

# CURRICULUM VITAE

May 2006

## 1. IDENTIFICATION

Daniel GUITTON  
Professor  
Department of Neurology & Neurosurgery  
McGill University

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Languages: English, French

## 2. EDUCATION

### 2.1 Undergraduate

McGill University	Mechanical Engineering	B. Eng.	1960
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### 2.2 Graduate

McGill University	Mechanical Engineering	M. Eng.	1964
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U. Libre de Bruxelles Institut von Karman de Dynamique des Fluides	Aeronautical Engineering	Diploma	1965
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McGill University Thesis topic	Mechanical Engineering Physics of turbulence	Ph.D.	1977
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McGill University Thesis topic	Physiology (Neurophysiology) Neurophysiology of oculomotor control	Ph.D.	1979
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**Post-doctoral training**

Université Catholique de Louvain (Belgium)	Dép. de Physiologie, Lab. de Neurophysiologie	Post-doctoral Fellow	1977-1978
Research topic	Neurophysiology of oculomotor and head motor control		

**3. APPOINTMENTS**

Current: McGill University, Neurology and Neurosurgery Department, Professor, 1992-present.

McGill University, Physiology Department, associate member, 1981-present.

McGill University, Biomedical Engineering Department, associate member, 1990-present.

Université de Montréal, Département de physiologie, Groupe de recherche en sciences neurologiques, Membre associé, 1983-present.

Past: -McGill University, Neurology and Neurosurgery Department, Associate Professor, 1983-1991.  
-McGill University, Neurology and Neurosurgery Department, Assistant Professor, 1977-1983.  
-Industry, Canadair Ltd., Aerodynamicist and thermodynamics engineer, 1960-1962.

**4. RESEARCH ACTIVITIES**

(a) Neurophysiological mechanisms underlying the visuomotor functions and plasticity of eye-head coordination in humans, monkeys and cats. Research involves single unit recording and pathway identification in cortex and brainstem of alert head-free behaving cats and monkeys. Current brain areas being studied: superior colliculus and brainstem. (b) Behavioural studies of the eye-head visuo-motor system in humans and monkeys. (c) Studies of eye and head movement deficits associated with various pathologies or lesions in humans. (d) Development of systems and neural network models of the gaze control system. (e) Analysis of signal processing in neural circuits of the alert animal using systems identification procedures.

**5. RESEARCH GRANTS**

Current: CIHR, Operating grant, Oculomotor control in hemidecorticate patients, 2005-2010, C\$254,685

CIHR, Operating grant, Neural control of gaze using coordinated eye-head movements, 2005-2010, C\$641,360

Past: FRSQ- Réseau Vision- The control of eye movements in hemispherectomy patients: abilities and localization functions in the remaining hemisphere. 2002-03 C\$8,000  
-FRSQ- Réseau Vision- The control of eye movements in hemispherectomy patients: abilities and localization functions in the remaining hemisphere. 2001-02 C\$6,250

- MRC, Operating grant, Neural control of gaze using coordinated eye-head movements, 1995-2000, C\$625,000, (Includes a studentship award)
- U.S. National Institutes of Health (NIH), Operating grant, 1990-1993, *Oculomotor and gaze-motor systems in Vision*, C\$260,000.
- International Human Frontiers Science Program Organization, 1992-1995, Team grant on topic: *Internal representations of body and target relationships in eye-head-hand coordination*. Amount to DG = C\$196,200.
- Establishment Grant, Conseil de la Recherche en Santé du Québec (CRSQ), 1978 C\$20,000.
- Major Equipment Grant, Medical Research Council of Canada (MRC), 1979, C\$20,000.
- Operating grant, MRC, 1979-1995, Total: C\$850,000.
- Multiple Sclerosis Society Grant, 1980, C\$15,000.
- Operating grant, MRC Fund for research in Dyskinesia and Torticollis, 1984, 1987, C\$26,000.
- CIHR, Operating grant, Oculomotor control in hemidecorticate patients, 2002-2005, C\$213,314
- CIHR, Operating grant, Neural control of gaze using coordinated eye-head movements, 2000-2005, C\$644,000

## 6. **HONOURS, RECOGNITION, AWARDS**

### 6.1 **Honours and Recognition**

Canadian astronaut selection competition: short list, 1984.

My graduate student Douglas P. Munoz, awarded the Society for Neuroscience Lindsley Prize, 1989, for best Ph.D. thesis in behavioral neuroscience.

