wang, H., Crawford, J.D. (2019). Decoding neural mechanisms of eye-head-hand coordination in primate premotor ventral (PMv) cortex during visually guided reaches. *International Conference on Predictive Vision. June 2019, Toronto, Canada*
- Schütz A, Bharmauria, V., Yan, X., Wang, H., Bremmer, F. & Crawford, J.D. (2019). Predictive influence of visual landmarks on frontal eye field (FEF) visual responses in rhesus macaques. *International Conference on Predictive Vision. June 2019, Toronto, Canada*
- Nacher, V., Arora, H., Bharmauria, V., Yan, X., Sun, S., Wang, H. & Crawford, J. D. (2019). Decoding eye-head-hand coordination in primate premotor cortex during visually guided reaches. *13th Annual Canadian Association for Neuroscience Meeting.*
- Bharmauria, V., Sajad, A., Yan, X., Wang, H. & Crawford, J. D. (2019). Neural mechanisms of multiplexed egocentric and allocentric gaze coding in monkey frontal eye fields. *13th Annual Canadian Association for Neuroscience Meeting.*
- Ghaderi, A. H., Tomou, G. & Crawford, J. D. Saccadic time compression is influenced by visual stimulus novelty. *13th CAN-ACN, May 22-25, 2019. Toronto, Canada.*
- Bharmauria, V., Sajad, A., Yan, X., Wang, H. & Crawford, J. D. (2019). Neural mechanisms of integration of egocentric and allocentric gaze coding in monkey frontal eye fields. *CAPnet-CPS Satellite — Canadian Association for Neuroscientists conference. May 2019, Toronto, Canada.*

- Baltaretu, B., Monaco, S., Velji-Ibrahim, J., Luabeya, G.N. & Crawford, J.D. (2019, May). “Functional connectivity for updating grasp plans for oriented objects across saccades: An fMRIa paradigm.” *Canadian Action and Perception Network, Toronto, ON, CA.*
- Nacher, V., Arora, H., Bharmauria, V., Yan, X., Sun, S., Wang, H. & Crawford, J.D. (2019). Decoding eye-head-hand coordination in primate premotor cortex during visually guided reaches. *CAPnet-CPS Satellite — Canadian Association for Neuroscientists conference. May 2019, Toronto, Canada.*
- Crawford, J.D., Bharmauria, V., Sajad, A., Yan, X. & Wang, H. (2019). Multiplexed allocentric and egocentric signals in primate frontal eye fields during a cue-conflict task. *Vision Sciences Society, Florida, USA.*
- Baltaretu, B., Monaco, S., Velji-Ibrahim, J., Luabeya, G., & Crawford, J.D. (2019, May). “Functional connectivity for updating grasp plans across saccades: An fMRIa study.” *Vision Sciences Society Conference, St. Petersburg, FL, USA.*
- Ghaderi, A. H., Tomou, G. & Crawford, J. D. (2019). Saccades vs. Novelty: the joint influence of saccades and repetition on perceived stimulus duration. *17th Vision Science Society (VSS). St. Pete Beach, USA.*
- Salimian, S., Wildes, R. P., & Crawford, J.D. (2018) Convolutional network model of allocentric landmark impact on target localization. *Society for Neuroscience Annual Meeting*. Abstract Number: 2018-S-8255-SfN
- Bharmauria, V; Sajad, A; Yan, X; Wang, H; Crawford, J.D. (2018) Testing egocentric vs allocentric models in the frontal eye field (FEF) during a cue-conflict task in head-unrestrained monkeys. *Society for Neuroscience Annual Meeting*. Abstract Number: 8258
- Al-Tahan, H., & Crawford, J.D. (2018) To reach or not to reach: Coordination of eye, head and hand movements during visually guided reach. *Society for Neuroscience Annual Meeting*. Abstract Number: 2018-S-12798-SfN
- Tomou, G., Yan, X. & Crawford, J. D. (2018) Impact of allocentric cues on transsaccadic integration of multiple objects. *Society for Neuroscience Annual Meeting*. Abstract Number: 11796
- Atputharaj, S., Cappadocia D. C., Fallah, M., & Crawford, J.D. (2018) The influence of spatiotemporal structure on recall performance in memory-guided saccade sequences. *Society for Neuroscience Annual Meeting*. Abstract Number: 061.16 / II15
- Baltaretu B.-R, Yan, X., & Crawford JD. (2018). Multiple saccades in the brain: A proof-of-principle fMRI study. *12th Annual Canadian Association for Neuroscience Meeting – Canadian Action and Perception Network Satellite Symposium (CAN-ACN, CAPnet-CPS Satellite), May 2018*

- Crawford, J. D. & Bharmauria, V. (2019). Neural mechanisms for Egocentric vs Allocentric Gaze coding in the Frontal eye fields. *Hoffmann Symposium, Germany*.
- Atputharaj, S., Cappadocia D. C., & Crawford, J.D. (2018) Memory-guided saccades to visual stimulus sequences: influence of set-size and spatiotemporal structure on recall accuracy. *Vision Sciences Society (VSS)*. Abstract Number: 53.447
- Velji-Ibrahim, J., Crawford, J.D. & Monaco, S. (2018) Beyond sensory processing: Human neuroimaging shows task-dependent functional connectivity between V1 and somatomotor areas during action planning. *Vision Sciences Society*. Abstract Number: 23.346
- Velji-Ibrahim, J., Crawford, J.D., Cattaneo, L., & Monaco, S. (2018) fMRI reveals that object features in early visual areas are modulated by action intention. CAOs
- Salimian, S., Wildes, R. P., & Crawford, J.D (2018) Convolutional Neural Network Approach to Modelling Allocentric Landmark Impact on Target Localization" *Vision Sciences Society (VSS)*. Abstract number : 992
- Tomou G, Yan X, & Crawford J D (2018) "Impact of diverse allocentric cues on transsaccadic integration of multiple objects", *Vision Sciences Society (VSS)*, May 2018 [63.346]
- Tomou G, Yan X, & Crawford J D (2018) "Impact of diverse allocentric cues on transsaccadic integration of multiple objects", *12th Annual Canadian Association for Neuroscience Meeting – Canadian Action and Perception Network Satellite Symposium (CAN-ACN, CAPnet-CPS Satellite)*, May 2018
- Bharmauria V, Sajad A, Yan X, Wang H, & Crawford JD (2018) Allocentric visual motor transformations in the FEF and the SEF during head-unrestrained gaze shifts in the monkey. *Progress in Primate Neurobiology Conference, Tuebingen, Germany*.
- Atputharaj, S., Cappadocia D. C., & Crawford, J.D. (2018) Memory-guided saccades to visual stimulus sequences: influence of set-size and spatiotemporal structure on recall accuracy. *47th Annual Lake Ontario Visionary Establishment (LOVE)*. Abstract Number: T11
- Tomou G, Yan X, & Crawford, JD (2018) "Transsaccadic integration of multiple objects and the influence of stable allocentric cues", *47th Annual Lake Ontario Visionary Establishment (LOVE)*, [F28]
- Bharmauria V, Sajad A, Arora H, Yan X, Wang H, & Crawford JD (2017). Comparison of visual-motor transformations of unit activity between the frontal eye fields and

supplementary eye fields during head-unrestrained gaze shifts. Society for Neuroscience.

Bharmauria V, Arora H, Yan X, Wang H, & Crawford JD (2017). Comparison of visual-motor transformations of unit activity between the frontal eye fields and supplementary eye fields during head-unrestrained gaze shifts. *International Conference on Vision in the Real World, York University Poster no. 6*

Bharmauria V, Sajad A, Arora H, Yan X, Wang H, & Crawford JD (2017). Comparison of spatial coding in unit data simultaneously recorded from frontal eye fields and supplementary eye fields during head-unrestrained gaze shifts. *Gordon eye movement conference*

Bharmauria V, Sajad A, Arora H, Yan X, Sun S, Wang H, & Crawford JD (2017). Allocentric visual-motor transformations in the Frontal eye fields and Supplementary eye fields of head unrestrained monkeys *Capnet, Poster no 26*

Bharmauria V, Sajad A, Arora H, Yan X, Wang H, Sun S, & Crawford JD (2017). Comparative analysis of allocentric visual-motor transformations between the Frontal eye fields and Supplementary eye fields of head unrestrained monkeys *Canadian Association for Neuroscience*. Abstract Number: 1-D-163

Tomou G, Yan X, & Crawford JD. (2017) The Influence of Stable Allocentric Cues on Transsaccadic Integration on Multiple Objects. *Centre for Vision Research Conference*

Tomou G, Yan X, & Crawford JD. (2017) The Influence of Stable Allocentric Cues on Transsaccadic Integration on Multiple Objects. *Canadian Association for Neuroscience*.

Atputharaj S, Cappadocia D.C, & Crawford JD. (2017). The influence of spatiotemporal structure on recall accuracy in memory-guided saccade sequences. *Canadian Association for Neuroscience*. Abstract Number: 17

Atputharaj S, Cappadocia D.C, & Crawford JD. (2017) The Influence of Spatiotemporal Structure on Recall Accuracy in Memory-Guided Saccade Sequences. *Centre for Vision Research Conference*. Abstract Number: 3

Arora H, Bharmauria V, Yan X, Wang H, Sun S, & Crawford JD (2017). Coordination of eye, head and hand movements during visually guided reaching in head unrestrained rhesus monkeys. *Society for Neuroscience*. Abstract no. 495.04 / GG3

Arora H, Bharmauria V, Yan X, Wang H, Sun S, & Crawford JD (2017) Coordination of eye, head and hand movements during visually guided reaching in head unrestrained rhesus monkeys. *Centre for Vision Research Conference*

Arora H, Bharmauria V, Yang X, Wang H, & Crawford JD. (2017) Eye-head-hand coordination during reaching in head unrestrained monkeys. *Canadian Association for Neuroscience*. Abstract No.: 2-D-166

- Arora H, Bharmauria V, Sajad A, Yang X, Wang H, & Crawford JD. (2017) Visual motor response fields and spatial tuning in supplementary eyes fields of the head unrestrained monkeys. *Vision Science Society Conference*.
- Baltaretu B.-R, Monaco S, Velji-Ibrahim J., Luabeya GN, & Crawford JD. (2017). Influence of Saccades on Cortical Signals for Grasp Planning: an fMRIa study. *Gordon Conference*.
- Baltaretu B.-R, Monaco S, Velji-Ibrahim J., Luabeya GN, & Crawford JD. (2017) Transsaccadic updating of object orientation for grasp planning: An fMRIa study. *Society for Neuroscience*. Abstract No.: 2017-S-5218-SfN
- Baltaretu B.-R, Monaco S, Velji-Ibrahim J., Luabeya GN, & Crawford JD. (2017) Transsaccadic Integration of Object Orientation for Grasp Planning: an fMRIa study. *Centre for Vision Research Conference*
- Baltaretu B.-R, Monaco S, Velji-Ibrahim J., Luabeya GN, & Crawford JD. (2017) Neural mechanisms for updating grasp plans: An fMRI study. *Vision Science Society Conference*. Abstract No.: 33.4001
- Baltaretu B.-R, Dunkley B. T, & Crawford JD (2016) Transsaccadic integration of spatial frequency information in an fMRIa paradigm. *IRTG Conference*
- Baltaretu B.-R, Dunkley B. T, & Crawford JD (2016) Transsaccadic integration of spatial frequency information in an fMRIa paradigm. *Society for Neuroscience*.
- Cappadocia, D., Monaco, S., Chen, Y., Blohm, G. & Crawford, J. D. (2016) Temporal evolution of visual and motor direction selectivity in human cortex during target representation, motor planning, and reach execution. *Society for Neuroscience Annual Meeting*.
- Baltaretu B.-R, B. T. Dunkley & Crawford JD (2016) Trans-saccadic integration of spatial frequency information in an fMRIa paradigm. *Canadian Association for Neuroscience*. Abstract No.:
- Cappadocia, D., Monaco, S., Chen, Y. & Crawford, J. D. (2016) Effector-specific cortical mechanisms for memory-guided reaches and saccades: progression from target memory through motor planning and execution *Canadian Association for Neuroscience Annual Meeting*.
- Chen, Y., & Crawford, J.D. (2016). Allocentric vs. Egocentric Coding of Remembered Saccade Targets in Human Cortex. *Vision Science Society Conference*. Abstract number: 23.4027

- Li J., Sajad, A., Marino R., Yan, X., Sun, S., Wang, H., & Crawford, J.D. (2016). Effect of allocentric cues on primate gaze behaviour in a cue conflict task. *Vision Science Society Conference*. Abstract number:43.4045
- Heuer, A., Schubö, A., & Crawford, J.D. (2016). Dissociation of spatial and feature-based attention in visual working memory: a TMS study *Vision Science Society Conference*. Abstract number:36.3031
- Cappadocia, D. C., Monaco, S., Chen, Y., & Crawford, J.D. (2015). Effector-specific cortical mechanisms for memory-guided reaches and saccades: progression from target memory through motor planning and execution. *Society for Neuroscience*. Abstract Number: 15013
- Mohsenzadeh, Y., & Crawford, J.D. (2015). A computational model for feature integration across saccadic eye movements. *Society for Neuroscience*. Poster Number: 61.16/L7
- Le, A., Monaco, S., Chen, Y., & Crawford, J.D. (2015). Investigating the neural mechanisms of reach-grasp integration. *Brain in Action (IRTG) Retreat*. Abstract number: 1
- Le, A., Monaco, S., Chen, Y., & Crawford, J.D. (2015). Cortical mechanisms underlying the integration of transport and grip components for grasping. *Society for Neuroscience*. Abstract number: 5836
- Sajad, A., Sadeh, M., Yan, X., Wang, H., & Crawford, J.D. (2015). Spatiotemporal transformations between sensory, memory, and movement responses in the primate frontal eye field. *Society for Neuroscience*. Abstract Control Number: 12479
- Baltaretu, B.-R., Dunkley, B. T., Monaco, S., Chen, Y., & Crawford, J.D. (2015). Space-fixed, retina-fixed, and frame-independent mechanisms of trans-saccadic feature integration: repetition suppression and enhancement in an fMRIa paradigm. *Vision Science Society Conference*. Abstract number: 548
- Monaco, S., & Crawford, J.D. (2015). Human cortical activity for visual processing is modulated by cued actions. *Vision Science Society Conference*. Abstract number: 848
- Mohsenzadeh, Y., & Crawford, J.D. (2015). A Computational Model to Study the Dynamics of Updating of Remembered Visual Targets During Rapid and Slow Eye Movements. *Vision Science Society Conference*. Abstract number: 744
- Mohsenzadeh, Y., & Crawford, J.D. (2014). A State Space Model for Trans-saccadic Updating of Remembered Visual Targets. *Society for Neuroscience*. Abstract No. 288.02
- Daemi, M., & Crawford, J.D. (2014). Decomposition of visual vs. auditory representations of gaze target location into 3-D eye and head movement commands: A neural network study. *Society for Neuroscience*. Abstract No. 625.19/EE14

- Daemi, M., & Crawford, J.D. (2014). Theoretical understanding of three-dimensional, head-free gaze-shift. *Organisation for Computational Neuroscience*. Abstract No. P184
- Chen, Y., Monaco, S., & Crawford, J.D. (2014). Cortical mechanisms for conversion of allocentric target representation into egocentric reach plans in humans" *Society for Neuroscience*. Abstract No 10391
- Monaco, S., Chen, Y., & Crawford, J.D. (2014). Cortical substrates for the integration of object properties and intended actions. *Society for Neuroscience*. Abstract No. 334
- Cappadocia, D. C., Monaco, S., Chen, Y., & Crawford, J.D. (2014). Cortical mechanisms for memory-guided reach direction in the human: progression from target memory through motor planning and execution. *Society for Neuroscience*. Abstract No. 334.12/FF10
- Ferrari, P., Cressman, E., Benites, D., Cheyne D., & Crawford, J.D. (2014). Occipital beta-band oscillations reflect target location at movement onset during a delayed pointing task. *International Conference on Biomagnetism*
- Cappadocia, D. C., Monaco, S., Chen, Y., & Crawford, J.D. (2014). Cortical mechanisms for reaching to a remembered visual location during target memory and motor planning periods: an fMRI study. *Canadian Association for Neuroscience*. Abstract No. 1-D-112
- Chen, Y., & Crawford, J.D. (2014). Neural substrates for allocentric-to-egocentric conversion of remembered target location for reach. *Canadian Association for Neuroscience*. Abstract No. 90855
- Monaco, S., Chen, Y., Al-Omawi, N., & Crawford J.D. (2014). Neural substrates involved in the integration of object properties and intended actions. *Canadian Association for Neuroscience*. Abstract No. 90795
- Baltaretu, B.-R., Dunkley, B. T., & Crawford, J.D. (2014) Trans-saccadic integration of spatial frequency information in an fMRIa paradigm *Vision Science Society Conference*. *Journal of Vision*. 2014; 14(10):1222-1222. doi: 10.1167/14.10.1222
- Barakat, T., Cappadocia, D.C., Gharavi, K., Fallah, M., & Crawford, J.D. (2014). The influence of spatio-temporal structure on sequential eye and arm movements to remembered visual targets. *Vision Science Society Conference*. Abstract No. 1134
- Malik, P., Dessing, J.C., & Crawford, J.D. (2014) rTMS Over Human Early Visual Cortex Degrades Low Level Visual Feature Memory In The Remapped, Not Perceived, Visual Field During a Transsaccadic Integration Task. *Vision Science Society Conference*.

- Chen, Y., & Crawford, J.D. (2014) Neural substrates for Allocentric-to-Egocentric Conversion of Target Representation for Memory-Guided Reach. *Vision Science Society Conference*. Abstract No. 1284
- Chen, Y., Monaco, S., Byrne, P., & Crawford, J.D. (2014) Allocentric Vs Egocentric Representation of Remembered Reach Targets in Human Cortex. *Organisation for Human Brain Mapping Hamburg*. Abstract No. 1008
- Dunkley, B.T., Baltaretu B.-R. & Crawford, J.D. (2014). c. *Organisation for Human Brain Mapping Hamburg*.
- Monaco, S., Chen, Y., Al-Omawi, N., & Crawford J.D. (2014). Neural substrates involved in the integration of object properties and intended actions. *Organisation for Human Brain Mapping Hamburg*.
- Crawford, J.D Chen, Y., & Byrne, P., (2014). Allocentric Versus Egocentric Mechanisms for Reach in the Human. *World Congress for NeuroRehabilitation Conference, Istanbul*
- Alikhanian, H., Blohm, G., Gaetz, W. C., Goltz, H. C., Desouza, J. F. X., Cheyne, D. O. Crawford, J. D., (2013) MEG during planning of visually-guided pointing movements. *Society for Neuroscience Abstracts* 263.16.
- Sadeh, M., Sajad, A., Wang, H., Yan, X., & Crawford, J.D (2013) Motor coding in the superior colliculus during reactive versus volitional gaze shifts in the head unrestrained monkey. *Society for Neuroscience*. Abstracts, 365.07/BBB21
- Daemi, M., & Crawford, J.D. (2013) A computational model of the kinematics of three-dimensional head-free gaze shifts. *Society for Neuroscience*. Abstracts, 293.03/LLL5
- Malik, P., Dessing, J.C., & Crawford J.D. (2013) fMRI guided TMS over early visual cortex degrades single object feature memory in the remapped, not perceived, visual field in a transsaccadic integration task. *Society for Neuroscience*. Abstracts, 365.10/BBB24
- Dunkley, B.T., & Crawford, J.D. (2013) Dorsal stream interactions between remapped and perceived orientation information across saccades. *Society for Neuroscience*. Abstracts, 826.14/DD11
- Sajad, A., Sadeh, M., Daemi, M., Yan, X., Wang, H., Crawford, J. D. (2013) Spatiotemporal evolution of FEF and SC response fields during delayed memory-guided gaze shifts. San Diego, CA: *Society for Neuroscience*.
- Marino, R.A., Wang, H., Yan, X., Crawford J.D. (2013) The influence of competing stimuli on classical visual response fields in the frontal eye fields. *Society for Neuroscience*.

