

Curriculum Vitae

Name: Alain Leroux, PhD

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Employment History:

- 2006- present Associate Professor
Department of Exercise Science, Concordia University
- 2001-2006 Assistant Professor
Department of Exercise Science, Concordia University
- 1999-2001 Lecturer
Department of Exercise Science, Concordia University

Research Positions:

- 2004-present Researcher at the Centre for Interdisciplinary Research in Rehabilitation of Greater Montreal (CRIR)
- 2004-present Associate researcher to the Constance-Lethbridge Rehabilitation Center (Montreal)
- 2002-present Researcher at the Quebec Rehabilitation Research Network (REPAR)

Adjunct Professor Positions:

- 2001-present Adjunct professor
Department of Kinanthropology, UQAM.
- 2001-present Adjunct professor
School of Physical and Occupational Therapy, McGill University.

Academic Background:

University Degrees:

- 1994- 2001 Doctorate (Ph.D.) in Rehabilitation Science
School of Physical and Occupational Therapy
Faculty of Medicine, McGill University
3654 Drummond, Montréal (Québec) H3G 1Y5
Thesis title: Locomotor and postural adaptations to inclined walking in healthy and spinal cord injured subjects

- 1992-94 Master (M.Sc.) in Kinanthropologie (Kinesiology)
Département de Kinanthropologie
Université du Québec à Montréal
Case postale: 8888; Succursale: Centre-Ville, Montréal (Québec)
Thesis title : L'influence de la douleur sur la modulation des réflexes spinaux
chez des patients présentant une dysfonction fémoro-patellaire
- 1989-92 Bachelor (B.Sc.) in Physical Education
Université du Québec à Montréal
Case postale: 8888; Succursale: Centre-Ville, Montréal (Québec)

PUBLICATIONS:

Published refereed papers (original articles published in journals with editorial review)

- Leroux, A.**, Fung, J. and Barbeau, H. (2006). Postural adaptation to walking on inclined surfaces: II. Strategies following spinal cord injury. *Clinical Neurophysiology*, 117: 1273-1282.
- Leroux, A.**, Pinet, H. and Nadeau, S. (2006). Task-oriented intervention in chronic stroke: Changes in clinical and laboratory measures of balance and mobility. *American Journal of Physical Medicine and Rehabilitation*. 85: 820-830.
- Bayouk, J.-F., Boucher, J.P. and **Leroux, A.** (2006). Balance training following stroke: effects of task-oriented exercises with and without altered sensory input. *International Journal of Rehabilitation Research*, 29: 51-59.
- Lefebvre, R., **Leroux, A.**, Poumarat, G., Galtier, B., Guillot, M., Vanneuville, G., and Boucher, J. P. (2006) Vastus medialis: anatomical and functional considerations and implications based upon human and cadaveric studies: *J Manipulative and Physiological Therapeutics*, 29, 139-144.
- Leroux, A.** (2005). Exercise training to improve motor performance in chronic stroke: Effects of a community-based exercise program. *International Journal of Rehabilitation Research*, 28: 17-23.
- Leroux, A.**, Fung, J. and Barbeau, H. (2002). Postural adaptation to walking on inclined surfaces: I. Normal strategies. *Gait and Posture*, 15: 64-74.
- Duval, C., Lafontaine, D., Hébert, J., **Leroux, A.**, Panisset, M. and Boucher, J.P. (2002). The effect of Trager therapy on the level of evoked stretch reflex responses in patients with Parkinson's disease and rigidity. *Journal of Manipulative and Physiological Therapeutics*, 25: 455-464.
- Leroux, A.**, Fung, J. and Barbeau, H. (1999). Adaptation of the walking pattern to uphill walking in normal and spinal cord injured subjects. *Experimental Brain Research*, 126: 359-8.