Medical Research Council of Canada, Visiting Scientist Award (to China), 1993.

Medical Research Council of Canada and National Natural Science Foundation of China, Visiting Scientist Exchange Program Award with Professor Chao-Yi Li, Shanghai Institute of Physiology, 1994.

Grant application ranked first among those evaluated by Behavioural Neuroscience Grant Committee, Medical Research Council of Canada, 1995.

Consultant to NASA/JSC on grant for in-orbit research on "Target acquisition to remembered target positions" (PI is Dr Mil Reschke), 1996-1999.

Visiting Professor, University of Seville, Spain, 1998

6<sup>th</sup> Annual William J. McNally Memorial Lecture, McGill University Health Center Royal Victoria Hospital, Department of Otolaryngology, Montreal, 2002

Fellow, Royal Society of Canada, 2004

### 6.2 **Personal Salary Support Awards**

Past:

- Defence Research Board Fellowship, 1963-1964, 1966-1970.
- NATO Fellowship for study at the von Karman Institut, Brussels, Belgium, 1965.
- Medical Research Council of Canada Fellowship, 1970-1973.
- Boursier, Conseil de la Recherche en Santé du Québec (CRSQ), 1973-1974, 1976-1977.
- Killam Scholarship, Montreal Neurological Institute, 1975-1976, 1977-1979.

- Chercheur Boursier, Conseil de la Recherche en Santé du Québec, 1979-1980.
- Scholar, Medical Research Council of Canada, 1980-1985.
- Chercheur Boursier Senior, Fond de la Recherche en Santé du Québec (FRSQ), 1986-1992.

7. **INVITED TALKS**  
(engineering invitations, 1964-1969 are not included)

**7.1 Major International Symposia, Meetings (invited speaker)**

The Control of Gaze by Brainstem Neurons, Paris	1979
Progress in Oculomotor Research, Ulm, Germany	1980
Functional Basis of Ocular Motility Disorders, Stockholm	1981
Physiological and Pathological Aspects of Eye Movements, Belgium	1982
Visitor to the Neurosciences Institute, New York	1985
1st Symposium on the Head-Neck Sensory Motor System, Vancouver	1986
Developments in Oculomotor Research, Portland, Oregon	1986
Société Française de Neurologie, Réunion Internationale, Paris	1988
Symposium on Brain and Space, Marseille	1989
2nd Symposium on the Head-Neck Sensory-Motor System, Paris	1989
NATO Advanced Study Institute, Tutorials in Motor Neuroscience, Corsica	1990
Neural Control of Movement, Florida	1991
Sensing and Controlling Motion: Vestibular and Sensorimotor Function, NASA - Ames Research Center	1991
Neural Control of Movement in Vertebrates, Fundación Juan March, Madrid	1991
Neural Control of Movement, Marcos Island, Florida	1991
Neural Control of Movement, Marcos Island, Florida	1992
International Union of Physiological Sciences, Symposium on the Control of Eye and Head Movements, Glasgow, U.K.	1993
Satellite Workshop to the 16th Annual European Neuroscience Association Information Processes Underlying the Control of Gaze, Seville, Spain	1993
Symposium to honor David Robinson, Eibsee, Germany	1993
Neural Control of Movement, Hawaii	1994
Sensorimotor Transformation in the Nervous System, Queen's University, Canada	1995
Symposium to honor Geoffrey Melvill Jones, Vail, Colorado	1995
Society for Neuroscience, Symposium on superior colliculus, Washington, D.C.	1996
Sensory and Biomedical contributions to posture and gait, Cozumel, Mexico	1997
Barany Society Symposium on the contributions of the vestibular system to oculo-motor, skeleto-motor and perceptual functions, Freiburg, Germany	1998
International Society for Behavioural Neuroscience, Athlone, Ireland	1998
22 <sup>nd</sup> International Symposium, "Vision, from neurons to cognition", Montreal	2000
Association Canadienne Française pour l'Avancement des Sciences, colloque 158	2000
Brazilian Society of Psychology, Symposium on Perception, action and Memory, Rio de Janeiro, Brazil	2001
Symposium on: Neural control, space coding and action production, Lyon, France	2001