- Cappadocia, D.C., Gharavi, K., Dessing, J.C., Vesia, M., & Crawford, J.D. (2013) The effect of TMS on reaching to a remembered location before or after a reach/anti-reach instruction. *Society for Neuroscience*. Session Number: 162; Control Number: 13176.
- Chen, Y., Monaco, S., Byrne, P., Yan, X., Henriques, D.Y.P., & Crawford J.D. (2013) Neural substrates for allocentric versus egocentric representation in memory-guided reach. *Society for Neuroscience*. Control Number 2013-9507-SfN
- Al-Omawi, N., Dessing, J.C., Yan, X., & Crawford, J.D. (2013) Influence of Gaze Direction, Target Location, and Target Orientation on Memory-Guided Reach and Grasp Errors. *Society for Neuroscience*. (2013-S-15192-SFN)
- Crawford, J.D. (2013) Progression of target-to-gaze command coding in superior colliculus and frontal eye fields during head unrestrained gaze shifts. *International Union of Physiological Sciences Symposium (IUPS) Abstract (ID: 1680475)*
- Chen, Y., Monaco, S., Byrne, P., Yan, X., Henriques, D.Y.P., & Crawford J.D. (2013) Neural substrates for egocentric and allocentric representations in memory-guided reaching *Centre for Vision Research Conference (CVR)*
- Malik, P., Dessing, J.C., & Crawford J.D. (2013) Role of early visual cortex in transsaccadic perception of visual feature memory in humans. *Centre for Vision Research conference Abstract No. 19*
- Crawford, J.D. (2013) Why does the visual system need to know eye position? *Centre for Vision Research Conference (CVR)*
- Marino, R.A., Wang H, Yan, X., & Crawford, J.D. (2013) The Influence of Allocentric Spatial Cues on Memory Guided Head Free Gaze Shifts. *Centre for Vision Research Conference (CVR)*
- Daemi, M., & Crawford, J.D. (2013) Computational Modeling of 3 D Head Free Gaze Shift Control. *Centre for Vision Research Conference (CVR)*
- Dunkley, B.T., Dessing, J.C., & Crawford, J.D. (2013) Investigating reference frame specificity of motion-processing cortex in the temporal summation of transsaccadic motion signals. *Canadian Association for Neuroscience*.
- Sajad, A., Sadeh, M., Yan, X., Wang, H., Crawford, J.D. (2013) Visual-motor transformations in FEF and SC memory delay activity during head unrestrained gaze planning. Easton, MA: *Gordon Research Conferences – Eye Movements*.
- Sajad, A., Sadeh, M., Wang, H., Yan, X., & Crawford, J.D. (2013) Spatiotemporal Evolution of the Response Field of Frontal Eye Field Neurons During Memory Delay Period. *Canadian Association for Neuroscience*

- Tanaka, L., Dessing, J.C., Prime, S.L., & Crawford J.D. (2013) Effects of TMS over dorsolateral prefrontal cortex on multiple-visual object memory across fixation and saccades. *Canadian Association for Neuroscience* 77.08/EE16
- Chen, Y., Monaco, S., Byrne, P., Yan, X., Henriques, D.Y.P., & Crawford J.D. (2013) Cortical substrates for egocentric and allocentric encoding of remembered visual target locations for reach. *Canadian Association for Neuroscience*.
- Sadeh, M., Sajad, A., Wang, H., Yan, X., & Crawford, J.D (2013) Differences in motor encoding of head unrestrained gaze shifts in reactive vs. volitional saccades in the primate Superior Colliculus. *Canadian Association for Neuroscience*
- Dash, S., Alipour-Nazari, S., Yan, X., Wang, H., & Crawford, J.D. (2013) Continuous visuospatial updating in superior colliculus neurons during smooth pursuit eye movements: effect of target visibility and behavioral relevance. *Canadian Association for Neuroscience*.
- Al-Omawi, N., Dessing, J.C., Yan, X., & Crawford, J.D. (2013) Gaze-Dependence of Grasp Location and Orientation of Visually Directed Reaching. *Canadian Association for Neuroscience* Abstract no. 85727
- Marino, R.A., Wang H, Yan, X., & Crawford, J.D. (2013) Allocentric spatial cues influence memory-guided head free gaze shifts. *Canadian Association for Neuroscience*
- Malik, P., Dessing, J.C., & Crawford J.D. (2013) Role of early visual cortex in transsaccadic perception of visual feature memory in humans. *Canadian Association for Neuroscience*
- Daemi, M., & Crawford, J.D. (2013) Computational Modeling of 3-D Head-Free Gaze-Shifts *Canadian Association for Neuroscience*
- Sajad, A., Sadeh, M., Yan, X., Wang, H., & Crawford, J.D. (2013) Spatiotemporal Evolution of the Response Fields of Frontal Eye Field neurons from Sensory to Movement Representation *Centre for Vision Research Conference*.
- Chen, Y., Monaco, S., Byrne, P., Yan, X., Henriques, D.Y.P., & Crawford J.D. (2012) Cortical mechanisms for egocentric and allocentric encoding of remembered visual target locations for reach. *Society for Neuroscience*. 573.05/GG16
- Tanaka, L., Dessing, J.C., Prime, S.L., & Crawford J.D. (2012) Effects of TMS over dorsolateral prefrontal cortex on multiple-visual object memory across fixation and saccades. *Society for Neuroscience*. 77.08/EE16.
- Sajad, A., Sadeh, M., Yan, X., Keith, G.P., Wang, H. & Crawford J.D. (2012) Visual and motor coding in frontal eye fields during head-unrestrained gaze shifts. *Society for Neuroscience Abstracts*, in press.

- Sadeh M, Sajad A, Wang H, Keith GP, Yan, X., & Crawford JD (2012) Visual and motor coding in the primate superior colliculus during head-unrestrained gaze shifts. *Society for Neuroscience Abstracts*, 419.10.
- Kokubu, M., Dessing, J.C., & Crawford, J.D. (2012) The effect of rTMS to SPOC on gaze-dependent errors when reaching to remembered visual vs. proprioceptive targets. *Society for Neuroscience Abstracts*, 089.10/RR2.
- Marino, R.A., Yan, X., & Crawford, J.D. (2012) Assessing the influence of allocentric spatial cues on memory-guided head free gaze shifts. *Society for Neuroscience Abstracts*, 370.16/LL6
- Dash, S., Yan, X., Wang, H., & Crawford, J.D. (2012) Continuous visuospatial updating in superior colliculus neurons during smooth pursuit eye movements depends on behavioral relevance of target location. *Society for Neuroscience Abstracts*, 374.01/OO5.
- Perry, C.J., Sergio, L., Crawford, J.D. Fallah, M. (2012) Reaching enhances orientation responses in area V2 neurons. *Society for Neuroscience Abstracts*.
- Dunkley, B.T., Dessing, J.C., & Crawford, J.D. (2012) Mechanisms for the temporal summation of transsaccadic motion signals. *Society for Neuroscience Abstracts*, 370.05/KK15
- Dash, S., Yan, X., Wang, H., & Crawford, J.D. (2012) Continuous updating of superior colliculus visuospatial memory responses during smooth pursuit eye movements. *Canadian Society for Brain, Behaviour, and Cognitive Science*. T-4-4.
- Sadeh, M., Wang, H., Keith, G.P., & Crawford, J. D. (2012) Visual and motor frames of reference in primate Superior Colliculus during head-unrestrained gaze shifts. *Canadian Society for Brain, Behaviour, and Cognitive Science*.
- Malik, P., Dunkley, B.T., Dessing, J.C., & Crawford, J.D. (2012) Role of the early visual cortex in transsaccadic integration in humans. *Canadian Society for Brain, Behaviour, and Cognitive Science*.
- Kokubu, M., Dessing, J.C. & Crawford, J.D. (2012) Individual differences in limb-specificity of gaze-dependent errors in memory-guided reaching. *Canadian Society for Brain, Behaviour, and Cognitive Science*. P-3-32.
- Daemi, M., & Crawford, J.D. (2012) Modeling the Decomposition of Retinotopic Representations into 3-D Eye and Head Movement Signals *Society for Neuroscience Conference*
- Daemi, M., Keith, G. P., & Crawford, J.D. (2012)CSBBCS-2012: Kinematic Models for Eye-Head Coordination During 3-D Head-Free Gaze-Shifts *Canadian Society for Brain, Behaviour, and Cognitive Science*

- Sadeh, M., Wang, H., Keith, G.P., & Crawford, J.D. (2012) Reference frames for visual and motor responses in the Superior Colliculus during head unrestrained gaze shifts. *Canadian Association for Neuroscience Meeting*.
- Cappadocia, D.C., Gharavi, K., Vesia, M., Dessing, J.C., Yan, X., & Crawford, J.D. (2012) The effects of TMS over PPC in a visual feature memory / saccade task. *Vision Science Society Conference*.
- Dash, S., Yan, X., Wang, H., & Crawford, J.D. (2012) Continuous updating of superior colliculus visuospatial memory responses during smooth pursuit eye movements. *Vision Science Society Conference*.
- Kokubu, M., Dessing, J.C. & Crawford, J.D. (2012) Hand-specificity in gaze-dependent memory-guided reach errors. *Vision Science Society Conference*. 26.556.
- Sadeh, M., Wang, H., Keith, G., & Crawford, J.D. (2011) Visual and motor receptive fields in the superior colliculus during head-unrestrained gaze shifts. *Gordon Research Conference on Eye Movements: The Motor System that Sees the World*
- Crawford, J.D & Blohm, G. (2011) Calculation of accurate 3-D reach commands from initial retinal and extra-retinal conditions. *Vision Sciences Society Conference*.
- Perry, C.J., Jones, S.M., Crawford, J.D. & Fallah, M. (2011) The effect of hand position on visual responses in areas V2 and V4. *Canadian Physiological Society/ Canadian Action and Perception Network Conference*.
- Dessing, J.C., Vesia, M., Yan, X.G., & Crawford, J.D. (2011) The Role of cortical area MT+/V5 in spatial aspects of manual interception: An RTMS study. *Canadian Physiological Society/ Canadian Action and Perception Network Conference*.
- Yan, X.G., Avillac, M, Ascencio-Monteon, J., Wang, H. & Crawford, J.D. (2011) Instruction-related saccade and head movement activity in superior colliculus units during planned sequences of head-unrestrained gaze shifts in the monkey. *Canadian Physiological Society/ Canadian Action and Perception Network Conference*.
- Farshadmanesh, F., Byrne, P., Yan, X.G., Wang, H., Corneil, B.D. & Crawford J.D. (2011) Cross-validated models of the relationships between neck electromyography (EMG) and head kinematics evoked by stimulation of the interstitial nucleus of Cajal (inc). *Canadian Physiological Society/ Canadian Action and Perception Network Conference*.
- Cappadocia, D.C., Vesia, M., Byrne, P., Yan, X.G. & Crawford, J.D. (2011) Saccade Target Selection Based on Single or Multiple Remembered Visual Features. *Canadian Physiological Society/ Canadian Action and Perception Network Conference*.

- Le, A., Vesia, M., Yan, X.G., Crawford, J.D. & Niemeier, M. (2011) A Right Hemisphere Dominance for Bimanual Grasps. *Canadian Physiological Society/ Canadian Action and Perception Network Conference*.
- Byrne, P. & Crawford, J.D. (2011) Is locating an Occluded Moving Target using Indirect Information a Statistically Optimal Process? *Canadian Physiological Society/ Canadian Action and Perception Network Conference*.
- Dash, S., Wang, H., Yan, X.G. & Crawford, J.D. (2011) Pre-Saccadic (predictive) Visual Responses in Superior Colliculus Neurons Across Pursuit Eye Movements. *Canadian Physiological Society/ Canadian Action and Perception Network Conference*.
- Dash, S., Yan, X., Wang, H., & Crawford, J. D. (2011) Continuous remapping of superior colliculus visuospatial memory responses during smooth pursuit eye movements. *Society for Neuroscience*. 18.02.2011
- Byrne, P. & Crawford, J.D. (2010) Is locating an occluded moving target using indirect information a statistically optimal process? *Society for Neuroscience Conference*, 74.20/PP9
- Cappadocia, D.C., Vesia, M., Byrne, P., Yan, X., & Crawford, J.D. (2010) Saccade target selection based on single or multiple remembered visual features. *Society for Neuroscience Conference*, 280.5/SS13
- Yan, X., Avillac, M., Ascencio-Monteon, J., Wang, H., & Crawford, J.D. (2010) Instruction-related saccade and head movement activity in superior colliculus units during planned sequences of head-unrestrained gaze shifts in the monkey. *Society for Neuroscience Conference*, 676.4/NN5
- Le, A., Crawford, J.D., & Niemeier, M. (2010) A right hemisphere dominance for bimanual grasps. *Society for Neuroscience Conference*, 777.10/JJ6
- Dash, S., Radik, R., Wang, H., Yan, X., & Crawford, J.D. (2010) Task dependent spatial updating of targets across smooth pursuit eye movements (SP) in rhesus monkeys. *Society for Neuroscience Conference*, 582.2/UU4
- Farshadmanesh, F., Byrne, P., Yan, X., Wang, H., Corneil, B.D., & Crawford, J.D. (2010) Using cross-validation to characterize neck electromyography (EMG) evoked by stimulation of the interstitial nucleus of Cajal (INC). *Society for Neuroscience Conference*, 676.7/NN8
- Dessing, J.C., Vesia, M., Yan, X., & Crawford, J.D. (2010) Online updating of spatial and temporal aspects of manual interception movements. *Society for Neuroscience Conference*, 373.17/PP9

- Wang, S.H., Cressman, E., Ferrari, P., Ren, L., Cheyne, D., & Crawford, J. D. (2010) Cortical Activation Underlying Saccades to Visual and Proprioceptive Targets: an MEG Study. *Human Brain Mapping Conference*
- Vesia, M., Prime, S. L., Yan, X. G. Sergio, L. E., & Crawford, J. D. (2010) Parietal regions specialized for saccades and reach in the human: a rTMS study. *Vision Science Society Conference*.
- Chen, Y., Byrne, P., & Crawford, J. D. (2010). Time courses of allocentric-to-egocentric conversion, in memory guided reaching. *Vision Science Society Conference*
- Cappadocia, D. C., Vesia, M., Byrne, P. A., Yan, X., & Crawford, J. D. (2010) Saccade target selection in subjects cued to remember single or multiple visual features. *Vision Science Society Conference*
- Chen, Y., Byrne, P., Crawford, J. D. (2009). Time courses for degradation in egocentric/allocentric representations, and for allocentric-to-egocentric conversion, in memory guided reaching. *Society for Neuroscience Conference*
- Dessing, J. C., Douglas, J. D., & Medendorp, W. P. (2009). Spatial updating across saccades during manual interception of a moving visual target. *Society for Neuroscience Conference*
- Keith, G. P., Blohm, G., & Crawford, J. D. (2009). Mechanisms underlying saccade related remapping in a current neural network. *Society for Neuroscience Conference*
- Farshadmanesh, F., Byrne, P., Yan, X., Wang, H., Corneil, B. D., Crawford, J. D. (2009) Cross-validation technique for establishing predictive models of the relationships between neck muscle electromyography and three-dimensional kinematics. *Society for Neuroscience Conference*
- Vesia, M., Prime, S. L., Yan, X. Sergio, L. E., Crawford, J. D. (2009). Mapping saccade and reach topography in human posterior parietal cortex using rTMS. *Society for Neuroscience Conference*
- Chen, Y., Byrne, P., Crawford, J. D. (2009). Time courses for degradation in egocentric/allocentric representations, and for allocentric-to-egocentric conversion, in memory guided reaching. *GAP/CAPnet Retreat Conference*
- Chen, Y., Byrne, P., Crawford, J. D. (2009). Time courses for degradation in egocentric/allocentric representations, and for allocentric-to-egocentric conversion, in memory guided reaching. *Society for Neuroscience Conference*.
- Blohm, G., Gaetz, W. C., Goltz, H. C., DeSouza, J. F. X., Bells, S., Cheyne, D., & Crawford, J. D. (2009). Cortical oscillations in human posterior parietal cortex during visually-guided reach planning. *Vision Sciences Society Conference*

- Prime, S. L., Vesia, M., & Crawford, J. D. (2009) Cortical mechanisms governing transsaccadic memory of multiple object features. *Canadian Association for Neuroscience Meeting*
- Blohm, G., Keith, G. P., & Crawford, J. D. (2009). Neural network properties for 3D reach planning. *Neural Control of Movement Society Conferences*
- Avillac, M., Yan, X., Ascencio-Monteon, J., Crawford, J. D. (2008) Superior colliculus activity during cued planning of sequenced head-free gaze shifts. *Society for Neuroscience Conference, DD7*
- Byrne, P., Cappadocia, D., Crawford, J. D. (2008). Interactions between gaze-centered and allocentric cues in memory-guided pointing. *Society for Neuroscience Conference, KK21*
- Desouza, J. F. X., Keith, G. P., Yan, X., Wang, H., Crawford, J. D. (2008). Intrinsic reference frames for visuomotor receptive fields in head-free gaze shifts II: Superior colliculus units in the monkey. *Society for Neuroscience Conference, DD6*
- Farshadmanesh, F., Keith, G. P., Yan, X., Wang, H., Corneil, B. D., Crawford, J. D. (2008) Neck muscle activation during gaze fixations in the monkey: 3-D postural fields and relationship to 3-D behavioral constraints. *Society for Neuroscience Conference, DD9*
- Keith, G. P., Desouza, J. F. X., Yan, X., Wang, H., Crawford, J. D. (2008). Intrinsic reference frames for visuomotor receptive fields in head-free gaze shifts. *Society for Neuroscience Conference, DD5*
- Prime, S. L., Vesia, M., & Crawford, J. D. (2008). Does FEF play a role in the transsaccadic memory? A TMS study. *Society for Neuroscience Conference, 119*
- Radik, R., Yan, X., Wang, H., Desouza, J. F. X., Crawford, J. D. (2008). Task dependent spatial updating of saccade targets during smooth pursuit. *Society for Neuroscience Conference, DD34*
- Ren, L., Cressman, E. K., Blohm, G., Cheyne, D., Crawford, J. D. (2008). Cortical activation of during visual memory-guided and hand-guided saccades: An MEG study. *Society for Neuroscience Conference*
- Sayegh, P., Neagu, B., Hoffman, K., Yan, X., Crawford, J. D., Sergio, L. E. (2008). Oscillatory activity in different monkey premotor areas during a dissociated task. *Society for Neuroscience Conference, CC18.*
- Vesia, M., Yan, X.G., Henriques, D.Y.P., Sergio, L.E., & Crawford, J.D. (2008). TMS over human dorsal-lateral posterior parietal cortex disrupts integration of hand position into reach plan. *Transcranial Magnetic Stimulation and Neuroimaging in*

Cognition and Behavior Conference.

