1. **Mandate of the Unit**

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

2. **Organizational Structure of the Unit**

Director  
Associate Director  
CVR Steering Committee (see below)  
Administrative Assistant  
Systems Administrator  
Technical Staff

**CVR Steering Committee 2005/06**

Director  
John K. Tsotsos  
Associate Director  
Doug Crawford  
Academic Coordinator  
Hugh Wilson  
Facilities Coordinator  
Rob Allison  
Seminar Coordinator  
Laurence Harris  
Ex-officio  
Ian P. Howard  
Member  
James Elder  
Member  
Richard Wildes  
Member  
Sven Dickinson, Adjunct Rep

3. **Active Membership List**
York University Faculty Members of the Centre (2005-2006)

<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Department</th>
<th>Interests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott Adler</td>
<td>Associate Professor of Psychology</td>
<td>development of eye movement control, visual selective attention, object recognition, and visual expectations</td>
</tr>
<tr>
<td>Rob Allison</td>
<td>Associate Professor of Computer Science</td>
<td>stereoscopic vision, perceptual issues in virtual environments, eye movements</td>
</tr>
<tr>
<td>Doug Crawford</td>
<td>Professor of Psychology, Biology, and Kinesiology &amp; Health Sciences Canada Research Chair in Visual-Motor Neuroscience Associate Director, Centre for Vision Research</td>
<td>three-dimensional eye and head movements, eye-hand coordination, Trans-saccadic perceptual integration, modeling, neurophysiology</td>
</tr>
<tr>
<td>James Elder</td>
<td>Associate Professor of Psychology, Computer Science, and Mathematics Project Leader, Human Performance Laboratory</td>
<td>human and computer vision</td>
</tr>
<tr>
<td>Mazyar Fallah</td>
<td>Assistant Professor of Kinesiology &amp; Health Science</td>
<td>visual perception and attention, object processing, oculomotor systems.</td>
</tr>
<tr>
<td>Laurence Harris</td>
<td>Professor of Psychology and Biology</td>
<td>perception and coding of space and self-motion</td>
</tr>
<tr>
<td>Denise Henriques</td>
<td>Assistant Professor Kinesiology &amp; Health Science and Psychology</td>
<td>motor learning, multisensory integration, visuomotor control, eye-hand coordination</td>
</tr>
<tr>
<td>Ian Howard</td>
<td>Distinguished Research Professor of Psychology and Biology</td>
<td>space perception, eye movements, visual-vestibular interactions</td>
</tr>
<tr>
<td>Richard Hornsey</td>
<td>Associate Professor of Computer Science and Physics</td>
<td>integrated electronic sensors, biologically inspired image sensors, low vision enhancement systems, sensors for space applications</td>
</tr>
<tr>
<td>Michael Jenkin</td>
<td>Professor of Computer Science</td>
<td>computer vision, mobile robotics, immersive visual displays</td>
</tr>
<tr>
<td>Richard Murray</td>
<td>Assistant Professor of Psychology</td>
<td>visual psychophysics, spatial vision, 3D shape perception</td>
</tr>
</tbody>
</table>
Hiroshi Ono  Distinguished Research Professor of Psychology
Interests: visual perception of direction and distance, eye movement

David Regan  CAE/NSERC Industrial Research Professor.
Distinguished Research Professor of Psychology and Biology, York University
Professor of Ophthalmology and Medicine, University of Toronto
Fellow of the Royal Society of Canada
Foreign Fellow of the Royal Netherlands Academy of Science
Interests: psychophysics of spatial vision, motion, stereopsis, colour vision, vision aviation, visually evoked magnetic and electrical brain activity, visual disorders, auditory psychophysics

Josée Rivest  Associate Professor of Psychology, Glendon College, York University
Department of Psychology of the Baycrest Centre for Geriatric Care
Interests: neuropsychology, face and object recognition, rehabilitation of visual neglect

Lauren Sergio  Associate Professor of Kinesiology, Faculty of Health
Interests: neural mechanisms of visually guided reaching in parietal and precentral cortex

Minas Spetsakis  Associate Professor of Computer Science
Interests: computer vision and robotics

Jennifer Steeves  Assistant Professor of Psychology, Faculty of Health
Interests: face and scene processing in neurological patients and one-eyed observers motion processing in strabismus

Martin Steinbach  Distinguished Research Professor of Psychology and Biology
Director, Vision Science Research, Toronto Western Hospital
Senior Scientist, Dept. of Ophthalmology, Hospital for Sick Children
Director of Research, Department of Ophthalmology, University of Toronto
Interests: eye movements, visual-motor coordination, clinical disorders of the oculomotor system

Wolfgang Stuerzlinger  Associate Professor of Computer Science
Interests: human-computer interaction, virtual reality, computer graphics

John Tsotsos  Professor of Computer Science
Director, Centre for Vision Research  
Canada Research Chair in Computational Vision  
Adjunct Professor, Dept. of Computer Science, University of Toronto  
Adjunct Professor, Dept. of Ophthalmology, University of Toronto  
Interests: human and machine vision, computational models of attention, motion understanding, robotics