**7.2 Seminars (invited speaker)**

Erasmus University, Rotterdam, Physiology Department	1977
Université Catholique de Louvain, Bruxelles, Lab. Neurophysiologie	1977
CNRS, Paris, Laboratoire de Physiologie Neurosensorielle	1977
Université de Montréal, Dép. de Physiologie	1979
Temple University, Philadelphia, Pharmacology Dept.	1980
Rockefeller University, New York	1981
University of Western Ontario, London, Physiology Dept.	1981
Université Catholique de Louvain, Bruxelles, Lab. Neurophysiologie	1981
Université de Montréal, Dép. de Biologie	1982
Université du Québec à Trois Rivières, Dép. de Psychologie	1982
Association Canadienne Française pour l'Avancement des Sciences	1982
Queens University, Kingston, Ontario, Physiology Dept.	1985
University of Toronto, Physiology Dept.	1985
CNRS, Laboratoire de Physiologie Neurosensorielle, Paris	1985
National Institutes of Health, Washington, DC	1987
Northwestern University, Chicago, Physiology Dept.	1987
Laval University, Quebec, Dép. de Kinanthropologie	1987
University of Western Ontario, London, Ophthalmology Dept.	1987
Cold Springs Harbour, Computational Neuroscience Workshop, New York, U.S.A.	1988
University of California, San Francisco, Physiology Dept.	1988
Université de Montréal, Dép. de Physiologie	1988
University of Chicago, Committee on Neurobiology	1988
Mount Sinai Hospital, Department of Neurology, New York	1989
State University of New York, Physiology Department	1989
INSERM, Lyon, France	1989
University College, London, England	1989
NASA/Johnson Space Center, Houston, Texas	1989
McGill University, Physiology Department	1990
University of Western Ontario, London, Physiology Dept.	1990
NIH, Poolesville, Maryland	1992
Northwestern University, Evanston, Illinois	1992
Queen's University, Kingston, Ontario	1993
Laval University, Quebec	1993
Chinese Academy of Science (Beijing, Shanghai)	1994
University of Calgary, Neuroscience group, Keynote Speaker	1995
Université de Montréal, Dép. de Psychologie	1996
Université Catholique de Louvain, Medical School, Keynote Speaker	1998
Université Catholique de Louvain, School of Engineering, Keynote Speaker	1999
Université de Montréal, Journée de Neuropsychologie Expérimentale, Keynote Speaker	1999
Queens University, Physiology Dept.	
2001	
Neuronal Control of Movement Society, (speaker and session organizer), Seville, Spain	2001
6 <sup>th</sup> Annual William J. McNally Memorial Lecture, McGill University Health Center Royal	
2002	

Victoria Hospital, Department of Otolaryngology, Montreal	
Neuronal Control of Movement Society, (speaker and session organizer), Florida	2002
Universite Catholique de Louvain, Medical Faculty, Brussels	2003
INSERM, Lyon, France	2003
CNRS, Paris, France	2003
National Eye Institute (NIH), Washington DC, USA	2004

## 8. **TEACHING**

### 8.1 **McGill Courses**

Current: Course Director

- Physiology Department 552-556B - Topics in Systems Neuroscience; 3 credit course, 4 hours per week, January - April. This is a course in advanced "systems neuroscience", designed for honours and graduate students. The format consists of: 3 ½ hours per week class discussion of relevant "classic" scientific articles in systems neurophysiology (e.g. role of motor cortex). Term paper required. I am responsible for designing, organizing and teaching course. 1981-present.

#### Course Participation

- Neurology and Neurosurgery Dept., Graduate course 531-630A,B, Principles of Neuroscience, 3 hours/year, 1991-present

present - Neurology and Neurosurgery Dept., Med I CNS Course 542-121B, 1 lecture/year, 1988-

Past: -Neurology and Neurosurgery Dept., Med I CNS Course 542-121B, 2 lectures/year, 1979-1987.  
 -Neurology and Neurosurgery Dept., Seminars and group discussions in neurophysiology 531-611A (11 hour/year), 1979-1983.  
 -Physiology Dept., 552-456D (1 lecture), 1980-1981.  
 -Neurology and Neurosurgery Dept., Neuroscience Seminars, 531-602D, speaker, 2 hours, 1980-1981.  
 -Ibid., session coordinator, 10 hours/year, 1985-1986.  
 -Ibid., coordinator for semester, 20 hours, 1988-1989.