- Vesia, M., Yan, X., Henriques, D. Y. P., Sergio, L. E., & Crawford, J. D. (2008). TMS over dorsal-lateral PPC: A problem with integrating hand position (not target position) into the reach plan. *Third International Conference on Transcranial Magnetic and Direct Cranial Stimulation.*
- Byrne, P.A., Pallan, S., Yan, X. G., & Crawford, J. D. (2008). Integration of object-centered and viewer-centered visual information in an open-loop pointing task. *Vision Sciences Society.*
- Blohm, G., Gaetz, W. C., Goltz, H. C., DeSouza, J. F. X., Bells, S., Cheyne, D. O., & Crawford, J. D. (2007). Functional dynamics of brain activity underlying the visuomotor transformation for pointing: An MEG study. *Society for Neuroscience Conference*,33.
- Blohm, G., Keith, G. P., & Crawford, J. D. (2007). Neural properties of the 3-D reference frame transformation for reaching as predicted and explained by an artificial network. *Centre for Vision Research International Vision Conference.*
- Blohm, G., Keith, G. P., & Crawford, J. D. (2007). The 3-D visuomotor transformation of reaching depth in a neural network model. *Neural Control of Movement Society Conference.*
- Byrne, P.A., Pallan, S., Yan, X. G., & Crawford, J.D. (2007). Integration of object-centered and viewer-centered visual information in an open-loop pointing task. *Society for Neuroscience Conference.*
- Constantin, A. G., Wang, H., Klier, E. M., Martinez-Trujillo, & Crawford, J. D. (2007) Comparison of gaze-shifts evoked by electrical stimulation of the superior colliculus and lateral intraparietal area. *Centre for Vision Research International Vision Conference*
- Constantin, A. G., Wang, H., Klier, E. M., Martinez-Trujillo, J. C., & Crawford, J. D. (2007). A quantitative comparison of head-free gaze shifts evoked through electrical stimulation of the lateral intraparietal area (LIP) and the superior colliculus (SC) in the macaque. *1st Annual Meeting of Canadian Association for Neuroscience-Association Canadienne des Neurosciences*
- Constantin, A. G., Wang, H., Klier, E. M., Martinez-Trujillo, J. C., & Crawford, J. D. (2007). Comparison of gaze-shifts evoked by electrical stimulation of the superior colliculus and lateral intraparietal area. *Neural of Control Movement Society Conferences*
- Constantin, A. G., Wang, H., Wang, H., Klier, E. M., Martinez-Trujillo, J. C., & Crawford, J. D. (2007). Comparison of gaze-shifts evoked by electrical stimulation of the superior colliculus and lateral intraparietal area. *Canadian Physiological Society Winter Meeting*

- Constantin, A. G., Wang, H., Klier, E. M., Martinez-Trujillo, J. C., & Crawford, J. D. (2007). Comparison of gaze-shifts evoked by electrical stimulation of the superior colliculus and lateral intraparietal area. *CIHR Group for Action and Perception (GAP) Retreat*
- DeSouza, J. F. X., Blohm, G., Chan, C.Y. J., Hoover A. E. N., Yan, X., Wang, H., & Crawford, J. D. (2007). Superior colliculus (SC) neural activity codes visually guided head-unrestrained gaze movements in retinal coordinates. *Canadian Physiological Society (CPS) Conference*.
- DeSouza, J. F. X., Blohm, G., Hoover A. E. N., Chan, C. Y. J., Yan, X., Wang, H., & Crawford, J. D. (2007). Superior colliculus (SC) neural activity codes visually guided head-unrestrained gaze movements in retinal coordinates. Effects of position-dependent motor tuning. *Neural Control of Movement*, 17.
- DeSouza, J. F. X., Blohm, G., Yan, X., Wang, H., & Crawford, J. D. (2007). Superior colliculus (SC) neural activity codes visually guided head-unrestrained gaze movements in retinal coordinates. *Vision Science Society*, 7.
- Farshadmanesh, F., Chang, P., Yan, X., Corneil, B.D., & Crawford, J. D. (2007). The synergy of neck muscles following unilateral inactivation and stimulation of the interstitial nucleus of Cajal (INC). *Canadian Physiological Society (CPS) Conference*.
- Farshadmanesh, F., Chang, P., Yan, X., Wang, H., Corneil, B. D., & Crawford, J. D. (2007). Position-dependent neck muscle activation during stimulation of the interstitial nucleus of Cajal (INC). *Society for Neurosciences Conference*.
- Farshadmanesh, F., Chang, P., Yan, X., Wang, H., Corneil, B. D., & Crawford, J. D. (2007). The effects of INC (interstitial nucleus of Cajal) stimulation/inactivation on neck muscle synergies. *Canadian Association for Neuroscience-Association Canadienne des Neurosciences*.
- Farshadmanesh, F., Chang, P., Yan, X., Wang, H., Corneil, B. D., & Crawford, J. D. (2007). The effects of stimulating/inactivating the INC (interstitial nucleus of cajal) on neck muscle synergies. *Gordon*.
- Feloui, D. F., Marotta, J.J., Vesia, M., Black, S. E., & Crawford, J. D. (2007). Visuomotor adaptation to reversing prisms in parietal patients performing a pointing task. *FICCDAT Advances in Neurorehabilitation Conference*.
- Keith, G. P., Blohm, G., & Crawford, J. D. (2007). When do hills of activation move and when do they jump? The dynamics of remapping during saccade, pursuit and combined eye movements. *Society for Neuroscience Conference*.
- Keith, G. P., & Crawford, J. D. (2007). A neural network that illustrates how the dynamic properties of spatial updating depend on the type of signals used to drive the updating. *Canadian Association for Neuroscience/Association Canadienne des Neurosciences*.

- Monteon J. A., Martinez-Trujillo, J. C, Wang, H., & Crawford, J.D. (2007). Electrical microstimulation of the primate frontal cortex reveals eye-centered and head-centered reference frames for gaze commands. *Canadian Association for Neuroscience-Association Canadienne des Neurosciences (CAN-ACN)*.
- Monteon, J.A., Martinez-Trujillo, J. C, Wang, H., Crawford, J. D. (2007). Frames of reference for eye-head gaze shifts evoked during stimulation of the primate FEF. *Vision Sciences Society Meeting*.
- Prime, S. L., Vesia, M., & Crawford, J. D. (2007). Role of human posterior parietal cortex (PPC) in transsaccadic memory. *Society for Neuroscience Conference*.
- Prime, S. L., Vesia, M., & Crawford, J. D. (2007). TMS over the posterior parietal cortex disrupts transsaccadic memory. *Canadian Association for Neuroscience-Association Canadienne des Neurosciences*.
- Prime, S. L., Vesia, M., & Crawford, J. D. (2007). TMS over the posterior parietal cortex disrupts transsaccadic memory. *Vision Sciences Society*.
- Prime, S. L., Vesia, M., & Crawford, J. D. (2007). Transsaccadic memory disrupted by TMS over posterior parietal cortex. *Centre for Vision Research International Vision Conference*.
- Prime, S. L., Vesia, M., Sergio, L .E., & Crawford, J. D. (2007). Role of human PPC in transsaccadic memory. *Canadian Association for Neuroscience-Association Canadienne des Neurosciences. (CAN-ACN)*.
- Ren, L., & Crawford, J. D. (2007). Failure to compensate for limb mechanics in proprioceptively-guided saccades. *Canadian Association for Neuroscience-Association Canadienne des Neurosciences (CAN-ACN)*.
- Vesia, M., Yan, X. G., Henriques, D. Y., Sergio, L. E., & Crawford, J. D. (2007). Impaired integration of initial hand position information into the reach plan during TMS of human posterior parietal cortex. *Centre for Vision Research International Vision Conference*.
- Vesia, M., Yan, X. G., Henriques, D. Y., Sergio, L. E., & Crawford, J. D. (2007). Role of human PPC in the integration of initial hand position information into the reach plan. *Canadian Association for Neuroscience-Association Canadienne des Neurosciences (CAN-ACN)*.
- Vesia, M., Yan, X. G., Henriques, D. Y., Sergio, L. E., & Crawford, J. D. (2007). TMS over posterior parietal cortex disrupts the integration of initial hand position information into the reach plan. *Society for Neuroscience Conference*.

- Vesia, M., Yan, X. G., Henriques, D. Y., Sergio, L. E., & Crawford, J. D. (2007). TMS over PPC disrupts state estimate of effector. *FICCDAT Advances in Neurorehabilitation Conference*.
- Zettel J. L., Vilis T., Culham J. C., & Crawford J. D. (2007). A comparison of saccade and pointing topography between medial and lateral areas in the human posterior parietal cortex. *Canadian Association for Neuroscience-Association Canadienne des Neurosciences (CAN-ACN)*.
- Zettel, J. L., Vilis, T., Culham, J. C, Crawford J. D. (2007). A comparison of saccade and pointing topography between medial and lateral areas in the human posterior parietal cortex. *Vision Sciences Society*.
- Zettel J. L., Vilis T., Culham J. C., Crawford J. D. (2007). A comparison of saccade and pointing topography in the human posterior parietal cortex. *Society for Neuroscience Conference*.
- Blohm, G., & Crawford, J. D. (2006). Egocentric distance estimation requires eye-head position signals. *Vision Sciences Society Abstracts*.
- Blohm, G., Keith, G. P., & Crawford, J. D. (2006). A possible neural basis of the 3D reference frame transformation for reaching. *Society for Neuroscience Abstracts*.
- Constantin, A. G., Wang, H., Martinez, J. C. & Crawford, J. D. (2006). A quantitative comparison of head-free gaze shifts evoked through electrical stimulation of the lateral intraparietal area (LIP) and the superior colliculus (SC) in the macaque. *Society for Neuroscience Abstracts*, 32, 139.5.
- Constantin, A. G., Wang, H., Martinez, J. C., & Crawford, J. D. (2006). Lateral intraparietal area (LIP) and motor control of gaze. *Southern Ontario Neuroscience Association (SONA) Meeting*, 43.
- Constantin, A. G., Wang, H., Martinez, J. C., & Crawford, J. D. (2006). Frames of reference for gaze shifts in lateral intraparietal cortex (LIP). *Vision Sciences Society Abstracts*, 181, 1021
- Crawford, J. D., Yan, X., Wang, H., & DeSouza, J. F. X. (2006). Internal representation of motion parallax in the superior colliculus (SC) during passive head translations and saccades to targets in 3-D space. *Society for Neuroscience Abstracts*.
- DeSouza, J. F. X., Yan, X., Blohm, G., Wang, H., & Crawford, J. D. (2006). Gaze position effects and position-dependent motor tuning in primate superior colliculus (SC) neurons during head-unrestrained visually guided movements. *Society for Neuroscience Abstracts*.

- DeSouza, J. F. X., Yan, X., Keith, G.P., Blohm, G., Wang, H., & Crawford, J. D. (2006). Gaze position effects and position-dependent motor tuning from primate superior colliculus (SC) neurons during head-unrestrained visually guided movements. *Vision Sciences Society Abstracts*.
- Farshadmanesh, F., Chang, P. F., Yan, X. G., Wang, H. Y., Corneil, B. D., & Crawford, J. D. (2006). Neck muscle synergies during gaze fixation before and after pharmacological inactivation of the interstitial nucleus of Cajal (INC) in the primate. *Society for Neuroscience Abstracts*.
- Keith, G. P., Blohm, G. & Crawford, J. D. (2006). A recurrent neural network for trans-saccadic spatial updating produces receptive field remapping and suppressed moving hills. *Vision Sciences Society Abstracts*.
- Keith, G. P., Blohm, G. & Crawford, J. D. (2006). A recurrent neural network that produces predictive spatial updating using retinal error and eye velocity efference copy signals. *Society for Neuroscience Abstracts*.
- Khan, A. Z., Pisella, L., Blohm, G., Rossetti, Y., & Crawford, J. D. (2006). Hand and target positions in multiple reference frames affect reach errors in unilateral parietal damaged patients. *Society for Neuroscience Abstracts*.
- Khan, A. Z., Pisella, L., Rossetti, Y, & Crawford, J. D. (2006). Initial hand position and movement direction affect reaching in a unilateral optic ataxia patient. *Vision Sciences Society Abstracts*.
- Klier, E. M., Farshadmanesh, F., Wang, H., & Crawford, J. D. (2006). The role of the Interstitial Nucleus of Cajal (INC) as an integrator for three-dimensional head movements. *Society for Neuroscience Abstracts*.
- Monteon, J. A., Martinez-Trujillo, J. C., Wang, H., & Crawford, J. D. (2006). Frames of reference for eye-head gaze shifts evoked during stimulation of the primate frontal eye fields. *Society for Neuroscience International Meeting*.
- Monteon, J. A., Wang, H., & Crawford J. D. (2006). Microstimulation of the Frontal Eye Filed Evokes Kinematically Normal Gaze Shifts. *Vision Sciences Society Abstracts*
- Monteon, J. A., Wang, H., Martinez-Trujillo, J. C., Crawford, J. D. (2006). Frames of reference for eye-head gaze shifts evoked during stimulation of the primate frontal eye fields. *Society for Neuroscience Abstracts*.
- Ren, L. & Crawford, J. D. (2006). Comparing Limb Proprioception and Oculomotor Signals During Hand-guided Saccades. *Neural Control of Movement Annual Meeting*.
- Ren, L. & Crawford, J. D. (2006). Failure to compensate for limb mechanics in proprioceptively-guided saccades. *Society for Neuroscience Abstracts*.

- Prime, S. L., & Crawford, J. D. (2006). Storing visual object features and locations across saccades. *Vision Sciences Society Abstracts*.
- Vesia, M., Monteon, J. A., Sergio, L. E., & Crawford, J. D. (2006). Hemispheric asymmetry in memory-guided pointing during transcranial magnetic stimulation of human parietal cortex. *Southern Ontario Psychomotor Behaviour Meeting*.
- Vesia, M., Monteon, J. A., Sergio, L. E., & Crawford, J.D. (2006). Hemispheric asymmetry in memory-guided pointing during single-pulse transcranial magnetic stimulation of human parietal cortex. *Society for Neuroscience Abstracts*.
- Vesia, M., Monteon, J. A., Sergio, L. E., & Crawford, J. D. (2006). Single-pulse TMS over dorsal posterior parietal cortex disrupts memory-guided pointing in humans. *Vision Sciences Society Conference*.
- Vesia, M., Monteon, J.A., Sergio, L. E., & Crawford, J. D. (2006). Transcranial magnetic stimulation of human parietal cortex reveals a hemispheric asymmetry in memory-guided pointing. *Southern Ontario Neuroscience Association (SONA) Meeting*.
- Vesia, M., Monteon, J. A., Sergio, L.E., & Crawford, J. D. (2006). Single-pulse TMS over dorsal posterior parietal cortex disrupts memory-guided pointing in humans. *Vision Sciences Society Abstracts*.
- Ren, L., & Crawford, J. D. (2005). Guiding the Eye with the Hand: Role of Proprioception in Spatial Updating for Saccades. *Vision Sciences Society Abstracts*. 783
- Ren, L., Khan, A. Z., & Crawford, J. D. (2005). Contribution of proprioception from the arm to the spatial updating of remembered target positions for saccades. *York Center for Vision Research Abstracts*. 2005:6
- Keith, G. P., Wang, H., & Crawford, J. D. (2005). A recurrent neural network model of the temporal dynamics of spatial remapping. *Society for Neuroscience Abstracts*, 35: 287.14.
- Fernandez-Ruiz, J., Goltz, H., Desouza, J. F. X., Vilis, T. & Crawford, J. D. (2005). Human 'parietal reach region' encodes visual stimulus coordinates, not movement direction, during reversing prism adaptation. *Neural Control of Movement Abstracts*.
- Chang, P. F., Farshadmanesh, F., Yan, X. G., Wang, H. Y., Crawford, J. D. and Corneil, B.D. (2005). Neck muscle recruitment evoked by micro-stimulation of the primate interstitial Nucleus of Cajal (INC). *Society for Neuroscience Abstracts*. 302.10
- Monteon, J. A., Wang, H., Martinez-Trujillo, J. C. and Crawford, J. D. (2005). Gaze shifts evoked by electrical stimulation of the frontal eye field in the head-free macaque. *Society for Neuroscience Abstracts*. Washington, DC, USA.

- Monteon, J. A., Wang, H., Martinez-Trujillo, J. C. and Crawford, J. D. (2005). The role of the frontal eye field on gaze control. *Centre for Vision Research International Vision Conference*, Toronto, ON, Canada.
- Constantin A. G., Wang, H., Martinez-Trujillo, J. C. and Crawford, J. D. (2005). Frames of reference for gaze shifts evoked during microstimulation of lateral intraparietal cortex (LIP). *Society for Neuroscience Abstracts*. 858: 858.17.
- Constantin A. G., Wang, H., Martinez-Trujillo, J. C. and Crawford, J. D. (2005). Stimulation evoked gaze-shifts from lateral intraparietal (LIP) area. *Centre for Vision Research International Vision Conference*. 1.
- Feloui F. D., Marotta, J. J., Black, S. E. and Crawford, J. D. (2005). Adaptation to reversing prisms: Pointing in patients with right-parietal damage. *Vision Sciences Society Abstracts*. 121.
- Feloui F. D., Marotta, J. J., Black, S. E. and Crawford, J. D. (2005). Eye-hand coordination in right parietal-damaged patients performing a reversing prism pointing task. *Society of Neurosciences Abstracts*. 287.22.
- Farshadmanesh, F., Chang, P.F., Wang, H., Klier, E.M. and Crawford, J.D. (2005). 3-D kinematics of eye and head movement during pharmacological inactivation of the interstitial nucleus of Cajal (INC) in the primate. *Society of Neuroscience Abstracts*. 35: 858.6.
- Prime, S. L., Niemeier, M. and Crawford, J.D. (2005). Transsaccadic integration of orientation and spatial position. *Experimental Brain Research*
- Prime, S. L., Niemeier, M. and Crawford, J. D. (2005). Integrating orientation and location of lines across saccades. *Centre for Vision Research*, Poster No. 38
- Prime, S. L., Niemeier, M. and Crawford, J. D. (2005). Integrating orientation and spatial position across saccadic eye movements. *Canadian Psychological Association*, 41:256.
- Vesia, M., Blohm, G., Monteon, J. A., Sergio, L. E. and Crawford, J. D. (2005). Transcranial magnetic stimulation over dorsal posterior parietal cortex induces contralateral biases in memory-guided pointing before and after reversing prism adaptation. *Society for Neurosciences Abstracts*.
- Vesia, M., Blohm, G., Monteon, J. A., Sergio, L. E. and Crawford, J. D. (2005). Effect of single-pulse TMS over dorsal posterior parietal cortex in memory-guided pointing before and after reversing prism adaptation. *Centre for Vision Research Conference on Computational Vision in Neural and Machine Systems*, Toronto, Ontario Canada

- Blohm, G. and Crawford, J.D. (2005). The 3-D eye-head geometry is needed to transform visual inputs into reaching movements. *Centre for Vision Research Conference on Computational Vision in Neural and Machine Systems*, Toronto, Ontario, Canada.
- Blohm, G. and Crawford, J.D. (2005s). 3D geometrical transformations for visually guided reaching. *Neural Control of Movement Conference*, Key Biscayne, Florida, USA.
- DeSouza, J. F. X., Yan, X., Wang, H. Y. & Crawford, J. D. (2005). Position-dependent Motor Tuning of Superior Colliculus (SC) Neurons in the Head-unrestrained Monkey. *Society for Neuroscnces Abstracts*
- Ren, L., Khan A. Z., & Crawford, J. D. (2004). Contribution of proprioceptive feedback from the arm to the spatial updating of remembered target positions for saccades. *Society for Neuroscience Abstracts*.
- Martinez-Trujillo, J. C., Khan, A. Z., & Crawford, J. D. (2004). Attention and stimulus contrast modulate saccade latency but not kinematics *Society for Neurosciences Abstracts*.
- Marotta, J. J., Keith, G. P., & Crawford, J. D. (2004). Visuomotor adaptation to reversing prisms (I): Separate parallel sensorimotor representations for reach and grasp. *Society for Neuroscience Abstracts*.
- Fernandez-Ruiz, J., Goltz, H., Vilis, T., & Crawford, J. C. (2004). Visuomotor adaptation to reversing prisms (II): Human ‘parietal reach regions’ encodes visual stimulus coordinates, not movement direction. *Society for Neurosciences Abstracts*
- Constantin, A. G., Wang, H., Martinez-Trujillo, J. C., & Crawford, J. D. (2004, in press). Properties of gaze shifts evoked by stimulating lateral intraparietal (LIP) cortex in the head-unrestrained monkey. *Society for Neurosciences Abstracts*
- Keith, G. P., Smith, M. A., & Crawford, J. D. (2004, in press). Neural network models develop explicit predictive remapping when the output layer encodes motor error topographically. *Society for Neurosciences Abstracts*
- Marotta, J. J., Keith, G. P., & Crawford, J. D. (2004). Is reversing prism adaptation global or modular? Vision Sciences Society, *Journal of Vision*.
- Prime, S. L., Niemeier, M., & Crawford, J. D. (2004). Transsaccadic integration of the orientation and location features of linear objects. Vision Sciences Society Abstract, G48, *Journal of Vision*.
- Crawford, J. D., Everling, S., Stuphorn, V., Martinez-Trujillo, J. C., Olson, C., & Ohbayashi, M. (2004). The frontal cortex and gaze control: from cognition to coordination. *Society for the Neural Control of Movement*.