Laurie Wilcox  
Associate Professor of Psychology  
Interests: stereopsis/depth perception

Richard Wildes  
Associate Professor of Computer Science  
Interests: spatiotemporal analysis of visual information, motion analysis, binocular vision, gesture recognition, biometrics

Frances Wilkinson  
Professor of Psychology, Faculty of Health Science  
Affiliated Scientist, Division of Applied and Interventional Research, Toronto Western Research Institute, University Health Network, Toronto  
Adjunct Professor - Department of Ophthalmology, University of Toronto  
Interests: involvement of the visual system in migraine; intermediate visual form perception using psychophysical, computational and fMRI methodologies

Hugh Wilson  
ORDCF Chair of Biological and Computational Vision  
Fellow, Canadian Institute for Advanced Research  
Director, CIHR Training Grant in Vision Health Research  
Fellow, Optical Society of America  
Interests: psychophysical and neural models of form vision; fMRI studies of cortical form vision, nonlinear dynamics of cortical function

**Membership Categories**

The steering committee will assign each person to the category that it feels fits best. New members appointed by director with advice from steering committee. The goal is to ensure all members have opportunity to influence the CVR.

**Member**  -  Tenured York Faculty who are active in research and primary research interest is consistent with CVR mandate

**Associate**  -  Contractually limited York faculty who are active in research and interest is strongly relevant to CVR mandate

**Sr. Research Associate**  -  Sr. Research Associates who are active in research and interest is strongly relevant to CVR mandate
**Affiliate** - Research Associates, graduate students, post-doctoral fellows, visitors, programmers, industrial partners, administrative assistants, staff (sponsored by a CVR Member, Associate or Adjunct)

**Adjunct** - Faculty outside York who would have qualified for Member or Associate status or who is a collaborator of a Member or Associate

**Benefits of Membership**

**Member** - use of CVR facilities/labs; use of administrative assistant and/or secretary; eligible for membership on steering committee; eligible to be a CVR grant PI; included on CVR web pages, brochure; eligible as primary supervisor of CVR graduate student; eligible for overhead sharing

**Associate** - use of CVR facilities/labs; use of CVR technical staff for your lab; use of administrative assistant and/or secretary; eligible for membership on steering committee; eligible to be a CVR grant PI; included on CVR web pages, brochure;

**Sr. Research Associate** - use of CVR facilities/labs; use of administrative assistant and/or secretary; included on CVR web pages, brochure

**Affiliate** - use of selected CVR facilities/labs; use of administrative assistant and/or secretary; included on CVR web pages, brochure

**Adjunct** - enjoys regular visits to CVR (minimum, one day per month); desk to work at while visiting; use of selected CVR facilities/labs; included on CVR web pages, brochure; co-investigator status on CVR grants; small honorarium for expenses; eligible as co-supervisor of CVR graduate student

**Renewal/Review/Termination of Membership**

- Continued membership to CVR includes participation (i.e. seminars, attending annual retreat, bi-annual conference, submission to the annual report and CVR brochure
- Mid-term review of Director
- Service category to be added to the CVR Annual report
- Problem cases will be dealt with by sending a letter to the member.

4. **Activities of the Unit**

- Grants for 2005/06 $4,954,129
- CVR hosted the International Conference on Computational Vision in Neural and Machine Systems.
- Weekly Seminar Series
- Day-long retreat to revamp governance of CVR
Publications for 2005/06:

Books 3
Chapters in Books 12
Refeered Journals 93
Proceedings 41
Technical Reports 9
Conference Presentations 123
Colloquia 58

5. **Measures taken to Promote Equity as Enunciated in the University Academic Plan**

   The CVR is an interdisciplinary research group in vision. As such, our seminar series and international conference are designed to foster interdisciplinary research and collaborations. As the largest and most prominent vision research group in Canada, we feel that we are highly successful in this endeavour.

   Regarding self-governance, the CVR held a retreat in June, 2006, at which it was decided that four members of the Steering Committee should be elected by the membership for two year terms. Elected members would be restricted to a maximum of two consecutive two-year terms before rotating off the committee for a minimum of two years. This procedure was implemented to ensure greater representation of the CVR membership while ensuring committee turnover to encourage a diversity of opinion. In addition, the Director (ex-officio member of steering committee) was mandated to appoint one additional member to achieve balance among the various departments (Computer science, Psychology, Biology, Kinesiology) comprising CVR. Finally, it was decided that the graduate students should elect one member to the committee. All of this has now been implemented, so we have made great strides in enhancing our self-governance.

6. **Graduate Training Activities/Accomplishments**

   MA 7  
   MSc. 41  
   PhD 51  
   Post-Doctoral Fellows 18

7. **Any Changes in Physical Space at the Unit**

   There have been no changes in CVR space allocation during the previous year.

8. **List of all Contractual Obligations Entered into By or on Behalf of the Unit**

   The CVR has not entered into any contractual obligations during the previous year.