### 8.2 **Research Trainees Supervised**

Current: Graduate students

W.Y. Choi, PhD, Neurological Sciences, 1998-  
 M. Boulanger, MSc, Neurological Sciences, FRSQ Studentship, 2002-

O. Savina, MSc, Neurological Sciences, 2004-  
 A. Richard, MSc, Neurological Sciences, 2005-

Past:

Graduate students

**A. Bergeron**, Doctoral Program 1996-2002. Supported by MRC Studentship. Ph.D. in Neurological Sciences awarded in 2002. Thesis entitled: Multiple-Step gaze shifts reveal gaze position error in brainstem. Currently Research Assistant in my laboratories. Montreal Neurological Institute, McGill University.

**M. Volle**, Doctoral program 1981-1988. Supported by U. du Québec. Ph.D. in Neurological Sciences awarded in 1988. Thesis entitled: Contributions à l'étude des coordinations oculo-céphaliques chez l'homme et l'animal. Currently Professeur, U. du Québec à Trois Rivières, Dép. de Psychologie.

**D. Munoz**, Doctoral program 1982-1988. Supported by MRC studentship. Ph.D. in Neurological Sciences awarded in 1988. Thesis won 1989 Society for Neuroscience Lindsley prize for most meritorious Ph.D. thesis in Behavioral Neuroscience. Thesis titled: On the role of the tecto-reticulo-spinal system in gaze control. Currently Associate Professor, Queen's University, Kingston, Ontario, Canada.

**O. Waskiw**, M.Sc. program, 1987-1989. Supported by MRC studentship. Abandoned program due to illness.

**M. Paré**, Doctoral program, 1987-1994. Supported by MRC studentship. Ph.D. in Neurological Sciences awarded in 1994. Thesis titled: The neural control of fixation and saccadic gaze displacements by midbrain and brainstem structures. Currently Assistant Professor, Queen's University.

**A. Tremblay**, M.Sc. program, 1990-1993. Supported by MRC grant to D. Guitton. M.Sc. awarded 1994. Currently working in pharmaceutical industry

**T. Wilson**, M.Sc. program, in Biomedical Engineering 1995- 1998 (co-supervised with Dr H.L. Galiana). Currently a medical resident in internal medicine, McGill University

**J. Murphy**, MSc, Neurological Sciences, 1999-2001.

**T. Herter**, Ph.D. Neurological Sciences, MRC Studentship, 1995-2004, currently post-doctoral fellow, Queens University

**S. Fakhri**, M.Sc. Neurological Sciences, 1991- present. On leave for to Medical studies

**C. Boulay**, MSc, Neurological Sciences, 2002-2004

**V. Kokkinos**, MSc, Neurological Sciences, 2003-2005

Postdoctoral Fellows

**R.M. Douglas**, 1982-1984. Ph.D. Dalhousie University. Supported by NSERC postdoctoral fellowship. Currently Associate Professor at the University of British Columbia, Ophthalmology Department.

**D. Pélisson**, 1988-1989. Ph.D. Université de Lyon. Supported by MRC postdoctoral fellowship. Currently director and scientist at INSERM, U-94, Vision et Motricité, Bron, France.

**K. Cullen**, 1991-1993. Ph.D. University of Chicago. Supported by an NIH postdoctoral fellowship. Currently Associate Professor, Dept. Physiology, McGill University.

**C. Rey**, 1992-1993. Ph.D. McGill University. Supported by MRC-NIH grants to Daniel Guitton. Currently group leader in signal analysis, Glenayre Electronics, Vancouver, Canada.

**J.D. Crawford**, 1993-1994. Ph.D. University of Western Ontario. Supported by an MRC postdoctoral fellowship. Currently Assistant Professor, York University, Ontario, Canada.

**H. Jiang**, 1994-1996. Ph.D. Université de Montréal. Supported by MRC grant to Daniel Guitton. Currently assistant professor, Bowman-Gay School of Medicine, Winston-Salem, NC.



**S. Matsuo**, 2000-2003. MD, PhD. Supported by Japanese Ministry of Education, Science and Culture. Currently Assistant Professor, Tottori University, Faculty of Medicine, Japan