- Medendorp W. P., Goltz, H.C., Crawford, J. D., & Vilis, T. (2004). Target topography and effector selection in human posterior parietal cortex. *Neural Control of Movement Conference*, Sigtes, Spain.
- Keith, G. P. Smith, M. A., & Crawford, J. D. (2004). Multiple mechanisms for saccadic updating and reference frame transformations revealed in physiologically and geometrically realistic neural network models. *Vision Sciences Society Abstracts*, F71.
- Keith, G. P., Smith, M. A., & Crawford, J. D. (2003). Network properties in a physiologically realistic model of updating target position across saccades. *Society for Neurosciences Abstracts*.
- Martinez-Trujillo, J. C., Wang, H., & Crawford, J. D. (2003). Macaque supplementary eye fields encodes gaze in head centered coordinates. *Society for Neuroscience Abstracts*.
- Prime, S. L., Niemeier, M., & Crawford, J. D. (2003). Transsaccadic integration of line orientation and location. *Society for Neurosciences Abstracts*.
- Keith, G., & Crawford, J. D. (2003). Network properties in a physiologically realistic model of updating target position across saccades. *Society for Neurosciences Abstracts*.
- Khan, A. Z., Pisella, L., Crawford, J. D., & Rossetti, Y. (2003). Errors in reaching in unilateral optic ataxia reflect a faulty eye-centered spatial representation. *Society for Neuroscience Abstracts*, 33.
- Medendorp, W. P., Goltz, H. C., Crawford, J. D., & Vilis, T. (2003). Effector-specific topology of target location in human PPC during pointing and saccades. *Soc for Neuroscience abstracts*, 33.
- Constantin, A. G, Wang, H., & Crawford, J. D. (2003). Role of the superior colliculus in adaptive changes in eye-head in coordination during gaze shifts in the monkey. *Society for Neurosciences Abstracts*.
- Klier, E. M., Wang, H., & Crawford, J. D. (2003). The three-dimensional neural integrator uses effector-specific coordinate systems. *Society for Neurosciences Abstracts*, 33.
- Barr, M. S., Yan, X., Crawford, J. D, & Sergio, E. (2003). The Processing of indirect visuomotor transformations in primates. *Society for Neurosciences Abstracts*.
- Farshadmanesh, F., Wang, H., Klier, E. M., Constantin, A. G., & Crawford, J. D. (2003). Three-dimensional eye head coordination during inactivation of the interstitial nucleus of Cajal in the primate. *Society for Neurosciences Abstracts*.
- Khan, A. Z., Rossetti, Y., & Crawford, J. D. (2003). Eye-centered remapping in patients with bilateral parietal lobe lesions. *Third Annual Meeting for the Vision Sciences Society, Poster presentation in May*.

- Rossetti, Y., Khan, A. Z., Pisella, L., Salemme, R., Vighetto, R., & Crawford, J. D. (2003). Remise à jour post-saccadique chez des patients atteints d'ataxie optique; combien de systèmes pour recoder l'informations spatiale en coordonnées retiniennes?. *6e Colloque de la Société des Neurosciences*, A0003.0. Poster presentation in May.
- Niemeier, M., Crawford, J. D., & Tweed, D. (2003). A new form of saccadic compression of space. *Vision Sciences Society*, 3, 193.
- Medendorp, W. P., Goltz, H. C., Vilis, T., Menon, R. S., & Crawford, J. D. (2003). Eye-centered remapping of remembered visual space in human parietal cortex. *Vision Sciences Society* (Sarasota, Florida, USA).
- Prime, S. L., Niemeier, M., & Crawford, J. D. (2003). Trans-saccadic memory of object features. *Centre for Vision Research: Visual Processing of Spatial Form Defined by Luminance, Colour, Motion, Texture and Binocular Disparity*, Toronto, Canada.
- Niemeier, M., Crawford, J. D., & Tweed, D. A. (2003). Bayesian-based contraction of spatial perception. *CVR Conference*.
- Prime, S. L., Niemeier, M., Yan, X. & Crawford, J. D. (2003). Trans-saccadic integration of visual features. Poster session presented at the annual meeting of the *Vision Sciences Society*, Sarasota, USA.
- Marotta, J. J., Medendorp, W. P., & Crawford, J. D. (2003). The 3-dimensional arm kinematics of grasp orientation. *Society for the Neural Control of Movement*, 13.
- Martinez-Trujillo, J. C., Wang, H., Crawford, J. D. (2003). Head-centered gaze coding in the SEF of macaques. *Society for the Neural Control of Movement*.
- Medendorp, W. P., Goltz, H. C., Vilis, T., Menon, R. S., & Crawford, J. D. (2002). Topography of saccades and pointing in human parietal cortex as revealed by fMRI. *Society for Neuroscience Abstracts*, 32, 716.11.
- Klier, E. M., Martinez-Trujillo, J. C., Wang, H., & Crawford, J. D. (2002). Head-free versus head-fixed electrical stimulation in the supplementary eye fields and the superior colliculus of the macaque monkey. *Society for Neuroscience Abstracts*, 32, 266.6.
- Martinez-Trujillo, J. C., Wang, H., Klier, E. M., & Crawford, J. D. (2002). Gaze shifts evoked by electrical stimulation of the supplementary eye fields in the head-free macaque. *Society for Neuroscience Abstracts*, 32, 11.9.
- Khan, A. Z., Crawford, J. D., & Rossetti, Y. (2002). Updating of visual information across a delay in normals and optic ataxia patients. *Society for Neuroscience Abstracts*, 32.

- Prime, S., Niemeier, M., Crawford, J. D., & Yan, X. (2002). Trans-saccadic integration for low-level visual information. *Society for Neuroscience Abstracts*, 32.
- Ascencio-Monteon; J., Martinez-Trujillo, J. C., Wang, H., & Crawford, J. D. (2002). Adaptive Cross-Coupling Between Eye And Head Position Commands Within the Gaze Control System of the Monkey. *Society for Neuroscience Abstracts*, 32.
- Niemeier, M., Crawford, J. D., & Tweed, D. (2002). Evidence for a Bayesian inference model of transsaccadic perception. *Society for Neuroscience* 32, 57.1.
- Marotta, J. J., Medendorp, W. P., & Crawford, J. D. (2002). Contributions of upper and lower arm to grasp orientation. *Society for Neuroscience*, 268.8. Abstract viewer/Itinerary Planner. Washington, DC: *Society for Neuroscience*. CD-ROM. 2002
- Niemeier, M., Crawford, J. D., Tweed, D. B. (2002). Evidence for a Bayesian inference model of transsaccadic perception. *FENS*.
- Khan, A. Z., & Crawford, J. D. (2002). Eye-hand alignment in a pointing task varies with gaze direction. *3rd Forum of European Neuroscience*. 28.
- Martínez-Trujillo, J. C., Klier, E., Wang, H., Crawford, J. D. (2002). Head fixed vs. head free electrical microstimulation in frontal cortex and superior colliculus of the macaque monkey. *Society for the Neural Control of movement*.
- Martínez-Trujillo, J. C., Klier, E., Wang, H., & Crawford, J. D. (2002). The contribution of head movements to visuospatial coding in frontal cortex and superior colliculus of the macaque monkey. *Society for the Neural Control of movement*.
- Medendorp, W. P., Tweed, D. B., & Crawford, J. D. (2002). Visuospatial updating of near space during translational head motion. *Neural Control of Movement Conference*, Naples, Florida.
- Medendorp, W. P., Tweed, D. B., & Crawford, J. D. (2002). Visuospatial updating of near space during translational head motion. *Multisensory Interactions Subservicing Orienting Behavior*, Naples, Florida.
- Niemeier, M., Crawford, J. D., & Tweed, D. (2002). As good as it gets – testing a Bayesian model of change blindness. *Vision Sciences Society*, 2.
- Henriques, D. Y. P., Medendorp, W. P., Gielen, C. C. A. M., & Crawford, J. D. (2002). Eye-hand coordination during reaching in 3D space: Binocular fixation and internal models. *ARVO* (abstract 4667).
- Khan, A. Z., & Crawford, J. D. (2002). Gaze angle dependency of ocular dominance in a pointing task. *ARVO* (abstract 4663).

- Crawford, J. D. (2002). Ocular kinematics in eye-hand coordination. *ARVO* (abstract 421).
- Constantin, A. G., Wang, H., Klier, E. M., & Crawford, J. D. (2001). Role of the superior colliculus (SC) in adaptive eye-head coordination. *Society for Neuroscience Abstracts*, 31: 784.2.
- Klier, E. M., Wang, H., Constantin, A. G., & Crawford, J. D. (2001). The primate midbrain possesses a neural integrator for torsional and vertical head posture. *Society for Neuroscience Abstracts*, 31: 784.2.
- Niemeier, M., Crawford, J. D. & Tweed, D. B. (2001). Change blindness as a result of optimal inference from visual and nonvisual information: a network approach to transsaccadic integration. *Society for Neuroscience Abstracts*, 31: 237.4.
- Smith, M. A., & Crawford, J. D. (2001). Network properties in a physiologically realistic model of the 2-D to 3-D visuomotor transformation for saccades. *Society for Neurosciences Abstracts*, 31: 71.38.
- Medendorp, W. P., Smith, M. A., Tweed, D.B., & Crawford, J. D. (2001). Representation and remapping of 3-D visual space during head-free gaze shifts. *Society for Neuroscience Abstracts* 31: 237.3.
- Henriques, D. Y. P., & Crawford, J. D. (2001). The eye-hand coordination system account for head orientation and target depth during reaching toward near targets. *Society for Neuroscience Abstracts* 31: 940.10.
- Khan, A. Z., & Crawford, J. D. (2001). Coordinating one hand with two eyes: gaze-dependent reversal of Ocular Dominance in a pointing task. *Society for Neuroscience Abstracts* 31: 940.12.
- Crawford, J. D. (2001). Visuomotor transformations for eye-hand coordination. *European Eye Movement Conference*, 11.
- Medendorp, W. P., Tweed, D. B., & Crawford, J. D. (2001). Modeling spatial updating during head-free gaze shifts. *Vision Sciences Society*, 1.
- Neimeier, M., Crawford, J. D., & Tweed, D. B. (2001). A probabilistic model of transsaccadic integration. *Vision Sciences Society*, 1.
- Klier, E. M., Wang, H., & Crawford, J. D. (2001). Three-dimensional eye-head coordination is implemented downstream from the superior colliculus. *Neural Control of Movement – 11th Annual Meeting*, 6, D-13.
- Crawford, J. D., Bekkering, H., van Donkelaar, P., Snyder, L., & Miall, C. (2001). Eye-hand coordination: Seeing the questions, reaching for the answers. *Neural Control of Movement, – 11th Annual Meeting* (Workshop).

- Klier, E. M., Wang, H. & Crawford, J. D. (2000). The superior colliculus encodes two-dimensional commands for head-free gaze shifts in oculocentric coordinates. *Society for Neuroscience Abstracts*, 26: 293.
- Crawford, J. D., Klier E. M., & Wang, H. (2000). Listing's and Donders' law of the eye and head are coordinated downstream of the superior colliculus. *Society for Neuroscience Abstracts*, 26: 292.
- Constantin, A. G., Wang, H., Klier, E., & Crawford, J. D. (2001). Context-dependent adaptation of eye-head coordination in gaze saccades evoked by superior colliculus stimulation. *Society for Neuroscience Abstracts*, 26: 1992.
- Smith, M. A., Henriques, D. Y. P., & Crawford, J. D. (2000). The internal remapping of spatial locations across saccades accounts for the non-commutativity of 3-D eye rotation. *Society for Neuroscience Abstracts*, 26: 1991.
- Khan, A. Z., Vilis, T. & Crawford, J. D. (2000). Eye position dependence of ocular dominance in a reaching grasping task. *Society for Neuroscience Abstracts*, 26: 1990.
- Schreiber, K., Fetter, M., Crawford, J. D., & Tweed, D. (2000). The role of eye coordination in depth perception. *Society for Neuroscience Abstracts*, 26: 1994.
- Medendorp, W. P., Crawford, J. D., Henriques, D. Y. P., Van Gisbergen, J. A. M., & Gielen, C. C. A. M. (2000). Three-dimensional control principles for upper arm-forearm coordination. *Society for Neuroscience Abstracts*, 26: 1720.
- Henriques, D. Y. P., & Crawford, J. D. (2000). The visuomotor transformation for head-free pointing accounts for differences in the centres of eye, head and arm rotation. *Society for Neuroscience Abstracts*, 26: 155.
- Crawford, J. D., Smith, M. A., & Henriques, D. Y. P. (2000). Modelling and testing the principle of computation-on-demand in the 3-D saccade generator. *Computational Neuroscience Meeting*.
- Klier, E. M., Wang, H. & Crawford, J. D. (2000). Stimulation of the Interstitial Nucleus of Cajal (INC) Produces torsional and vertical head rotations in Fick coordinates. *Southern Ontario Neuroscience Association Meeting (SONA)*.
- Smith, M. A. & Crawford, J. D. (2000). Spontaneous development of parallel task modules and coordinate systems in a neural network model of the visuomotor transformation for saccades. *Southern Ontario Neuroscience Association Meeting*.
- Wang, H., Klier, E. M., & Crawford, J. D. (2000). 3-D gaze control and head posture deficits during reversible inactivation of the primate interstitial nucleus of Cajal (INC) *Southern Ontario Neuroscience Association Meeting*.

- Henriques, D.Y. P., & Crawford, J. D. (2000). The visuomotor transformation for pointing accounts for curvature of visual space produced by rotatory 3-D eye orientation in correcting for curvature of space. *Investigative Ophthalmology & Visual Science*, S811.
- Crawford, J. D., Tweed, D., Gielen, S., Flanders, M. (2000). Donders' law of the eye, head and arm: Canonical Rule or task-dependent strategy? *Neural Control of Movement Conference*, Key West, Florida, April 9-14.
- Freedman, E. G., Crawford, J. D., Van Opstal, J., & Corneil, B. (2000). Current directions in head-free gaze control: The superior colliculus and beyond. *Neural Control of Movement Conference*, Key West, Florida, April 9-14.
- Medendorp, W. P., Crawford, J. D., Henriques, D. Y. P., Van Gisbergen, J. A. M., & Gielen, C. C. A. M. (2000). A new perspective on Donders' law as a control principle in upper arm-forearm coordination. *Neural Control of Movement Conference*, Key West, Florida, April 9-14.
- Henriques, D. Y. P., Crawford, J. D., & Vilis, T. (2000). The visuomotor transformation for arm movement accounts for 3-D eye orientation and retinal geometry. *Neural Control of Movement Conference*, Key West, Florida, April 9-14.
- Crawford, J. D., & Vilis, T. (1999). Role of the 3-D Neural Integrator in control of ocular counterroll. *Society for Neuroscience Abstracts*, 25: 6.
- Klier, E. M., Wang, H., & Crawford, J. D. (1999). Stimulation of the Interstitial Nucleus of Cajal (INC) Produces torsional and vertical head rotations in Fick coordinates. *Society for Neuroscience Abstracts*, 25: 1650.
- Wang, H., Klier, E. M. & Crawford, J. D. (1999). 3-D gaze control and head posture deficits during reversible inactivation of the primate interstitial nucleus of Cajal (INC). *Society for Neuroscience Abstracts*, 25: 1650.
- Ceylan, M., & Crawford, J. D. (1999). Visuomotor constraints on 3-D head posture during gaze shifts in humans. *Society for Neuroscience Abstracts*, 25: 6.
- Hudobba, M., Crawford, J. D., & Harris, L. (1999). Three-dimensional gaze movements evoked by passive rotation of cats. *Society for Neuroscience Abstracts*, 25: 1650.
- Smith, M. A., & Crawford, J. D. (1999). Spontaneous development of parallel task modules and coordinate systems in a neural network model of the visuomotor transformation for saccades. *Society for Neuroscience Abstracts*, 25: 1921.
- Henriques, D. Y. P., & Crawford, J. D. (1999). The visuomotor transformation for arm movement accounts for 3-D eye orientation and retinal geometry. *Society for*

Neuroscience Abstracts, 25: 1911.

Henriques, D. Y. P., & Crawford, J. D. (1999). Consequences of eye orientation for the visuomotor transformation in arm control. 10th Annual European Eye Movement Conference.

Demer, J. L., Miller, J., Quaia, C., & Crawford, J. D. (1999). New concepts of the ocular motor plant and the neural control of eye movements. *Neural Control of Movement Conference*, Kauai, Hawaii, April 11-16.

Ceylan, M., Henriques, D., Llianos, D., Tweed, D., & Crawford, J. D. (1998). Context-dependent visual-motor adaptation of eye-head coordination in humans and monkeys. *Society for Neuroscience Abstracts*, 24: 670.

Klier, E. M., Guitton, D., & Crawford, J. D. (1998). Trajectories and 3-D fixation ranges of the eye and head during large gaze shifts in the monkey. *Society for Neuroscience Abstracts*, 24: 1743.

Smith, M. A., & Crawford, J. D. (1998). Accounting for 3-D eye rotations in the mechanisms for spatial memory and visuomotor transformation. *Society for Neuroscience Abstracts*, 24: 1742.

Henriques, D. Y. P., & Crawford, J. D. (1998). Visual-motor miscalibrations of remembered vertical & oblique retinal errors when pointing. *Society for Neuroscience Abstracts*, 24: 2096.

Andersen, R. A., Goldberg, M. E., Crawford, J. D., & Kleinfeld, D. (1998). Maintaining stable spatial representations (Symposium) *Society for Neuroscience Abstracts*, 24: 755.

Smith, M. A., & Crawford, J. D. (1998). Simulating a 3-D VOR in non-orthogonal coordinate systems. *Conference for Research on Action and Perception*, Queens U., June 5-6.

Henriques, D. Y. P., & Crawford, J. D. (1998). Coding of remembered visual space in a dynamic retinotopic map while pointing toward briefly flashed targets. *Conference for Research on Action and Perception*, Queens U., June 5-6.

Klier, E. M., & Crawford, J. D. (1998). 3-D eye position is taken into account in a visuomotor reference frame transformation for saccade generation. *Conference for Research on Action and Perception*, Queens U., June 5-6.

Smith, M. A., & Crawford, J. D. (1997). Simulating neural processes in non-orthogonal coordinate system: a 3-D tensor model of the VOR. *Society for Neuroscience Abstracts*, 23: 472.

- Henriques, D. Y. P., Lowey, D., & Crawford, J. D. (1997). Dynamic retinotopic coding of remembered visual space in a virtual target-pointing task. *Society for Neuroscience Abstracts*, 23: 1950.
- Klier, E. M., Lowey, D., & Crawford, J. D. (1997). The brain accounts for 3-D eye position in an eye-to-head reference frame transformation for accurate saccades. *Society for Neuroscience Abstracts*, 23: 8.
- Gold, B. T., Goel, V., Kapur, S., Houle, S., & Crawford, J. D. (1997). Neuroanatomic correlates of deductive and inductive reasoning. *Society for Neuroscience Abstracts*, 23: 495.
- Crawford, J. D., Goldberg, M. E., Andersen, R. A., & Van Opstal, J. (1997). What is the role of eye position information in spatial perception and visuomotor control? *Neural Control of Movement Conference*, Cancun, Mexico, April 8-13.
- Smith, M. A., & Crawford, J. D. (1997). A matrix-tensor model for the 3-D vestibulo-ocular reflex. *International Vision and Action Conference*, York U.
- Henriques, D. Y. P., & Crawford, J. D. (1997). Visual space is remembered in a gaze centred rather than a head-centric frame. *International Vision and Action Conference*, York U.
- Klier, E. M., & Crawford, J. D. (1997). A 3-D eye position-dependent visuomotor transformation is required in order to generate accurate saccades. *International Vision and Action Conference*, York U.
- Klier, E. M., & Crawford, J. D. (1997). The brain takes 3-D eye position into account when reading the retinal code. *Investigative Ophthalmology and Visual Science (ARVO Abstracts)*, 38: S656.
- Henriques, D. Y. P., Crawford, J. D., Klier, E. M., & Smith, M. A. (1997). Testing between craniotopic and retinotopic models of spatial memory in a visually guided pointing task. *Investigative Ophthalmology and Visual Science (ARVO Abstracts)*, 38: S988.
- Smith, M. A., & Crawford, J. D. (1997). Modelling the vestibulo-ocular reflex in three-dimensional space. *Annual Computational Neuroscience Conference*.
- Crawford, J. D. (1995). Visuomotor codes for three-dimensional saccades. *York University International Conference on Visual Coding*.
- Crawford, J. D., & Guitton, D. (1995). Of neural coordinate systems, Listing's law, and head-free gaze shifts. *Three-Dimensional Kinematic Principles of Eye, Head, and Limb Movements in Health and Disease*.
- Crawford, J. D. (1995). Representations of 3-D eye position in the visuomotor

transformation for saccades. *Three-Dimensional Kinematic Principles of Eye, Head, and Limb Movements in Health and Disease*.

Crawford, J. D., & Guitton, D. (1995). Motor adaptation of 2-D and 3-D aspects of eye-head coordination in monkeys. *Society for Neuroscience Abstracts*, 21: 1271.

Guitton, D., & Crawford, J. D. (1994). Coordination of Monkey eye and head movements in three dimensions. *Society for Neuroscience Abstracts*, 20: 1405.

Crawford, J. D., & Guitton, D. (1994). A model of the sensorimotor transformations required for accurate 3-D saccades. *Society for Neuroscience Abstracts*, 20: 234.