Sabbatical Fellows

**M. Crommelinck**, 1990, Professeur, Faculté de médecine, Univ. Catholique de Louvain, Bruxelles, Belgium.

**L. Massone**, 1997-98, Visiting Scientist, from Northwestern University, Chicago, Illinois.

Undergraduate students doing 1 year research projects

**F. Jean**, Physiology Dept. course 552-461D, 1982-1983.

**N. Wereley**, Mechanical Engineering course 305-403D, 1982-1983.

**J. Chorlton**, Electrical Engineering Design Project, 1984-1985.

**G. Risha**, Physiology Dept. course 552-461D, 1984-1985.

**Z. Ivanski**, Ibid.

**J. Chen**, Physiology Dept. course 552-461D, 1994-1995.

**G. Gracias**, Physiology Dept. course 552-461D, 1997-1998.

Medical students doing summer research projects

**M. Gans**, Faculty of Medicine summer bursary project, 1982-1983.

**M. Discepola**, Faculty of Medicine summer bursary project, 1984-1985.

Medical residents doing one year research rotations

**R. Beraja**, Ophthalmology Dept., 1988.

**R. Simard**, Ophthalmology Dept., 1989.

**8.3 Invited Teaching**

Current: Université de Montréal, Département de Physiologie, post graduate course NRL 6070, 3 hours/yr, 1983-present.

Past: -Université de Montréal, Département de Physiologie, post graduate course NRL 6010, Invited professor, 6 hours, 1980-1981.  
-The James S. McDonnell Foundation Summer Institute in Cognitive Neuroscience, Dartmouth University, Faculty member, 1992.

**8.4 Clinical Teaching**

Current: McGill University, Ophthalmology Dept. Basic science lectures to residents, 4-6 hours/year, 1978-1983, 1998-present

McGill University, Neurology and Neurosurgery Dept. Basic science lectures to Neurology residents, 1 hour, 1981-1982, 3 hours, 1990-1991, 1998- present

**8.5 Student Advisory Committees**

Current: -J. Roy, PhD student, Physiology Dept., 1995-present  
-P.A. Sylvestre, PhD student, Physiology Dept., 1997- present  
-M. Huterer, MSc student, Physiology Dept., 1997- present  
-S. Dubrovsky, MSc student, Physiology Dept., 1999- present  
-J. Coulombe, PhD student, Ecole Polytechnique, Université de Montreal, 2000-present  
-S. Sadegji, PhD student, Physiology Dept., 2001-present

-M. McCluskey, MSc student, Physiology Dept., 2001-present

Past: -M.Sc. student, P. Rouillon, Dép. de Biologie, Univ. de Montréal, 1990.  
-Ph.D. students, Physiology Dept.: P. Lala 1990-95; D. Fuoco 1990-95; L. Bouyer 1990-95.

### **8.6 External/Internal thesis examiner**

**R. Mailloux**, PhD, Psychology Dept., Université de Montréal, 1978  
**S.B. Khalsa**, PhD, Physiology Dept., University of Toronto, 1985  
**H. Doma**, PhD, Physiology Dept., University of Toronto, 1987  
**E. Virre**, PhD, Physiology and Ophthalmology Depts., University of W. Ontario, 1988  
**E. Olivier**, PhD, Faculté de Médecine, Université Catholique de Louvain, 1992  
**M. Missal**, PhD, Faculté de Médecine, Université Catholique de Louvain, 1994  
**A. Coimba**, PhD, Faculté de Médecine et Ecole d'Ingenieur, Université Catholique de Louvain, 1999  
**S. Quessy**, PhD, Psychologie, Université de Montréal, 1999  
**H. Theoret**, PhD, Dép. Psychologie, Université de Montréal, 2000  
**V. Tozlovanu**, MSc, Science Neurologiques, Psychologie, Université de Montréal, 2001  
**P.A. Sylvestre**, PhD, Physiology Dept., McGill University, 2003

### **8.7 Ph.D. thesis examining committee member**

**G. Leonard**, Dept. of Neurology and Neurosurgery, McGill University, 1985.  
**M.L. Smith**, Psychology Dept., McGill University, 1985  
**J. Bloomberg**, Physiology Dept., McGill University, 1989  
**H. Webster**, Psychology Dept., McGill University, 1989.  
**P. Hoeltzell**, Physiology Dept., McGill University, 1990  
**J. Coulombe**, Ecole Polytechnique, Université de Montreal, 2003

## **9. ADMINISTRATIVE RESPONSIBILITIES**

### **9.1 Major**

Current: **Member Board of Govenors**, McGill University, 2003-

Past: - **Vice -president**; McGill- Association of University Teachers, 1997-2003  
- **McGill delegate** to Council of Canadian Association of University Teachers, 1997-2003  
- **McGill delegate** to Conseil Fédéral de L'Association des Professeures et Professeurs d'Université du Québec, 1997-2003  
- **Consultant** Ontario Council on Graduate Studies, appraisal consultant on Graduate Program in Neuroscience, Queens University, 2003