Highstein, S., Kaneko, K., Cullen, K., Phillips, J., Tomlinson, D., Hepp, K., & Crawford, J. D. (1994). The saccade burst generator revisited: its role in head-free gaze control and 3-D eye rotations. *Neural Control of Movement*, Maui, Hawaii, April 13-18.

Crawford, J. D., & Vilis, T. (1993). The oculomotor integrator encodes eye positions in Listing's coordinates. *Society for Neuroscience Abstracts*, 19: 857.

Crawford, J. D., & Vilis, T. (1992). Evidence for distributed parallel integration in the interstitial nucleus of Cajal. *Society for Neuroscience Abstracts*, 18: 102.10.

Crawford, J. D., & Vilis, T. (1991). The riMLF produces torsional and vertical saccadic velocity signals for both eyes. *IBRO Abstracts*. 3, P63.19.

Crawford, J. D., & Vilis, T. (1991). Oculomotor short-lead burst neuron populations generate eye velocity vectors in Listing's coordinates. *Society for Neuroscience Abstracts*, 17.

Vilis, T., Crawford, D., & Tweed, D. (1989). Simulations of a three-dimensional VOR with stable gaze. *Society for Neuroscience Abstracts*, 15, 211.4.

Crawford, D., Vilis, T., & Cadera, W. (1989). Quick phase planes anticipate violations of Listing's law produced by slow phases. *Society for Neurosciences Abstracts*, 15, 211.5.

Crawford, D., Cadera, W., & Vilis, T. (1988). The oculomotor velocity to position transformation involves the nucleus of Cajal. *Society for Neurosciences Abstracts*, 14, 386.8.

INVITED CONFERENCE PRESENTATIONS:

2021 Gordon Research Conference on Eye Movements “Prefrontal integration of egocentric and allocentric cues for gaze” (scheduled for July 2021).

2021 Rochester CVS Symposium on Active Vision. (Scheduled for June 2021)

- 2019 CVR/VISTA International Conference on Predictive Vision “Spatial Updating in the Superior Colliculus During Smooth Pursuit”. (June 10, 2019).
- 2019 Symposium in celebration of Klaus-Peter Hoffman. “Cortical Integration of Egocentric and Allocentric Cues for Goal-Directed Action”. Marburg, Germany. March 28, 2019.
- 2018 Symposium in Celebration of Lance Optican. “Spatial updating during smooth pursuit: From models to neurons”. November 2, 2018.
- 2018 NeuroXChange Conference “How Vision Becomes Action” April 27, 2018. (Keynote)
- 2018 Primate Neurobiology Conference. Spatiotemporal Evolution of Target Coding in the Primate Gaze Control System (March 13-14, 2018)
- 2018 47th Annual Lake Ontario Visionary Establishment (L.O.V.E.) conference 2018 ' Visuomotor Transformations at Macroscopic and Microscopic Levels of Brain Function' (February 8 - 9 2018) (Keynote)
- 2017 Chair of the SfN 2017 Nanosymposium, "Visually-Guided Reach and Grasp" Washington, DC. Tuesday, November 14, 2017
- 2017 VSS 2017 Symposium "Visual-motor transformations at the Neuronal Level in the Gaze System" as part of a symposium called “The Brain Correlates of Perception and Action: from Neural Activity to Behavior” (May 19, 2017)
- 2017 CVR/VISTA summer school June 9, 2017
- 2016 *Keynote Lecture* at the CAPnet-CPS CAN-ACN Satellite Symposium “Action & Perception: Cognition, Coding and Clinical Populations” (May 29, 2016)
- 2016 Society for the Neural Control of Movement (Montego Bay) “Using Behavioral Variability to fit Spatial Models against Neural Activity through Time in the Gaze Control System” (April 24 – 29)
- 2014 IRTG Retreat and Summer School Wildbad Kreuth. (Bavaria) *Keynote Lecture: How Vision Becomes Action* (June 3-6)
- 2014 8th World Congress of Neurorehabilitation (WCNR) (Istanbul Turkey). *Allocentric vs. Egocentric Mechanisms for Reach*. (April 8-12)
- 2013 University of British Columbia Brain Research Centre Neuroscience Research Colloquium (Vancouver Canada). *How vision becomes action in the gaze control system* (October 18)

- 2013 International Union of Physiological Sciences Symposium (IUPS) (Birmingham, UK). From perceiving to acting: neurophysiological mechanisms of conscious visual perception. *“Progression of target-to-gaze command coding in superior colliculus and frontal eye fields during head unrestrained gaze shifts”* July 21-26
- 2013 Centre for Vision Research at York University Conference. Interaction in Vision *'The importance of knowing eye orientation for perception and visuomotor behavior'* June 26-June 28, 2013
- 2013 Canadian Association for Neuroscience (Toronto, Ontario). *“Spatial representation for action in human parietal cortex: an emerging story from fMRI, neuropsychology, and TMS”*
- 2012 The Canadian Society for Brain, Behaviour and Cognitive Science Conference (Kingston, Ontario). *“Vision for perception and action, 20 years later: where are we now?”*
- 2011 Vision Science Society Symposium (Naples Florida). *“Calculation of accurate 3-D reach commands from initial retinal and extra-retinal conditions”*
- 2010 Perception and Action Meeting (Frankfurt, Germany) *“Involvement of Parietal and Frontal Eye Fields in Trans-saccadic Memory of Multiple Objects”*
- 2009 Vision Sciences Society 2009 Symposia (VSS) (Naples, Florida) *“Cortical Mechanisms for Trans-Saccadic Memory of Multiple Objects”*
- 2009 TMS Summer meeting (London, England) *“Spatial updating for motor and perceptual memory”*
- 2009 Scottish Vision Group (Tobermory Scotland) *“Neural Mechanisms for Trans-saccadic memory of multiple objects”*
- 2008 Psychology, Neuroscience, and Behavior (PNB) Colloquium (Hamilton, Ontario) *“Retaining, Updating, and Integrating Visual Representations Across Saccades”*
- 2008 University of Toronto Interdisciplinary Symposium on the Mind (Toronto, Ontario) *“Retaining, Updating, and Integrating Visual Representations Across Saccades”*
- 2007 Biomedical Imaging and Computer Vision (BICV) (Waterloo, Ontario) *“Spatial representation in parietal cortex”*
- 2007 Autumn School in Vision and Movement (Wildbad Kreuth, Germany) *“3-D Aspects of Gaze Control”*
- 2007 Computation Neuroscience Pre-Conference Satellite meeting (Toronto, Ontario)

- “Perspectives for Future Directions in Computational and Mathematical Neuroscience”*
- 2007 Canadian Physiological Society. Mt. St. Ann, Quebec. *“Gaze coding in parieto-frontal cortex of the monkey”*
- 2006 Scottish Vision Meeting. (University of Aberdeen, Scotland)
“Visual Coordinates for reach plans in human parietal cortex”
- 2005 Society for Neuroscience. Washington, DC. (Symposium Chair, Organizer, and Participant) *“Visual-motor transformations for eye-hand coordination”*
- 2005 Gordon Research Conference: Oculomotor System Biology (for David Sparks)
“Reference Frames for Gaze Coding in Cortex and Superior Colliculus”
- 2005 Centre for Vision Research International Conference.
“Computational Mechanisms for spatial updating”
- 2005 Vision Science Society. Sarasota, Florida
“PRR Encodes Visual Goal in Retinal Coordinates, not Reach Direction”
- 2005 Neural Control of Movement Conferences (Key Biscayne, Florida)
“Reference Frames for Gaze Coding in Cortex and Superior Colliculus”
- 2005 Canadian Physiological Society (Special Symposium to honor D. Guitton).
“Reference Frames for Gaze Coding in Cortex and Superior Colliculus”
- 2004 A modern approach to the interaction between vision and movement (one-day symposium in Louvain, Belgium) *“Parietal mechanisms for eye-hand coordination”*
- 2004 Neural Control of Movement Conference (Barcelona, Spain).
“Frontal Cortex and Gaze Control: From Cognition to Coordination”
- 2003 Eye Movement Symposium Honoring Ray Buncic, Sick Children’s Hospital, Toronto, Canada. *“Brainstem Control of 3-D eye and head orientation”*
- 2003 Southern Ontario Neuroscience Association Annual Meeting, London Ontario
“Neural mechanisms of Eye-Hand Coordination”
- 2003 Physiology and Disorders of Oculomotor Control, Wildbad Kreuth, Germany.
“Brainstem Control of 3-D eye and head posture”
- 2002 ARVO Symposium: Ocular Kinematics, Visual Perception, and Action. *“Ocular kinematics in eye-hand coordination”*
- 2002 International Conference on Eye-hand Coordination, Queens University *“Internal*

- representations and the geometry of eye-hand coordination*”
- 2001 Brainerd Conference on Systems Analysis in Neurophysiology (Brainerd, Minnesota) “*Brainstem Control of 3-D Gaze Shifts*”
- 2001 11th European Conference on Eye Movements. (Turku, Finland)
“*Visuomotor transformations for eye-hand coordination*”
- 2001 Neural Control of Movement Conference (Seville, Spain) “*Eye-hand coordination: seeing the questions, reaching for the answers*”
- 2001 The Vestibular and Oculomotor System: Basic Mechanisms and Clinical Applications."(Munich Germany) “*Brainstem control of 3-D gaze shifts in the monkey*”
- 2001 Neural Control of Movement Conference (Key West, Florida): “*Donders’ law of the eye, head, and arm: canonical rule of task-dependent strategy?*”
- 2000 Neural Control of Movement Conference (Key West, Florida): “*Current directions in head-free gaze control: the superior colliculus and beyond*”
- 1999 Neural Control of Movement Conference (Princeville, Kauai, Hawaii). “*New Concepts of the ocular motor plant and the neural control of eye movements*”
- 1998 Annual Society for Neuroscience Meeting (LA California): “*Moving and Perceiving in Three-Dimensional Space.*” (Part of a symposium entitled *Maintaining Stable Spatial Representations*, organized by Richard Andersen).
- 1997 Neural Control of Movement Conference (Cancun, Mexico): “*What is the role of eye position in spatial perception and visuomotor control?*”
- 1997 International Vision and Action Conference (York University): “*Listing’s Law: What’s all the Hubbub?*”
- 1995 Three-Dimensional Kinematic Principles of Eye, Head, and Limb Movements in Health and Disease, (Tuebingen, Germany) (2 invited presentations):
(1) “*Neural coordinate systems for head-fixed and head-free gaze shifts*”
(2) “*Geometric Transformations in the visual-motor interface for saccades*”
- 1995 International Conference on Visual Coding (York University): “*Visuomotor Codes for Three-Dimensional Saccades*”
- 1994 Annual Neural Control of Movement conference (Maui, Hawaii):
“*The saccade burst generator revisited: its role in 3-D eye rotations*”

Invited Colloquia, Workshop, Summer School Presentations

- 2020 CVR/VISTA Summer School ‘Cortical Representation of Reach Goals: Spatial Frames and Updating’ (June 2, 2020)
- 2020 Brain in Action IRTG Lecture Series ‘Cortical Representation of Reach Goals: Spatial Frames and Updating’ (June 2, 2020)
- 2019 CVR/VISTA Summer School. “Cortical Integration of Egocentric and Allocentric Cues for Goal-Directed Action”. June 2019.
- 2019 Donders Institute: Cortical Integration of Egocentric and Allocentric Cues for Goal-Directed Action. Nijmegen, Netherlands. April 2, 2019.
- 2018 CVR/VISTA summer school “How Vision becomes Action” June 5, 2018
- 2018 York University: Centre for Vision Research Retreat. September 27, 2018.
- 2018 University of Waterloo, Centre for Theoretical Neuroscience. Spatial updating during smooth pursuit: From models to neurons. October 23, 2018.
- 2017 Marburg Germany IRTG seminar, Marburg Germany IRTG seminar: 'Where, when, and how does vision become action in the primate brain?'
- 2017 CVR/VISTA Summer School "How Vision Becomes Action in the Primate Brain" June 5-9, 2017
- 2015 University of Toronto: Department of Psychology Seminar Series "Cellular basis of visual working memory during gaze behaviors" (November 25)
- 2015 York University: Centre for Vision Research Seminar Series "Cellular basis of visual working memory during simple gaze behaviors" (November 13)
- 2015 York University: Post-doctoral Orientation Reception (September 15)
- 2015 McMaster University Neurology Grand Rounds Series “Cortical Mechanisms for Visually Aimed Reaches” (May 20)
- 2015 University of Toronto department of Kinesiology “Visuo-Spatial Representations for Reach in Human Cortex” (May 4)
- 2014 Queens University “Early Visuomotor Transformations for Reach” (Oct 15)
- 2014 University of Waterloo “Early Visuomotor Transformations for Reach” (Oct. 7)

- 2014 University of Waterloo Neuroscience Seminar “Cortical Mechanisms for Allocentric vs. Egocentric Coding of Reach” (April 4)
- 2013 UBC Brain Research Centre “How Vision Becomes Action in the Gaze Control System” (Oct. 18)
- 2013 CVR Summer School “Neural mechanisms for visually guided movement” (June 5)
- 2012 DFG IRTG Site Visit Marburg / Giessen (Sept 19) 'CAPnet and Crawford Lab Overview'.
- 2012 IRTG Meeting, York U
- 2012 Crawford lab overview CVR Annual Retreat, Toronto
- 2012 IRTG Planning Workshop, York U
- 2010 Neuroimaging, Sick Kids Hospital, Toronto
- 2010 2nd CAPnet Faculty Retreat, Queens University, Kingston
- 2009 Department of Neurobiology and Anatomy, Washington University, St. Louis
- 2009 Donders’ Lecture Series, University of Nijmegen
- 2008 Department of Physiology, University of Toronto
- 2008 First Annual York Leadership Roundtable Dinner, York U.
- 2008 Smith-Kettlewell Eye Research Institute, San Francisco, California (deferred)
- 2008 Berkley University, San Francisco, California (deferred)
- 2008 1st CAPnet Faculty Retreat, York University, Toronto
- 2008 Department of Psychology, Neuroscience, and Behavior, McMaster U, Hamilton
- 2008 Vision Science Group Nikon Lectures, University of Montreal
- 2008 Led CAPnet fMRI Presentation to Siemens R&D Team (Toronto Conference C.)
- 2008 Led (chaired) York Presentation to CFI (Pearson Airport Hotel, Toronto).
- 2007 Department of Neurophysics, Philipps-University, Marburg, Germany

- 2007 Department of Cognitive Neurology, Hertie Institute of Clinical Brain Research, Tuebingen, Germany
- 2007 Biomedical Imaging and Computer Vision (BIVC) Symposium, U. Waterloo
- 2007 Frontiers of Theoretical Neuroscience in Canada Workshop, U. Waterloo
- 2007 Computational Neuroscience Series, Washington University
- 2007 Vision Science Group Nikon Lectures, U. Montreal
- 2006 Baycrest Centre, Departments of Neurology and Neuropsychology
- 2006 CIHR Training Program in Vision Health Research Workshop
- 2005 Annual Steacie Prize Lecture, Ottawa
- 2005 Washington U, Department of Neurobiology and Anatomy
- 2005 University of Toronto, Psychology, Scarborough Campus
- 2005 York Centre for Vision Research Seminar Series
- 2004 CIHR Training Program in Vision Health Research Workshop
- 2004 Johns Hopkins, Department of Biomedical Engineering
- 2003 Department of Psychology, McMaster U
- 2003 Computational Neuroscience Meeting, U. Toronto.
- 2002 Neuroscience Seminar Series, University of Montreal
- 2000 (Institute for) Espace et Action, INSERM, Lyon, France
- 2000 Neuroscience Seminar Series, Queens University
- 2000 Department of Psychology, McMaster University
- 2000 Perspectives in Neuroscience Series, University of Western Ontario
- 1999 Department of Medical Physics and Biophysics, University of Nijmegen, Netherlands
- 1998 York Vision Seminar Series, York University.

- 1997 Department of Physiology, University of Toronto.
- 1997 Department of Psychology, York University.
- 1997 Exercise and Health Science Seminar Series, York University.
- 1996 Department of Physiology, University of Minnesota.
- 1996 Department of Psychology, University of Toronto.
- 1996 York Vision Seminar Series, York University.
- 1994 Department of Anatomy, Queens University.
- 1994 Department of Psychology, York University.
- 1993 Department of Physiology, Queens University.
- 1993 Department of Physiology, University of Western Ontario.
- 1993 Department of Neurology and Neurosurgery, McGill University.
- 1992 Department of Ophthalmology, University of Western Ontario.
- 1992 Department of Clinical Neurological Sciences, University of Western Ontario.

Selected Media Coverage and Interviews

YFile: York's Daily Bulletin , 4/2/2020 Highly applicable research could help brain surgeons target disease" <https://yfile.news.yorku.ca/2020/04/02/highly-applicable-research-could-help-brain-surgeons-target-disease/>

YFile: York's Daily Bulletin ,11/09/2018 "How double vision can actually be a good thing" <https://research2reality.com/health-medicine/vision-technology-improvements-collaboration-vista/>

Yfile: York's Daily Bulletin, 11/09/2016 "World leading vision research program receives Canada's premiere grant" <http://yfile.news.yorku.ca/2016/09/11/world-leading-vision-research-program-receives-canadas-premiere-grant>

Yfile: York's Daily Bulletin, 10/08/2016 "York research finds new brain mechanism for perception during eye movements" <http://yfile.news.yorku.ca/2016/08/10/york-research-finds-new-brain-mechanism-for-perception-during-eye-movements/>

Yfile: York's Daily Bulletin, 07/03/2016 Professor Doug Crawford recipient of prestigious Sarrazin Award Lectureship <http://yfile.news.yorku.ca/2016/03/07/hold-professor->

[doug-crawford-recipient-of-prestigious-sarrazin-award-lectureship/?utm_source=YFile_Email&utm_medium=Email&utm_content=Top-Stories&utm_campaign=yfile](http://www.rcinet.ca/en/2016/04/21/57880/)

CBC Radio Canada International, 04/21/2016 “Memory and motion, why we sometimes knock over the glass” <http://www.rcinet.ca/en/2016/04/21/57880/>

The Economic Times, 04/21/2016 “Short memory delay leads to errors in life”.
<http://economictimes.indiatimes.com/magazines/panache/short-memory-delay-leads-to-errors-in-life/articleshow/51923094.cms>

Times of India, 04/21/2016 “Why short memory delay leads to errors in life”.
<http://timesofindia.indiatimes.com/life-style/health-fitness/health-news/Why-short-memory-delay-leads-to-errors-in-life/articleshow/51926841.cms>

(This article has been in 48 different online media)

Yfile: York’s Daily Bulletin, 04/13/2016 “Open Your Mind: A Q&A with neuroscientist Doug Crawford”.

<http://yfile.news.yorku.ca/2016/04/13/open-your-mind-a-qa-with-neuroscientist-doug-crawford/>

Fairchild TV, 01/21/2015

http://fairchildtv.com/newsarchive_detail.php?n=28&topic=365&episode=681
http://fairchildtv.com/newsarchive_detail.php?n=28&topic=365&episode=682

CBC Radio Canada International, 01/21/2015 “Canadian research discovers how we continually update visual memory of surroundings”.

<http://www.rcinet.ca/en/2015/01/21/canadian-research-discovers-how-we-continually-update-visual-memory-of-surroundings/>

Medical News Today, 01/20/15 “How a map in the midbrain remembers the location of visual targets even as the eyes follow another object”.

<http://www.medicalnewstoday.com/releases/288151.php>

Jagran Post, 01/17/15 “Mid-brain region help map visual targets”.

<http://post.jagran.com/midbrain-region-help-map-visual-targets-1421475633>

Bright Surf, 01/16/15 “York U researchers discover how midbrain map continuously updates visuospatial memory”.

http://www.brightsurf.com/news/headlines/105158/York_U_researchers_discover_how_midbrain_map_continuously_updates_visuospatial_memory_.html

ScienceNewsline, 01/16/15 “York U Researchers Discover How Midbrain Map Continuously Updates Visuospatial Memory”.

<http://www.sciencenewsline.com/articles/2015011614350073.html>

Mangalorean.com, 01/16/15 “How the brain maps visual targets”.