### **9.2 Committees**

Organizer of Retreat (with T. Paus), Montreal Neurological Institute) 2003  
Member, Faculty Search Committee, Montreal Neurological Institute 2003-

Member of ad hoc Ethics committees formed to evaluate research projects involving human subjects. Aviation Medical Research Unit, McGill, and Departments of Otolaryngology (RVH) and Biomedical Engineering, McGill, 1981-present

- Past:
- Member, Montreal Neurological Institute - Promotions and Tenure Committee, 1998-2002
  - Chairman** Neuroscience Division and Graduate Program in Neuroscience, Neurology and Neurosurgery Dept., 170 students in program, about 250 hours/year, 1988-1999.
  - McGill, Faculty of Medicine, Montreal Neurological Institute Directorship Review Committee, 1996
  - Member, Ad hoc committee on “Commercialisation de la Recherche Universitaire” Fédération des Professeurs et Professeures du Québec (FQPPU) 2000-2001
  - Montreal Neurological Institute, member Epilepsy Search Committee, 1998-1999
  - Montreal Neurological Institute, member Research Advisory Committee, 1996- 2001
  - Graduate Faculty Council, 1992-1999
    - Neurology & Neurosurgery Dept., member Committee on Promotions & Tenure, 1991-1993.
    - Montreal Neurological Institute, member Committee on Promotions & Tenure, 1994-1996.
    - Montreal Neurological Institute, member Graduate Programs Evaluation Committee, 1996-1999.
  - Senate Statutory Selection Committee for Promotions to Full Professor in the Department of Physiology, September 16, 1992-1995.
  - Advisory Committee to graduate students P. Lala and G. Fuoco, Dept. Physiology.
  - Montreal Neurological Institute, member Neuropsychology Dept. search committee for new director, 25 hours, 1989.
  - Combined NASA and National Institute for Aging (NIA) advisory committee on priorities for research on sensory-motor adaptation, 1992.

### **9.3 Panel Member**

- Past:
- Fonds de la Recherche en Santé du Québec (FRSQ), Chercheur Boursier Committee, 1993-1996.
  - Fonds de la Recherche en Santé du Québec, site visit team to evaluate Sacré Coeur Hospital research activities, 1984.
  - Medical Research Council, site visit team to Dalhousie University for evaluation of group grant, 1984.
  - Fonds de la Recherche en Santé du Québec, Comité des demandes de bourses de formation post-troisième Cycle (FRSQ post-doctoral fellowship committee), 1987, meet 5 days/year.
  - National Science and Engineering Research Council (NSERC), Psychology Grant Selection Committee, 1988, meet 5 days/year.

### **9.4 Officer in learned societies**

- Current: Member, Board of Governors (“Trustee”), Society for the Neural Control of Movement, 1998- present

## **10. OTHER CONTRIBUTIONS**

### **10.1 Journal Reviews**

- Current: Ad hoc reviews

About 5 articles/year total, generally for:

Can. J. Physiol. Pharmacol.; Exp. Brain Res.; IEEE Trans. Biomed. Eng.; J. Biol. Psychiat.; J. Neurophysiol.; J. Neurosci.; Nat Neurosci., Vis. Res.; Vis. Neurosci.

## **10.2 Grant Reviews**

Current: Ad hoc reviews (currently  $\approx 10$ /year)

Canadian Institutes of Health Research - Operating grant and Scholarship applications.

National Science and Engineering Research Council of Canada - Operating grant applications.

Fonds de la Recherche en Santé du Québec - Demandes de Chercheur-boursier et de stagiaire postdoctoral.

National Science Foundation (U.S.)

Fond National de la Recherche en Santé (FNRS), Belgium

## **10.3 Professional and/or Learned Societies**

### Membership

Canadian Association for Brain, Behavior and Cognitive Science.

Canadian Association for Neuroscience.

Canadian Physiological Society.

Society for Neuroscience.

Association des Physiologistes, France

Fond de la Recherche en Santé du Québec, membre Réseau Vision

## **11. PUBLICATIONS (\* indicates first author was a student in my laboratory)**

### Articles in Peer-reviewed Journals

Jerome F.E., Guitton D. & Patel R.P. Experimental study of the thermal wake interference between closely spaced wires of an X-type hot wire probe. *Areo. Quart.* 23: 119-126, 1971.