- <http://www.mangalorean.com/news.php?newstype=local&newsid=542864>
- Webindia123.com*, 01/16/15 “How the brain maps visual targets”.
<http://news.webindia123.com/news/Articles/Science/20150116/2526748.html>
- The Freepress Journal*, 01/16/15 “How the brain maps visual targets”.
<http://freepressjournal.in/how-the-brain-maps-visual-targets/>
- Business Standard*, 01/16/15 “How the brain maps visual targets”. http://www.business-standard.com/article/news-ians/how-the-brain-maps-visual-targets-115011600436_1.html
- Chennai Online*, 01/16/15 “How the brain maps visual targets”.
<http://news.chennaionline.com/international/How-the-brain-maps-visual-targets--/4130d67c-42a0-4c20-9fbd-72db6ee2e099.col>
- Vancouver Desi*, 01/16/15 “How the brain maps visual targets”.
<http://www.vancouverdesi.com/news/world-2/how-the-brain-maps-visual-targets/835205/>
- Net India123*, 01/16/15 “How the brain maps visual targets”.
<http://www.netindia123.com/netindia/showdetails.asp?id=2526748>
- Yahoo! India News*, 01/15/15 “How the brain maps visual targets”.
<https://in.news.yahoo.com/brain-maps-visual-targets-081005563.html>
- Longwoods.com*, 01/15/15 “York U researchers discover how midbrain map continuously updates visuospatial memory”. <http://www.longwoods.com/newsdetail/4882>
- Medical Xpress*, 01/15/15 “Team finds how midbrain map continuously updates visuospatial memory”. <http://medicalxpress.com/news/2015-01-team-midbrain-visuospatial-memory.html>
- EurekaAlert!*, 01/15/15 “York U researchers discover how midbrain map continuously updates visuospatial memory”. http://www.eurekaalert.org/pub_releases/2015-01/yu-yur011515.php
- The Medical News*, 01/15/15 “Researchers identify how midbrain map remembers location of visual targets”. <http://www.news-medical.net/news/20150116/Researchers-identify-how-midbrain-map-remembers-location-of-visual-targets.aspx>
- Science Daily*, 01/14/15 “How midbrain map continuously updates visuospatial memory”. <http://www.sciencedaily.com/releases/2015/01/150115134828.htm>

Yfile: York's Daily Bulletin, 01/14/15 “York U researchers discover how midbrain map continuously updates visuospatial memory”.

http://yfile.news.yorku.ca/2015/01/15/york-u-researchers-discover-how-midbrain-map-continuously-updates-visuospatial-memory/?utm_source=YFile_Email&utm_medium=email&utm_campaign=MorningEmail

Yahoo News, 11/09/2014 “Brain map shows how people take aim”.

<https://my.news.yahoo.com/brain-map-shows-people-aim-104804921.html>

Business Standard, 11/09/2014 “Brain map shows how people take aim”.

http://www.business-standard.com/article/news-ians/brain-map-shows-how-people-take-aim-114091100705_1.html

Health Canal, 11/09/2014 “York U neuroscientists decode brain maps to discover how we take aim”.

<http://www.healthcanal.com/brain-nerve/55017-york-u-neuroscientists-decode-brain-maps-to-discover-how-we-take-aim.html>

News Medical, 11/09/2014 “Different regions of brain help to visually locate objects relative to one's own body”.

<http://www.news-medical.net/news/20140911/Different-regions-of-brain-help-to-visually-locate-objects-relative-to-ones-own-body.aspx>

Medical Press, 11/09/2014 “Neuroscientists decode brain maps to discover how we take aim”.

<http://medicalxpress.com/news/2014-09-neuroscientists-decode-brain-aim.html>

Counsel & Heal News, 11/09/2014 “Here's how we take aim”.

<http://www.counselheal.com/articles/11285/20140911/heres-take-aim.htm>

MizoNews, 11/09/2014 “Brain map shows how people take aim”.

<http://www.mizonews.net/sciencetech/brain-map-shows-how-people-take-aim/>

Daijiworld.com, 11/09/2014 “Brain map shows how people take aim”.

http://www.daijiworld.com/news/news_disp.asp?n_id=262506

The Free Press Journal, 11/09/2014 “Brain map tells how people take aim”.

<http://freepressjournal.in/brain-map-tells-how-people-take-aim/>

CBC Radio Canada International, 11/09/2014 “New Canadian research into brain function and spatial relationship”.

<http://www.rcinet.ca/en/2014/09/15/new-canadian-research-into-brain-function-and-spatial-relationship/>

NewsObserver.com, 11/09/2014 “Brain maps decode how we aim at objects”.

<http://www.newsobserver.com/2014/09/14/4141799/science-briefs-grabbing-space.html>

Nu.nl: Dutch newspaper, 11/09/2014 “Brain scans show how people are aiming”
<http://www.nu.nl/wetenschap/3875195/hersenscans-tonen-mensen-mikken.html>

Yfile: York's Daily Bulletin, 11/09/2014 (<http://yfile.news.yorku.ca/2014/09/10/york-u-neuroscientists-decode-brain-maps-to-discover-how-we-take-aim/>) “Decoding brain maps to discover how we take aim”.

Yfile: York's Daily Bulletin, 07/07/2014 (<http://yfile.news.yorku.ca/2014/07/07/nserc-awards-more-than-3-2-million-to-york-led-research-partnerships/>) “NSERC awards more than \$3.2 million to York-led research partnerships”.

Yfile: York's Daily Bulletin, 26/02/2014 (<http://yfile.news.yorku.ca/2014/02/26/york-celebrates-its-leading-researchers/>) “York celebrates its leading researchers”. – Doug awarded ‘York 2014 Research Leadership Award’.

Yfile: York's Daily Bulletin, 17/07/2013(<http://yfile.news.yorku.ca/2013/07/17/four-york-researchers-awarded-more-than-2-3-million-from-cihr/>) “Four York researchers awarded more than \$2.3 million from CIHR”- Doug awarded \$1 million from CIHR

Why do we stop to stare? We can't help it, it's instinct
Montreal Gazette, February 11, 2012
<http://www.montrealgazette.com/news/stop+stare+help+instinct/6137358/story.html>

Toad-like ‘Inner Eye’ makes it hard to look away. 40 articles were published in *Metro News*: Toronto, Ottawa, Vancouver, Edmonton, Halifax, 680 News, 97.5 EasyRocks, etc. December 15, 2011.
(<http://www.570news.com/news/national/article/310817--toad-like-inner-eye-makes-it-hard-to-look-away-york-researcher-says>)

Daily Planet (Discovery Channel). 2X/11/2010 “Watch Your Head!
The best football players have to exercise their muscles, and their brain.”
<http://news.yorku.ca/2010/11/29/york-u-vision-research-featured-on-discovery-channels-daily-planet/>

METRO Newspaper, 05/12/2009, p. 26
(<http://www.metronews.ca/toronto/Learn/article/227485--york-u-sets-its-sights-on-neuroscience>) “York U sets its eyes on neuroscience”

CBC Radio Canada International, 12/03/2009,
(<http://www.rcinet.ca/rci/console/index.asp?langue=EN&idEmission=1998&dateExtrait=03/12/2009>) “Change to funding blocks neuroscientists”

Globe and Mail, 11/03/2009, Page 1,

(http://www.theglobeandmail.com/servlet/Page/document/v5/content/subscribe?user_URL=http://www.theglobeandmail.com%2Fservlet%2Fstory%2FRTGAM.20090311.wresearch11%2FCommentStory%2FNational%2Fhome&ord=73454120&brand=theglobeandmail&force_login=true) “Neuroscientists fear brain drain as crucial funding disappears”

Fairchild Television/ Timeline Magazine. (Filmed Aug 2008, Aired Fall 2008). Doug Crawford interview. Doug Crawford’s lab at York University CVR. October 1, 2008.

Yfile: York’s Daily Bulletin, 03/12/08 (and several Technical magazines), (<http://www.yorku.ca/yfile/archive/index.asp?Article=11636>) “New research initiative fosters collaboration in neuroscience”

The Toronto Star, 20/08/08, (<http://www.healthzone.ca/health/article/481858>) “You can’t believe your eyes: Which way is up? Vision, king of the senses, convinces us of anything” and “Vital Glimpses”.

MaCleans Magazine (Health Blog) 07/08/08.

(<http://www2.macleans.ca/2008/07/08/accident-prone-heres-why/>) “Accident Prone? Here’s Why”.

Yfile: York’s Daily Bulletin, 03/06/2008,

(<http://www.yorku.ca/yfile/archive/index.asp?Article=10606>) “York launches graduate diploma program in neuroscience”

YorkU Magazine, 08/2005, Page 18, “The Mind’s Eye” (Profile Article).

National Post, Calgary Herald, Ottawa Citizen, London Free Press, Yfile: York’s Daily Bulletin, 20/04/2005, (<http://www.yorku.ca/yfile/archive/index.asp?Article=4398>) “Scientist dedicates award to ailing mentor”

Yfile: York’s Daily Bulletin, 20/04/2005,

(<http://www.yorku.ca/yfile/archive/index.asp?Article=4395>) “Rewarding interdisciplinary excellence with York’s first Steacie”

Yfile: York’s Daily Bulletin, 12/03/2004,

(<http://www.yorku.ca/yfile/archive/index.asp?Article=2516>) “Celebrating teaching excellence”

Yfile: York’s Daily Bulletin, 05/11/2003,

(<http://www.yorku.ca/yfile/archive/index.asp?Article=1996>) “York chosen for “World Famous Universities” TV show”

RESEARCH SUPPORT:

Total funds awarded or held as PI = \$56,089,226.00

Total funds awarded or held as Co-I = \$21,461,413.00

Grand Total = \$77,550,639.00

1. EXTERNAL RESEARCH FUNDING

Held

2019-2023	VISTA sub-grant (\$800,000)		Visuomotor integration of eye, head, and hand motion in health and disease
2019/01-	CFI	\$8.2M	Centre for Neuro-Behavioural Monitoring Using Advanced Technologies (PI)
2018/11-2020/09	VISTA	\$50,000	Application of an advanced neurophysiological toolbox for “real time” investigation, diagnosis and rehabilitation in the human.
2018/09-2020/08	DMRF	\$65,000 USD/yr	Integrative network and its proprioceptive modulation to probe physiology and therapy of cervical dystonia Shaikh (PI)
2018/1 – 2023/12	CFI	\$8,211,628.00	Centre for Neuro-Behavioral Monitoring using Advanced Technologies (PI)
2018/4-2022/9	DFG /IRTG	€ 4,300,000 ~\$5,851,870.00	“The Brain in Action” (Bremmer PI)
2017	NIH	\$55,000 USD	NIH Support for Conferences and Scientific Meetings (NIH R13) M Sommer (PI), JD Crawford, Schall J, M Pai-Spering. (2017, 4 – 2017, 7) \$47,300 GRC and \$7,700 GRS ~\$71, 000CAD

2016	CFREF	\$33,300,000	Vision Science to Application
2015	NIH	\$75,290 USD	NIH Support for Conferences and Scientific Meetings (Parent R13/U13) T Stanford (PI), J Van Opstal, M Sommer, JD Crawford
2016-2021	NSERC Discovery	61,000/yr	“Role of Supramarginal Gyrus in the Integration of Visual Features Across Eye Movements”
2014-2021	Tier I CRC (CIHR)	\$200,000/yr	“CRC in Visual-Motor Neuroscience”
04,2014-03, 2020	NSERC CREATE	\$1,650,000	“The Brain in Action” (9 Co-Applicants at York, Queens, Western)
2012-2016	DFG /IRTG	€ 4,300,000 ~\$5,851,870.00	“The Brain in Action” (Bremmer PI)
10,2013-09,2018	CIHR	\$200,187/yr	“Neurophysiology of 3-D Gaze and Head Control”
2011-2016	NSERC Discovery	\$110,000/yr	“Cortical Mechanisms for Trans-Saccadic Integration and Memory in the Human”
2011	NSERC RTI	\$96,305	“MRI-Guided Navigation System for TMS” (Co-Applicants: M. Fallah, D. Henriques, L. Sergio, M. Niemeier)
2011	CIHR Meetings	\$6,000	Planning and Dissemination Grant: Joint CPS/CAPnet winter meeting: Physiological mechanisms of perception, cognition and action. Cook et al.
2009-2014	CIHR	\$150,170/yr	“Mechanisms for Eye-hand Coordination in the Human”
2010	CIHR Meetings	\$5,000	Planning and Dissemination Grant: Neurosciences, Mental Health Canadian Action and Perception Network (CAPnet): Strategic

Planning Meeting

2009-2015	NSERC	\$300,000/yr	CREATE Program in Computational Approaches to Sensorimotor Transformations for the Control of Action (Goodale PI).
2007-2012	CIHR	\$209,440/yr	“Spatial Transformations of 3-D gaze”
2007	CFI-CRC	\$508,960	“Upgrades for laboratory in Computational and Applied Neurophysiology”
2007-2014	Tier I CRC (CIHR)	\$200,000/yr	“CRC in Visual-Motor Neuroscience”
2006-2007	Tier II CRC (CIHR)	\$100,000/yr	“Canada Research Chair in Visual-Motor Neuroscience”
2005-2010	NSERC Discovery	\$32,000/yr	“Mechanisms for Trans-saccadic perceptual integration”
2009	CFI	\$30,000	Infrastructure Operating Funds
2004-2009	CIHR Operating	\$123,543/yr	“Parietal Mechanisms for Eye-hand Coordination in the Human”
2004-2009	CIHR Group	\$454,440/yr (\$77,000/yr for York)	“Neural transformations for perception and action” Goodale et al.
2003-2009	CIHR Training	\$240,000/yr	“CIHR Training program in Vision Health Research” PIs Crawford and Wilson.
2002-2007	CIHR Operating	\$156,161/yr	“Spatial Representations for head-free gaze control in the monkey”
2002	CFI	\$500,000	“Laboratory for Experimental, Computational, and applied neurophysiology.
2001-2006	CRC	\$100,000/yr	“Canada Research Chair in

			Visuomotor Neuroscience”
2001-2004	CIHR operating	\$68,969/yr	“Stages of visuomotor transformation in human and non-human primates” with L. Sergio (PI).
2001	CIHR equipment	\$86,245	“Stages of visuomotor transformation in human and non-human primates” with L. Sergio (PI).
2001-2004	NSERC MFA	\$136,000/yr	“Personnel Support for York’s Centre for Vision Research” with York Cent. Vis. Res.
2001	CIHR (torticollis)	\$11,000	“Midbrain Control of Head Posture and its relation to Torticollis”
2000-05	PREA	\$150,000	“Neural mechanisms for eye-head coordination”
2000	NSERC MFA	\$90,000	“Personnel Support for York’s Centre for Vision Research” With York Cent. Vis. Res.
2000	NSERC equipment	\$37,958	“Hardware and Software for analysing 6-D head motion and fMRI brain images”
2000-2004	NSERC operating	\$30,000/yr	“Spatial representations for perception and motor control”
1999-2002	CFI Grant	\$5,800,000	“Active Sensory Processing in Real and Synthetic Environments” With York Centre for Vision Research (L. Harris PI)
1999-2004	MRC Group Grant	\$285,000/yr	“Neural Transformations for Perception and Action” With Goodale, Vilis, Tweed, & Menon
1999-2004	MRC Grp. Equip.	\$240,000	“Neural Transformations for Perception and Action” With Goodale, Vilis, Tweed, & Menon
1999-2002	ORDCF	\$228,000	“Improvements to the Centre for

			Vision Research” With York Centre for Vision Research.
1996-2002	MRC operating grant	\$88,441/yr	“Brainstem Control of 3-Dimensional eye and Head Movements”
1996-2001	MRC Scholarship	\$59,000/yr	“Neural Control of 3-Dimensional eye and Head Movements”
1996-2000	NSERC grant	\$23,100/yr	“Human eye, head & arm movements in three-dimensional space”
1996-1998	Sloan Fellowship	\$35,000 US	Unrestricted Neuroscience Research Support.
1996	MRC equipment grant	\$54,162	“Brainstem Control of 3-Dimensional Eye and Head Movements”
1993-96	M. R. C. Fellowship	\$30,000 / yr.	
1989-92	M. R. C. Studentship	\$15,000 / yr.	
1987-99	O.G.S. Studentship	\$11,000/ yr	

2. INTERNAL RESEARCH FUNDING

2018	York University	\$58,200	Bridging Funds for Dr. Nacher-Carda
2018	York University	\$50,000	Bridging Funds for Saihong Sun
2018	York University	\$10,000	PREA Award
2017-2024	York University	\$322000.00	VISTA
2013	York University	\$5000	DRP funds
2013	York Health & VPRI	\$37200/yr	Bridging Funds for CREATE
2011	York Health, VPRI & CVR	\$32,000	Bridging Funds for Dr. Wang

2009	York Health & VPRI	\$60,000	Bridging Funds for Dr. Yan
2007-2014	CRC Match Funds	\$54,148/yr	York Contribution to Tier 1 CRC
2006-2007	CRC Research Stip.	\$58,094/yr	York Contribution to CRC Research
2001-2006	CRC Research Stip.	\$68,000/yr	York Contribution to CRC Research
1995	York U., Faculty of Arts	\$42,000	Start-up funds for laboratory Equipment
1995	York Faculty of Arts	\$3,497	"Accuracy of 3-D Eye Movements" Research Grant
1995	York Presidents NSERC research fund	\$2,000	"Visual-motor transformations necessary for accurate saccades"

CONTRIBUTIONS TO THE PROFESSION:

NATIONAL RESEARCH COMMITTEES

2018-	Canadian Neuroscience Leaders Committee
2016-2018	Canadian Brain Research Strategy Working Group - Member
2003-2009	Canadian Council on Animal Care (CCAC) Guidelines committee

GRANT AGENCY COMMITTEES

2010	CIHR Behavioural Sciences Committee C
2003	CIHR Behavioural Sciences Committee A.
2001-	Canada Research Chair College of Reviewers
2000-01	CIHR New Investigator Awards Committee B.
2000	Nominating Committee (Conference Call) for Behavioural Sciences Grant Review Committee, Medical Research Council of Canada.

1998 Nominating Committee (Conference Call) for Behavioural Sciences Grant
Review Committee, Medical Research Council of Canada.

EDITORIAL BOARDS

Journal of Neurophysiology -2004 June -
Journal of Neuroscience – 2011 September - 2015

EXTERNAL REFEREE FOR

(1) JOURNALS: *Nature*
Nature Neuroscience
Journal of Vision
Vision Research
Journal of Neurophysiology
Journal of Neuroscience
Experimental Brain Research
Journal of Computational Neuroscience
Visual Neuroscience
Journal of Vestibular Research.
Journal of Experimental Psychology
Current Biology
European Journal of Neuroscience
Neuron
Neuroimaging
Non-Linear Dynamics, etc

(2) GRANTING AGENCIES: MRC / CIHR
NSERC
Dutch Research Council
Swiss NSF
US NSF

(3) OTHER: Successful nomination of Shayna Rosenbaum for the CSBBCS Early Investigator Award (2014)
Successful nomination of Laurence Harris for the 2014 President's Research Excellence Award
Successful nomination of Shayna Rosenbaum for CAN Young investigator award (2013)
External Referee for animal care protocols, UWO, Queens
External PhD examiner, Gunnar Blohm, 2004, Belgium
External PhD examiner, Stan Van Pelt, 2008, Nijmegen
Habilitation review, 2010, U Marburg)
Promotion to Tenure review (2010 Rutgers)

Promotion to full professor reviews (2000 U. Toronto, 2010 Wash U)
Nominated two professors for Kavli Prize (2010)
Nominated a professor for Killam Prize (2010)
Nominated a Prof for York Faculty of Health Research Award (2010).
Nominated a Prof for VSS Young Investigator Award (2009)
Nominated a Prof for SFN Young Investigator Award (2010).

RESEARCH CONFERENCES / WORKSHOPS CO-ORGANIZED AND/OR CHAIRED

- 2020 Second Annual VISTA Research Retreat (Feb 20, 2020)
- 2019 CVR – VISTA International Conference on Predictive Vision (June 10-13, 2019)
(Co-organizer with P Cavanagh and R. Wildes).
- 2019 First Annual VISTA Research Retreat (Feb 21, 2019).
- 2017 Co-Chair for Gordon Research Conference on Eye Movements (with M Sommer)
“The Oculomotor System as Model of Mind and Brain” July 9 -14
- 2017 International Conference on Vision in the Real World at CVR-VISTA conference,
June 13 – 17
- 2017 York CVR-VISTA Vision Science Summer School, June 5 – 9. Co-organizer.
“How vision becomes action in the primate brain”
- 2017 Member, Canadian Brain Research Strategy Working group with Hotchkiss Brain
Institute CIHR-INMHA
- 2016 Executive Sponsor for CAPnet-CPS Satellite meeting at CAN-ACN, May 29
Toronto.
- 2015 Organizer / Chair, “Brain in Action” retreat Kingbridge Centre, York Region
- 2015 Co-Vice Chair for Gordon Research Conference on Eye Movements (with M
Sommer)
- 2015 Organizing committee and Sponsor for CAN-CAN satellite meeting “Vision and
Movement Order and Disorder: From Bench to Bedside”.
- 2014 Organizing committee for COSMO Computational Neuroscience Summer
(University of Minnesota, Minneapolis, MN)
- 2014 Co-Chair / Organizer for CAN-CAN satellite meeting “Linking primate brain
circuits to behavior”. May 25, 2014. Montreal.

- 2013 Organizing committee for International Research Training Group Research Retreat “Multisensory Perception for Action” Wildbad Kreuth
- 2013 Organizing committee for COSMO Computational Neuroscience Summer Workshop (Kingston)
- 2012 Co-Organizer for International Research Training Group Workshop: The Brain in Action. York University, April 27-29th, 2012 with Dr. Denise Henriques
- 2012 Organizing committee for COSMO Computational Neuroscience Summer Workshop (Chicago)
- 2011 Co-Organizer, CPS/CAPnet Meeting: Physiological Mechanisms of Perception, Cognition, and Action, Feb 10-12, near Montreal (with E Cook).
- 2011 Organizing Committee, COSMO Computational Neuroscience Summer Workshop (Kingston, Ontario)
- 2008 Organizer, First annual CAPnet meeting, Dec 2-3, York U
- 2007 Co-Organizer, York Centre for Vision Research International Conference on Cortical Mechanisms of Vision (with H Wilson)
- 2005 Co-Organizer Canadian Physiological Society Meeting honoring Dan Guitton, Mt. St Anne. February (with D Munoz and K Cullen).
- 1998 Co-Organizer, First MRC-GAP conference at McMichael Art Gallery, Oct 13-14. (With M Goodale)

CONFERENCE EVENTS ORGANIZED AND/OR CHAIRED

Canadian Vision Social. *Vision Science Society*, June 23, 2020, Co-Organizer

Nanosymposium Session 108. Dynamic Signal Integration Across Saccades (Chair). Oct 20, 2019, Chicago. *Society for Neuroscience*

CVR/VISTA Conference Session, “Attention and recurrent processes” (Chair) June 11, 2019, Toronto

Canadian Vision Social. *Vision Science Society*, May 21, 2019, Organizer

Nanosymposium Session 288. Eye Movements and Perception (Chair). November 17, 2019, Washington, DC. *Society for Neuroscience*

Canadian Vision Social. *Vision Science Society*, May 21, 2018, Organizer

“Eye Hand Coordination (Chair)” July 7-12 2013 Easton, Massachusetts. Gordon conference

Organized *“CAN-ACN / CAPnet Conference Social”* May 23, 2013 Toronto.

Nanosymposium Session 419. Eye Movements: A Window to the Soul of Circuits (Chair) October 15, 2012 New Orleans. Society for Neuroscience

Oculomotor & Vestibular Systems Social, (Chair) October 16 2012 New Orleans. Society for Neuroscience

“The Canadian Society for Brain, Behaviour and Cognitive Science Conference” 2012 (Kingston, Ontario)

“Oculomotor Signals in Cortical Processing” 2007 CVR International Conference.

‘Visual-motor transformations for eye-hand coordination’ 2005 Society for Neuroscience Conference, Washington DC

‘Computational Models of Vision for Action’ 2005 CVR International Conference.

“Frontal cortex and gaze control: from cognition to coordination” 2004 Neural Control of Movement Conference (Barcelona, Spain).

2000 Federation of European Neuroscience Societies Conference. *Special symposium: Contribution of saccadic eye movements to sensory motor coordination*

2001 Society for Neuroscience Conference. *Extrastriate Cortex: Perception and Action*

“Eye-hand coordination: seeing the questions, reaching for the answers” 2001 Neural Control of Movement Conference (Seville, Spain):

“Donders’ law of the eye, head, and arm: canonical rule of task-dependent strategy?” 2000 Neural Control of Movement Conference (Key West, Florida).

“What is the role of eye position in spatial perception and visuomotor control?” 1997 Neural Control of Movement Conference (Cancun, Mexico):

+ Several CVR international conference symposia

SOCIETY DIRECTORIAL BOARDS

2002-2005 Society for Neural Control of Movement

RESEARCH AND TRAINING GROUPS ORGANIZED

- 2015 CFREF Application: Canadian Innovation Hub for Biological and Computational Vision (Now 'VISTA').
- 2014 Canadian Director (NSERC CREATE PI) for international research training group 'The Brain in Action' with Marburg (Germany), Giessen (Germany), York, Western, and Queens.
- 2011 National Coordinator for The Canadian Action and Perception Network (CAPnet)
- 2009 Co-Led formation of York-YCH Stroke Collaboration (with W. Gage)
- 2008 Co-founder of NSERC CREATE Program in Sensorimotor Computation
- 2008 Co-led regional CFI application (with H. Wilson) that established final plan for CVR/fMRI component of Sherman Health Sciences Bldg.
- 2007 Co-founder and Coordinator of Canadian Action and Perception Network (CAPnet) (now ~50 labs in Ontario and Quebec).
- 2006 Co-led CFI application (with L. Harris) that established basic plan for CVR/fMRI component of Sherman Health Sciences Bldg.
- 2002 Founded and organized group for CIHR Training Program for Vision Health Research (later directed by Co-PI H. Wilson).
- 2001 Founder and Organizer of CVR Spatial Perception and Sensorimotor Control Working Group (includes ~50 faculty and students in GTA) 2001-2006
- 1998 Co-Founder of CIHR Group for Action and Perception (1999-2009)
- 1996 Founded York Primate Neurophysiology 'Centre' (now used by 6PIs).

MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS

- Canadian Action and Perception Network
- American Physiological Society
- Canadian Physiological Society
- Society for Neuroscience
- Canadian Association for Neuroscience
- Society for Neural Control of Movement
- Vision Sciences Society

- Brain and Behavioural Science Board of Associates
- Canadian Council for Animal Care
- Southern Ontario Neuroscience Association
- York Centre for Vision Research
- CIHR Group for Perception and Action
- CIHR Training Program in Vision Health Research

TEACHING:

Notes:

MRC scholarship leave 1996-2001
CRC teaching release 2001-2021
Parental leave 2012 (Feb-March)
Medical Leave 2015 (Aug) -2016 (Feb)
VISTA teaching release 2016-2021

1. UNDERGRADUATE COURSES

(a) York University, Department of Psychology

Guest Lectures:

2015 PSYC 2250 (Cognition) “Spatial Memory During Eye Movements”.
2010 BPHS 2090 (Current Topics In Biophysics) “Trans-saccadic Visual Integration”
2004 PSYC 3270. (Sensation and perception II) “Spatial Perception”
2004 PSYC 1010. (Introductory Psychology) “The Brain”

Courses Directed:

<u>Year</u>	<u>Course</u>
15-16	PSYC4360.03 (Visuospatial Memory and Goal-Directed Action)
13-14	PSYC4360.03 (Visuospatial Memory and Goal-Directed Action)
10-11	PSYC4360.03 (Visuospatial Memory and Goal-Directed Action)
97-98	PSYC3350.03A (Neural Bases of Behaviour)
	PSYC3350.03M (Neural Bases of Behaviour)
	PSYC4890.03 (Independent Reading)
96-97	Year 1 of MRC Scholarship - on leave
95-96	PSYC2240.03A (Physiological Psychology)

PSYC2240.03B (Physiological Psychology)
 PSYC2240.03M (Physiological Psychology)
 PSYC3350.03M (Neural Bases of Behaviour)
 94-95 PSYC2240.03M (Physiological Psychology)
 PSYC3350.03M (Neural Bases of Behaviour)

(b) University of Western Ontario, Department of Physiology (as TA and Lecturer)

88-92	PHYS 020	(General Physiology)	(TA /Lecturer - 2 hrs x 26 wks/yr)
87-92	PHYS 471	(Sensory Physiology)	Lecturer - 2hrs x 2 wks/yr).
87-88	BIO 310	(General Physiology)	(Laboratory demonstrator - 3 hrs x 26 weeks).
1987	PHYS 463	(Motor Control)	(Tutor - 2 hrs x 13 weeks)

2. UNDERGRADUATE THESES SUPERVISED

2018-2018	Haider Al-Tahan	Eye-Head Coordination During Reach
2018-2018	Gaelle Luabeya	Influence of Gaze on aiming hand orientation
2015-2016	Sharmini Atputharaj	Understanding the role of visual spatial and temporal memory in memory-guided saccade and reach tasks (Honour Thesis).
2013-2014	Tasneem Barakat	The influence of spatio-temporal structure on sequential eye and arm movements to remembered visual targets
2012-13	Sina Alipour-Nazari	Comparing the Visual and the Visual Memory Updating response in the Superior Colliculus Visual Neurons during slow eye Movement.
2010-11	Shahina Manji	Microsaccades: Window to consciousness or an artefact of head immobilization.
2010-11	Meem Siddique	Reference Frames Underlying Reaching

Movements Towards Moving Targets

2010-11	Michael Comishen	Allocentric Mechanisms in Visual Motion Perception
2007-08	David Cappadocia	Psychology (Experimental Paper: Integration of egocentric and allocentric spatial information for memory guided pointing)
2003-04	Natalia Fedianina	Biology (Experiment: Ocular dominance switching)
1999-2000	Aarlenne Khan	Psychology (Experimental Paper: “Ocular Dominance and Gaze Angles”)
1997-98	Dimitrios Lianos	Psychology (Experimental Paper: “The Reduction of the useful visual / oculomotor range in humans”)
1996-97	Anna Puzzo	Psychology (Experimental Paper: “Comparison of Neural Constraints in head and arm orientation between discrete and pursuit movements”)
1995-96	Paul Alexander	Psychology Atkinson (Review paper: “The Role of Posterior Parietal Cortex in Perception and Movement”) Governor <i>General Silver Medal Winner</i>

3. NSERC summer studentships

2020	Serah Seo	Fitting spatial models to multi-unit cortical activity
2013	Khashayar Gharavi	Role of FEF in Sequential Eye Movements
2008	Smiley Pallan Jigar Panchal	Allocentric vs. Egocentric Representations Visuomotor Psychophysics of Reach
2005	Lia Tsotsos	Seeing the Light: Visual Memory of Object Luminance Across Saccades
2003	Natalia Fedianina	Visual mechanisms of eye dominance switching
2000	Irene Podolsky	Spatio-temporal filling of the retinal blind spot.

4). ‘Work-study’ and ‘Ray’ students

(Several supervised each year).

4. GRADUATE COURSES

<u>Year</u>	<u>Course</u>
2016	Visuospatial Memory and Goal-Directed Action -6260 3.0 (W) (x-listed with BIOL/KINES) Intergrated with undergrad 4360.3
2014	Visuospatial Memory and Goal-Directed Action -6260 3.0 (W) (x-listed with BIOL/KINES) Intergrated with undergrad 4360.3
2013	PSYC 6260 (Visuospatial Memory and Goal-Directed Action)
2011	PSYC 6260 (Visuospatial Memory and Goal-Directed Action)
2009	PSYC 6260 (Spatially Coordinated Behaviour)
2005	PSYC 6260 (Spatially Coordinated Behaviour)
2004	PSYC 6260 (Spatially Coordinated Behaviour)
2004	BIOL 5126 (Physiology of Vision and Neural Processing) (Guest)
2000	PSYC 6260 (Spatially Coordinated Behaviour)
2000	BIOL 5126 (Physiology of Vision and Neural Processing)
1998	BIOL 5126 (Physiology of Vision and Neural Processing)
1996	PSYC 6750B.03 (Visuomotor Behaviour and the Computational Brain)
1995	PSYC 6260.06 (Physiological Psychology)

5. SUPERVISORY COMMITTEES

<u>Years</u>	<u>Name</u>	<u>Level</u>	<u>Program</u>
2018-19	Adrian Schuetz	PhD	Physics
2016-20	Maria Ayala	PhD	Psychology
2016-19	Constanze Schmitt	PhD	Physics, Marburg, (June – Dec)
2016	Katie Herdman	PhD	Psychology

2014-15	Anna Heuer	PhD	Psychology, Marburg, Germany
2014-15	Steve Jesin	MSc	Kinesiology & Health Sciences
2012-	Lisa Pritchett	PhD	Psychology
2009-	Chris Glover	MSc	Kinesiology & Health Sciences
2009-	Stephanie Jones	PhD	Psychology
2008-11	Aidan Thompson	MSc	Kinesiology & Health Sciences
2004-09	M. Barnett-Cowan	MA	Psychology
2003-05	Mera Barr	MSc	Kinesiology & Health Sciences
2002-07	Dianne Gorbet	PhD	Kinesiology & Health Sciences
2002-08	Phil Jaekle	MA	Psychology
1999-	Jayne Kalmar	PhD	Biology
1996-98	Brian Gold	PhD	Psychology
1996-98	Peter Mente	PhD	Biology
1995-97	Xuiping Fang	MSc	Biology
1995-96	Randolf Penfield	MA	Psychology
1995-96	Andrea Downie	MA	Psychology

6. GRADUATE STUDENT TEACHING PRACTICA SUPERVIZED

<u>Year</u>	<u>Student</u>	<u>Undergraduate Course</u>
1996	Esther Olshanski	PSYCH3250.03M
1996	Brian Gold	PSYC2240.03M
1995	Brian Gold	PSYC2240.03B

7. GRADUATE THESES SUPERVIZED

Name	Degree	Start	End	Short Thesis Title	Awards	Current Pos.
Elee Stalker	MA Psych	01/20		Influence of depth vision on head motion durin reach	VISTA scholarship	MSc Student, York
Gaelle Nsamba-Luabeya	MSc Bio	09/18	06/20	Interactions between Gaze and Reach Orientation	VISTA Scholarship	MSc Student, York
Lina Musa	MSc Psych	09/18	06/20	Probing Allocentric Visual Memory Using TMS	IPH Family, VISTA Scholarships	MSc Student, York
George Tomou	PhD Psych	09/18	TBD 2021	Cortical Mechanisms of Allocentric Coding for TSI	VISTA Scholarship	PhD Student, York
Sohrab Salimian	MSc Bio	09/17	TBD 2019	Modelling influence of allocentric cues on gaze behaviour	VISTA Scholarship	MSc Student, York
Sharmini Atputharaj	MSc Kin	09/17	TBD 2019	Influence of Spatiotemporal structure on memory of saccade target sequence		MSc Student, York

George Tomou	MA Psych	09/16	03/19	Role of allocentric cues in trans-saccadic integration		PhD Student, York
Jena Velji-Ibrahim	MSc Kin	09/16	04/18	Role of early visual cortex in reaching and grasping		
Bianca-Ruxandra Baltaretu	PhD Bio	09/15		Cortical mechanisms for Transaccadic integration		PhD Student, York
Harbandhan Arora	MSc	09/15	03/19	Eye-Head-Hand Coordination in Monkey		
Jirui Li	MSc Kin	09/14	06/16	Allocentric coding of gaze targets in the monkey		Dental School
Bianca-Ruxandra Baltaretu	MSc Bio	09/13	01/16	Cortical mechanisms for Transaccadic integration		PhD Candidate
Pankhuri Malik	MSc Bio	09/11	03/14	Transaccadic Memory	York Entrance	Research Officer, Western University
David Cappadocia	PhD Kin	06/11	04/18	Eye-hand Coordination During TMS in Parietal Cortex	York Entrance, NSERC USRA, OGS scholarship	Senior Consultant, IQVIA
Mehdi Daemi	PhD Biol	09/10	07/16	Models of 3D gaze control	NSERC CREATE studentship	
Leiko Tanaka	MA Psych	09/10	08/13	Role of DLPCF in transsaccadic memory		RA, Baycrest
Morteza Sadeh	PhD Kin	09/10	12/18	Superior Colliculus unit activity in the head unrestrained monkey	Entrance Scholarship, OGS	Medical School
Noura Al-Omawi	MSc Kin	09/10	05/15	Effect of gaze position on grasp orientation	Saudi Arabia Scholarship	
Amirsaman Sajad	PhD Biol	01/10	05/16	The Role of Frontal Eye Fields in Guiding 3D Gaze Movements	Entrance Scholarship, OGS	Post-Doc, Vanderbilt University
Ying Chen	PhD Kin	04/10	06/16	Allocentric control of reach: behaviour, fMRI, and stroke		Post-Doc, Queens
Alzahir Tharani.	MSc	09/08	09/11	Task Dependent Strategies in Eye-Head Gaze Shifts		Senior Studies Teacher Qatar Canadian School
David Cappadocia	MSc Kin	09/08	05/11	Eye-hand Coordination During TMS in Parietal Cortex	York Entrance, NSERC USRA, OGS scholarship	PhD student, York
Ying Chen (MD)	MSc Kin	09/07	04/10	Eye-hand Coordination in Parietal Cortex		PhD student, York
Ruvim Radik	MSc Biol	09/06	08/09	Updating in Superior Colliculus for depth		VWR (Life Sciences)

				saccades		
Farshad Farshadmanesh, (MD)	PhD Biol	05/05	12/11	Mid-brain Control of Neck Muscle Activation	OGS scholarship, CPS Graduate Student Travel Award	
Gerald Keith	PhD Psych	09/04	10/09	Neural Network Models of Visual Updating	OGS scholarship, CPA Certificate of Excellence Nominee	Author
Jachin Ascencio Monteon	PhD Biol	05/04	09/09	Cortical Mechanisms of Gaze Control	CNYU scholarship, York Entrance scholarship	Assessment Officer, Health Canada, Government of Canada
Michael Vesia	PhD Kinesiology and Health Science	09/04	04/10	Eye-Hand Coordination During TMS in Parietal Cortex	OGS Scholarship, two CIHR synapse awards, CIHR research travel award, several conference travel awards	Post-Doc Sunnybrook Hospital, Waterloo
Steven Prime	PhD Psych	09/03	02/09	Transsaccadic Perceptual Integration	OGS scholarship, Alberta Heritage Fellowship	Assistant Professor, University of Saskatchewan
Florin Feloiu (MD)	MSc Kinesiology	09/03	09/05	Eye-hand coordination in hemispatial neglect patients.	York Entrance scholarship	MD, Hamilton Rehab Centre.
Farshad Farshadmanesh, (MD)	MSc Biol	05/03	04/05	3-D Eye-Head coordination after unilateral inactivation of the interstitial nucleus of Cajal (INC) in the primate	OGS Scholarship, York Entrance Scholarship	
Lei Ren (MD)	PhD Kinesiology	01/03	09/08	Proprioceptive Updating of Saccade System	York Entrance scholarship	Neurologist Haldimand Health
Gerald Keith	MA Psych	09/02	10/04	Models of Transsaccadic Integration	OGS scholarship	Author
Alina Constantin (MD)	PhD Biol	09/02	11/08	Role of Lateral Intraparietal in Eye-Head Coordination		Lecturer, UNBC
Aarlene Khan	PhD, Psych	09/02	05/06	Eye-hand Coordination During Parietal Damage	CIHR doctoral award, NSERC PGSB, CIHR Fellowship	Assistant Professor, University of Montreal

Jachin Ascencio Monteon	MSc Biol	09/01	09/04	Adaptation of eye-head coordination in the monkey	CNYU scholarship, York Entrance scholarship	Johnson & Johnson as a Quality Assurance and Regulatory Compliance Associate.
Steven Prime	MA Psych	09/01	09/03	Trans-saccadic memory of object features		Assistant Professor University of Saskatchewan
Aarlene Khan	MA Psych	09/00	09/02	Role of Gaze direction in binocular eye-hand alignment	York Entrance Scholarship	Assistant Professor, University of Montreal
Alina Constantin (MD)	MSc Biol	01/00	09/02	Role of Superior Colliculus in Adaptive eye-head coordination	York Entrance Scholarship	Lecturer, UNBC
Eliana Klier	PhD Biol	09/97	12/02	Brainstem control of three-dimensional eye and head movements	Governor General Gold Medal, NSERC scholarship, Human Frontiers Fellowship	Research Professor Baylor College, Texas
Michael Smith	PhD Psych	09/97	01/03	Modelling the visuomotor transformation for saccades with ANNs	OGS, NSERC scholarship, Dean's academic excellence	Professor Taylor College.
Denise Henriques	PhD Psych	09/97	03/02	Visual-motor transformations for eye-hand coordination	Dean's academic excellence, MRC scholarship, CIHR Fellowship	Assoc. Prof, Kinesiology, York
Melike Ceylan	MA Psych	09/97	09/99	3-D head posture during gaze shifts	MRC scholarship	SAP Alliance Manager, IBM
Denise Henriques	MA Psych	09/95	09/97	Testing between Models of visual spatial memory	York Entrance Scholarship	Assoc. Prof, Kinesiology, York
Michael Smith	MA Psych	09/95	09/97	A 3-D tensor model of the VOR	York Entrance Scholarship	Professor Taylor College.
Eliana Klier	MSc Biol.	09/95	04/98	Three-Dimensional Visuomotor Geometry of Human Saccades		Research Professor Baylor College, Texas