Guitton D. & Mandl G. The effect of frontal eye field stimulation on unit responses in the superior colliculus of the cat. *Brain Res.* 68: 330-334, 1974.

Guitton D. The effect of high intensity turbulence on the response of a hot wire. *Transactions of the Canadian Aeronautics and Space Institute* 7, No 2 September pp: 69-80, 1974.

Guitton D. & Mandl G. Inputs to the intermediate and deep layers of the superior colliculus from the frontal eye fields in the cat. *Exp. Brain Res.* 1: 556-562, 1976.

Guitton D. & Newman B.G. Self-preserving turbulent wall jets over convex surfaces. *J. Fluid Mech.* 81: 155-185, 1977.

Guitton D. & Mandl G. Frontal "oculomotor" area in alert cat: I. Eye movements and neck muscle activity evoked by stimulation. *Brain Res.* 149: 295-312, 1978.

Guitton D. & Mandl G. Frontal "oculomotor" area in alert cat: II. Unit discharges associated with eye movements and neck muscle activity. *Brain Res.* 149: 313-327, 1978.

Kirkham T.H., Guitton D., Katsarkas A., Kline L.B. & Andermann E. Oculomotor abnormalities in Friedreich's ataxia. *Can. J. Neurol. Sci.* 6:167-172, 1979.

Guitton D. & Mandl G. A comparison between saccades and quick phases of vestibular nystagmus in the cat. *Vision Res.* 20: 865-874, 1980.

Guitton D. & Mandl G. Oblique saccades of the cat: a comparison between the durations of horizontal and vertical components. *Vision Res.* 20: 875-883, 1980.

Guitton D., Crommelinck M. & Roucoux A. Stimulation of the superior colliculus in the alert cat. I. Eye movements and neck EMG activity evoked when the head is restrained. *Exp. Brain Res.* 39: 63-73, 1980.

Roucoux A., Guitton D. & Crommelinck M. Stimulation of the superior colliculus in the alert cat. II. Eye and head movements evoked when the head is unrestrained. *Exp. Brain Res.* 39: 75-85, 1980.

Kirkham T.H., Coupland D. & Guitton D. Sialidosis. The cherry-red-spot-myoclonus syndrome. *Can. J. Ophthalmol.* 15: 35-39, 1980.

Kirkham T.H., Guitton D., & Coupland S.G. Giant axonal neuropathy: visual and oculomotor deficits. *Can. J. Neurol. Sci.* 15: 177-184, 1980.

Kirkham T.H., Guitton D. & Gans M. Task dependent variations of ocular lateropulsion in Wallenberg's syndrome. *Can. J. Neurol. Sci.* 8: 21-26, 1981.

Guitton D. & Douglas R.M. Une comparaison entre les mouvement rapides d'orientation de l'oeil accompagnant les mouvements actifs ou passifs de la tête chez le chat. *Rev. Can. Biol.* 40: 69-75, 1981.

Kirkham T.H. & Guitton D. A quantitative study of abnormal eye movements in Huntington's chorea using the scleral search coil technique. *Neuro-ophthalmology* 4: 27-38, 1984.

Guitton D., Douglas R.M. & Volle M. Coordinated eye-head movements in the cat. *J. Neurophysiol.* 52: 1030-1050, 1984.

Guitton D., Buchtel H.A. & Douglas R.M. Frontal lobe lesions in man cause difficulties in suppressing reflexive glances and in generating goal-directed saccades. *Exp. Brain Res.* 58: 455-472, 1985.

\* Munoz D. & Guitton D. Tectospinal neurons in the cat have discharges coding gaze position error. *Brain Res.* 341: 184-188, 1985.

Guitton D., Kearney R.E., Wereley N. & Peterson B.W. Visual, vestibular and voluntary contributions to human head stabilization. *Exp. Brain Res.* 64: 59-69, 1986.

- \* Munoz D. & Guitton D. Presaccadic burst discharges of tecto-recticulo-spinal neurons in the alert head free and fixed cat. *Brain Res.* 398: 164-168, 1986.
  
- Guitton D. & Volle M. Gaze control in head-free humans: eye-head coordination during orienting movements to targets within and beyond the oculomotor range. *J. Neurophysiol.* 58: 427-459, 1987.
  
- Melvill Jones G., Guitton D. & Berthoz A. Changing patterns of eye-head coordination during 6h of optically reversed vision. *Exp. Brain Res.* 69: 531-544, 1988.
  
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