8. POST-DOCTORAL FELLOWS SUPERVIZED

Name	Start	End	Project Title	Awards	Current Position
Parisa Abedi Khoozani	04/20		Modeling and testing Allocentric Codes	VISTA Fellowship	1 st Year Post-Doc
Vishal Bharmauria	10/18	08/20	Electrophysiological Recordings in Human FEF	VISTA Grant	Same
Amirhossein Ghaderi	04/18	08/20	Testing trans-saccadic feature integration using magnetoencephalography (MEG)	VISTA fellowship	Same
Veronica Nacher-Carda	09/17	12/19	Neurophysiological recordings during head-unrestrained reach in the monkey		Research Associate
Vishal Bharmauria	06/16	09/18	Egocentric & allocentric coding of gaze shifts in frontal cortex	IRTG fellowship	2 nd York Post-Doc
Ada Le	06/15	05/16	Cortical integration of reach and grasp	IRTG fellowship	Associate at BE Works
Yalda Mohsenzadeh	02/14	02/16	Models of Trans-saccadic Integration	NSERC CREATE fellowship	Post Doc, MIT University
Simona Monaco	11/13	09/14	Perceptual motor integration for reach		Post Doc, Trento University
Robert Marino	04/12	07/13	Neural basis of 3D reference frames transformation in supplementary eye fields	NSERC CREATE fellowship	Research Associate, Queens University
Benjamin Dunkley	11/11	08/13	Neural basis of transsaccadic integration	NSERC fellowship	Associate Scientist, Sickkids, Assistant Prof, U of T.
Masahiro Kokubu	10/11	10/12	Cortical Mechanisms for reach to somatosensory stimuli	Scholarship from Japan	Assistant Professor, University of Tsukuba
Jacobus Joost Dessing	09/08	10/12	Neural basis of manual interception	NSERC CREATE fellowship	Assistant Professor Queen's University, Belfast

Suryadeep Dash 2011	09/08	03/12	Neural basis of visual updating	MRI fellowship	Post Doc at Western University
Erin Cressman	09/07	08/09	Proprioceptive Updating of Saccade System	NSERC Fellowship, CIHR Vision Training	Assistant Prof, Dept Kines., U. Ottawa
Ewa Niechwiej	06/08	06/10	Eye-hand Coordination in People with Visual Deficits		Assistant Prof. In Waterloo
Pat Byrne	11/06	11/10	Object-centred and ego-centred representation	CIHR Vision Training Award, NSERC CREATE fellowship	Senior Research Advisor for the Ontario Ministry of Transportation.
Marie Avillac	01/06	12/06	Cortical Reference Frames for Gaze	Human Frontiers Fellowship, Marie Curie Fellowship (declined).	Assist. Prof, U. Paris-Sud: UFR Des Sciences
John Zettel	09/05	01/08	Neural Mechanisms for Reach and Grasp	CIHR Vision Training Award	Assistant Professor, Guelph University
Gunnar Blohm	11/04	12/06	Transformations for eye-hand coordination	Marie-Curie Fellowship	Associate Professor, Queens' University
Joseph DeSouza (PhD)	09/04	06/06	Multi-unit Recordings of Superior Colliculus and Frontal Cortex	NSERC Fellow	Associate Professor, York
Pengfei Chang (MD, PhD)	04/04	07/05	Brainstem control of neck muscles	CIHR Training Program Scholar	Neurosurgeon and Lab Director, Beijing Neurological Institute
Jonathan Marotta (PhD)	01/02	08/04	Grasping movements in normals and patients.	CIHR Senior Fellowship	Professor, U. Manitoba
W. Pieter Medendorp (PhD)	04/01	04/03	Updating visual space during eye & head movements	Human Frontiers Fellowship, CIHR fellowship (decl.)	Professor and Director, Donders' Institute
Xiaogang Yan (PhD)	01/01	04/01	Neural mechanisms of eye-hand coordination		Research Associate, York
Julio C. Martinez-Trujillo (MD, PhD)	12/00	08/04	Frontal cortex mechanisms of gaze control.	Canada Research Chair	Professor, Western U.
Matthias Niemeier (PhD)	09/00	09/03	Transsaccadic Perceptual Integration		Assoc. Professor, U. Toronto
Hongying Wang (MD, PhD)	09/98	09/99	Neural Control of eye-head coordination		Research Associate, York

9. RESEARCH ASSOCIATES, STAFF AND TECHNICIANS SUPERVIZED

<u>NAME</u>	<u>POSITION</u>	<u>START END DATE</u>
Caitlin Mullin	Program Manager	05/20-
Olivia Zheng	Senior Financial Officer	05/20-
Kary Jiang	Marketing & Events Coordinator	12/19-
Sukhjit Hothi (MSc)	Administrative Assistant	12/19-
Tara Tharani	Administrative Assistant	12/19-
Veronica Nacher	Research Associate	1019-
Linda Moradzadeh	Project Manager	04/17-
Olivia Ma	Program Manager	04/17-05/20
Yaser Kerachian	Commercialization Manager	04/17-
Katherine Seton	Marketing & Events Coordinator	10/18-09/19
Sharmini Atputharaj (MSc)	Research Assistant	09/19-12/19
Mehdi Daemi (PhD)	Research Assistant	07/19-10/19
Haider Al-Tahan (BSc)	Research Assistant	05/19-08/19
Avalon Moore (BSc)	Administrative Assistant	09/18-10/19
Janice D'Silva	Administrative Assistant	05/12-08/18
Jirui Li (BSc)	Research Assistant	10/13-08/14
Leiko Tanaka (MSc)	Research Assistant	09/13-07/14
Farisa Mohammed (MSc)	Administrative Assistant	01/11-05/12
Ellen Rhee	Administrative Assistant	06/09-01/11
Ruvim Radik (MSc)	Research Assistant	04/09-08/09

Constance Abebreseh (BA)	Administrative Assistant	09/07-05/09
Farisa Mohammed (BSc)	Administrative Assistant	07/05-09/07
Jessica Klassen (BA)	Administrative Assistant	07/04-07/05
Dr. Xiaogang Yan (PhD)	Technical Supervisor, primate labs	05/01-
Saihong Sun (MSc)	Computer Programmer	5/01-
Ricardo Tabone (BSc)	Matlab Programmer	05/00-03/03
Dr. Hongying Wang (MD, PhD)	Neurophysiology Lab Manager	09/99-
Steacie Woodward (BSc)	Research Assistant	04/99-12/99
Jeff Laurence	Mechanical Technician	01/97-01/99

10. Sabbatical Projects Hosted at CVR

Prof. Frank Bremmer	Philipps-Universitat Marburg	2014 (3 weeks July – Aug)
Prof. Takahsi Mitsuda	Okoyama University	2010-2011
Prof. Matthias Neimeir	University of Toronto	2009-2010
Prof. Juan Fernandez Ruiz	Universtiy of Mexico	2003-2004

11. Undergraduate Interns Supervised

Barnd Hengstebeck	Philipps-Universitat Marburg	March – June 2014
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12. Visiting Students Supervised

2019 (Jan – May)	Adrian Schuetz	PhD	Physics, Marburg
2016 (June –Dec)	Constanze Schmitt	PhD	Physics, Marburg,
2014-15 Germany	Anna Heuer	PhD	Psychology, Marburg,

SERVICE TO THE DEPARTMENT AND UNIVERSITY

2020-2021

- Scientific Director and Chair of Leadership Committee, VISTA
- Member, Director of Visual Neurophysiology Faculty Search Committee
- Chair, Primate Neurophysiology Search Committee (Psychology)
- Neuroscience Building Project Committee and User Group – Member
- Centre for Vision Research Steering Committee – Member
- Acting Chair, York Non-Human Primate User Group Committee
- Member, York VUC Committee
- Tenure and Promotion Committee, Joel Zylberberg (Physics and Astronomy)
- Thesis exam committees for Psychology, Biology and Kinesiology

2019-2020

- Scientific Director and Chair of Leadership Committee, VISTA
- Member, Director of Visual Neurophysiology Faculty Search Committee
- Neuroscience Expansion Project Committee and User Group – Member
- CVR Steering Committee – Member
- Acting Chair, York Non-Human Primate User Group Committee
- Member, York VUC Committee
- Thesis exam committees for Biology and Kinesiology

2018-2019

- Scientific Director and Chair of Leadership Committee, VISTA
- Oversaw Nine VISTA Faculty Searches
- Neuroscience Expansion Project Committee – Member
- CVR Steering Committee – Member
- Acting Chair, York Non-Human Primate User Group Committee
- Member, York VUC Committee
- Thesis exam committees for Biology and Kinesiology

2017-2018

- Scientific Director and Chair of Leadership Committee, VISTA
- Oversaw Six VISTA Faculty Searches
- BSB Vivarium Committee – Member
- CVR Steering Committee – Member
- Thesis exam committees for Biology and Kinesiology

2016-2017

- Scientific Director and Chair of Leadership Committee, VISTA
- Lead presenter for York CFREF application Interview

- Chair, York Vivarium Space Planning Committee
- Member, BSB Vivarium Committee
- Member, 2 CFI Project Planning Committees
- CVR Steering Committee – Member
- Thesis exam committees for Biology, Kinesiology, and Psychology

2015-2016

- Nominated Scientific Director, Member of Leadership Committee, and Member of core user and grant preparation committees; York CFREF Application
- Director and Steering Committee Chair, CREATE component of ‘Brain in Action’ International Research Training Group
- National Coordinator and Steering Committee Chair For Canadian Action and Perception Network (CAPnet)
- Chair, York Vivarium Space Planning Committee
- Member, BSB Vivarium Committee
- Member, 2 CFI Project Planning Committees
- CVR Steering Committee – Member
- Tenure and Promotion File Preparation Committees for S. Rosenbaum and J. Steeves.

2014-2015 (On Sabbatical but continued to serve on most committees)

- Lead Writer, Chair of Core Investigator Committee and Nominated Scientific Director for York CFREF Application.
- Canadian Director ‘Brain in Action’ International Research Training Group
- Chair of Brain in Action CREATE Program Steering Committee
- Chair, York Vivarium Space Planning Committee
- Member, BSB Vivarium Committee
- National Coordinator For Canadian Action and Perception Network (CAPnet)
- Chair, CAPnet Steering Committee
- NSERC CAN-ACT CREATE program steering committee
- CVR Steering Committee – Member
- York Undergraduate Neuroscience Program Planning Committee – Committee member- July 2014 – June 2016

2013-2014

- Served as on E. Lynn Kirshner Memorial Scholarship adjudication committee for the scholarship (2014)
- Canadian Director ‘Brain in Action’ International Research Training Group
- Chair, York Vivarium Space Planning Committee
- Member, BSB Vivarium Committee

- National Coordinator For Canadian Action and Perception Network (CAPnet)
- Chair, CAPnet Steering Committee
- NSERC CAN-ACT CREATE program steering committee
- CVR Steering Committee – Member

2012-2013

- Chair, York Vivarium Space Planning Committee
- Member, BSB Vivarium Committee – June 2013
- National Coordinator For Canadian Action and Perception Network (CAPnet)
- Chair, CAPnet Steering Committee
- NSERC CAN-ACT CREATE program steering committee
- CVR Steering Committee – Member – June 2013

2011-2012 (Parental Leave January-March).

- Chair, York Vivarium Space Planning Committee
- Member, BSB Vivarium Committee.
- National Coordinator For Canadian Action and Perception Network (CAPnet)
- Chair, CAPnet Steering Committee
- NSERC CAN-ACT CREATE program steering committee

2010-2011

- Chair, York Animal Care Committee
- Chair, BSB Vivarium Committee.
- Participated in external animal care review
- Coordinator For Canadian Action and Perception Network (CAPnet)
- Chair, CAPnet Steering Committee
- Adjudicating Committee, MRI Post-Doc in Neuroscience
- NSERC CAN-ACT CREATE program steering committee
- Josh Granek Comprehensive Exam.

2009-2010

- Chair, Search Committee, Tier 1 CRC in Molecular Neuroscience
- Coordinator For Canadian Action and Perception Network (CAPnet)
- Chair, CAPnet Steering Committee
- Chair of BSB Vivarium Committee
- Coordinator for York Neuroscience Graduate Diploma Program
- Chair of York Neuroscience Steering Committee
- York fMRI Purchase / Planning Committee
- NSERC CAN-ACT CREATE program steering committee
- Comprehensive exams for Aidan Thomson and Blake Martin
- T&P Representative for Shayna Rosenbaum

2008-2009

- Search Committee, VP Academic
- Coordinator For Canadian Action and Perception Network (CAPnet)
- Chair, CAPnet Steering Committee
- Chair of BSB Vivarium Committee
- Coordinator for York Neuroscience Graduate Diploma Program
- NSERC CAN-ACT CREATE program steering committee
- Organized CVR lab tour for several VIP visitors.
- Representing York on Canadian Council for Animal Care
- Co-organizer for York Institutional CFI grant
- Co-organizer for York Institutional CERC grant
- York Research Centre (CAC) External Reviewer
- Several Thesis exams

2007-2008 (Sabbatical Year)

- Coordinator For Canadian Action and Perception Network (CAPnet)
- Chair of BSB Vivarium Committee
- Supervise primate facility and electronics shop
- Coordinator for York Neuroscience Graduate Diploma Program
- Organized CVR lab tour for several VIP visitors.
- Representing York on Canadian Council for Animal Care
- Several Thesis Exams
- Presented (personally and Video Shoot) at First Annual York Leadership Dinner

2006-2007

- Faculty of Health Research Task Force Committee
- Chair of Neuroscience Graduate Program Steering Committee
- Steering Committee, York Centre for Vision Research
- Executive Committee, Dept. Psychology
- Chair, Psychology Vivarium Committee
- Representing York on Canadian Council for Animal Care
- Supervise primate facility and electronics shop
- Thesis examination committees for Departments of Psychology, Kinesiology
- Organized CVR lab tour for several VIP visitors.
- Psychology Search Committee for Social/ Personality Area

2005-2006

- Steering Committee, York Centre for Vision Research
- Executive Committee, Dept. Psychology
- Chair, Psychology Vivarium Committee

- Chair of Space Committee, York Centre for Vision Research (Led planning of CVR renovations for 2005).
- Representing York on Canadian Council for Animal Care
- Search Committee for new Vivarium Supervisor
- Supervise primate facility and electronics shop
- Thesis examination committees for Departments. Psychology, Kinesiology, and Computer Science.
- Chaired CVR committee for Science Retreat
- Organized CVR lab tour for several VIP visitors.
- Main Writer and co-organizer for Major CFI Leading Edge grant
- Chaired York's CFI face-to-face presentation

2004-2005

- Associate Director, York Centre for Vision Research
- Executive Committee, Dept. Psychology
- Chair, Psychology Vivarium Committee
- Chair of Space Committee, York Centre for Vision Research (Led planning of CVR renovations for 2005).
- Steering Committee for CIHR training program in vision health research
- Representing York on Canadian Council for Animal Care
- York ACC committee member
- Supervise primate facility and electronics shop
- Thesis examination committees for Depts. Psychology, Kinesiology, and Computer Science.
- Organized CVR lab tour for Ontario Ministry of Colleges and Training.
- Faculty Search Committee for Dept. Kinesiology
- Affirmative Action Representative for BBCS search Committee, Dept Psychology

2003-2004

- Associate Director, York Centre for Vision Research
- Chair of Space Committee, York Centre for Vision Research (Led planning of CVR renovations for coming year).
- Steering Committee for CIHR training program in vision health research
- Representing York on two National Research Committees
- York ACC committee member
- Co-wrote & present Psychology BBCS area hiring strategy plan
- Represented York at 'Partners in Research' Dinner
- Represented York at CIHR annual award reception
- Represented York at annual CIAR dinner
- Organized CVR lab tours for Dep. Minister Economics Ont, Head of PREA,
- Represented York on Chinese National TV
- Supervise primate facility and electronics shop

- Thesis examination committees for Depts. Psychology, Kinesiology, and Computer Science.

2002-2003 (on sabbatical leave)

- Stayed at York to oversee expansion of BSB Animal facilities for multi-user primate neurophysiology facility.
- Lunch and CVR lab tour for President Marsden and VP Imperial Oil.
- Created new workshop for Tyrone Lew and Histology Facility
- Served on thesis exam committee for Department of Computer Science (Yuliang Zhu) and Psychology.

2001-2002

- Chair, York Animal Care Committee
- Psychology Junior Promotion and Tenure committee, 2001-2002. (Prepared successful application file of Dr. Susan Murtha)
- Shop Liaison representative for department of Psychology
- Prepared Institute of Neurosciences strategic survey for York, 2001
- Served on thesis examination committee for department Biology (Slava)

2000-2001

- Search Committee, Dean of Pure and Applied Sciences. (Dr. Gillian Wu hired)
- Vice-Chair, York Animal Care Committee
- University Search Committee, Vivarium Supervisor, hired Lydia Troc
- Kinesiology and Health Sciences Faculty Search Committee, Dr. Richard Staines Hired
- Shop Liaison representative for department of Psychology
- Psychology Thesis Prize Committee
- Kirshner Award Committee
- T&P teaching evaluation for Dr. James Elder

1999-2000

- York Animal Care Committee
- University Search Committee, Band 6 Vivarium technician, hired Natasha Richardson
- Shop Liaison representative for Department of Psychology
- Contributed to 2000 Faculty of Arts Computing Plan
- Ad-hoc Psychology Rep at pre- CUPE strike chairs and directors meeting
- Served on thesis examination committee for department of Biology (Michelle Hudoba)

1998-99

- Area Coordinator for General Experimental Area (GEA) of Psychology
- Kinesiology and Health Science search Committee for Faculty Motor Control Position, hired Dr. Lauren Sergio.
- Faculty of Pure and Applied Science nominating committee
- Shop Liaison representative for department of Psychology
- Core graduate vision course coordinator for Department of Biology.
- Referee for Psychology Course Mark Reappraisals
- Served on thesis examination committees for the department of Biology (Peter Mente)
- Co-organizer and co-author of CFI (Canadian Foundation for Innovation) proposal with Laurence Harris and Centre of Vision Research to improve general research infrastructure at York
- Participant in a CFI proposal for York “supercomputer”

1997-98

- Chair of steering sub-committee for General Experimental Area (GEA) of Psychology Graduate Program for re-examination and revision of GEA curriculum, author of subsequent document describing proposed changes, and participant in resultant series of GEA committee meetings voting on these changes
- Faculty of Pure and Applied Science nominating committee
- Served on thesis examination committees for the departments of Psychology (Isabelle Boutet; Phillip Grove, Exercise and Health Science (David Cox), and Biology (Xuiqing Fang, 1997; Mark Takahashi, 1997)
- Ad-hoc Psychology hiring committee, led to hiring Dr. Murtha
- Referee for Faculty of Arts Research Grant for Vinod Goel
- Referee for York teaching development scholarship for Dr. Keith Grasse

1996-97

- Faculty of Pure and Applied Science nominating committee
- Served on thesis examination committees for the departments of Psychology (Andrea Downie, Randalf Penfield), Computer Science (Jochen Lang).
- Referee for Faculty of Arts Research Grant for Laurence Harris
- Psychology Internal Referee for NSERC graduate scholarship applications
- Referee for Psychology Course Mark Reappraisals
- Ad-hoc Psychology hiring committees, led to hiring Dr. Wilcox and Dr. Elder.
- Numerous further consultations, communications, and proposals with Department of Psychology Chair’s office, Dean’s Office, York Animal Care Committee, Canadian Council on Animal Care Inspectors, York Physical Plant, York Maintenance, and independent contractors - related to general infrastructure and security improvements to the animal vivarium facility in the Behavioural Science Building

1995-1996

- Organized and co-wrote successful MET proposal with Dr. Pyke and W. Lezama for Vivarium renovations / security. (Money was mainly used to set up my primate housing / laboratory facility but was also used to benefit several other investigators.)
- Recruited current Veterinary Consultant / Animal Care Seminar Coordinator for York (Dr. D. Kemp).