- Barbeau, H., Pépin, A., Norman, K.E., Ladouceur, M. and **Leroux, A** (1999). Walking after spinal cord injury: evaluation, treatment, and functional recovery. *Archives of Physical Medicine and Rehabilitation*, 80: 225-235.
- Barbeau, H., Pépin, A., Norman, K.E., Ladouceur, M. and **Leroux, A** (1998). Walking following spinal cord injury: control and recovery. *The Neuroscientist*, 4(1): 14-24.
- Leroux, A.**, Pépin, A., Fung, J. and Barbeau, H. (1998). Locomotor adaptation to uphill walking after spinal cord injury. *Canadian Journal of Rehabilitation*, 11(4): 213-214.
- Leroux, A.**, Poumarat, G. and Boucher, J.P. (1997). Quadriceps femoris function investigated through electrical stimulation. *Journal of Athletic Training*, 32(2): 115-118.
- Leroux, A.**, Bélanger, M. and Boucher, J.P. (1995). Pain effect on monosynaptic and polysynaptic reflex inhibition. *Archives of Physical Medicine and Rehabilitation*, 76(6):576-582.

Published contribution to a book chapter (collective work derived from a conference)

- Barbeau, H., Fung, J., **Leroux, A.** and Ladouceur, M. (2002). A review of the adaptability and recovery of locomotion after spinal cord injury. In: McKerracher, L., Douchet, G., Rossignol, S. editors. *Progress in Brain Research*, vol 137. Elsevier, 2002:9-25.

Research Report:

- Leroux, A.**, Nadeau, S., McKinley, P., Korner-Bitensky, N. and Brosseau R. (2006) Exercise training in elderly individuals with chronic: Effects of a long-term community-based exercise program on functional recovery. Drummond Foundation, Montreal, Quebec, Canada. 12 p.

Presentations as invited speaker:

- Leroux, A.** (2005) Stratégies d'adaptations locomotrices et posturales lors de la marche en plan incliné chez les sujets ayant une blessure médullaire. Journée Scientifique conjointe du Centre interdisciplinaire de recherche en réadaptation et intégration sociale et du Centre de recherche interdisciplinaire en réadaptation du Montréal métropolitain: Approche Intégrée de Recherche en Traumatologie, Québec City, Canada, May.
- Leroux, A.** (2005) Functional Recovery in Chronic Stroke Individuals : Effects of a Community-Based Exercise Program. Invited presentation to the Board of Governors, Cummings Jewish Centre for Seniors, Montreal, Canada, April.
- Leroux, A.** (2004) Effets de l'exercice sur l'amélioration de l'équilibre et de la mobilité des personnes atteintes d'un AVC en phase chronique. Les conférences scientifiques du Centre de recherche interdisciplinaire en réadaptation du Montréal métropolitain. Centre de réadaptation Constance-Lethbridge, Montreal, Canada, January.

Published conference presentations (abstracts):

- Leroux, A.**, Rozen, J.N. and Artuso, S. (2005). Temporal disorganization and balance disturbance of the step test after stroke. *Gait and Posture*, 21 (S1): S108. Presentation at the XVIIth Conference on Postural and Gait Research, Marseille, France, June.
- McKinley, P., Bednarczyk, V., Jacobson, A., **Leroux, A.**, Rainville, C., Rossignol, M.L. and Fung, J. (2005). Argentine tango dancing improves balance and complex task performance in at-risk elderly: a feasibility study. *Gait and Posture*, 21 (S1): S117. Presentation at the XVIIth Conference on Postural and Gait Research, Marseille, France, June.
- DeMont, R.G. and **Leroux A.** (2005). Desire for graduate athletic therapy programs within Canada is high. *Journal of Athletic Training*, 40 (2) : S19. Presentation at the NATA Conference, Indianapolis, USA, June.
- Leroux, A.**, Bayouk, J.-F., Kaneva, P. and Boucher, J.P. (2004). Poststroke postural stability improvements following exercise with altered sensory input. *Archives of Physical Medicine and Rehabilitation*, 85 (8): E13. Presentation at the American Congress of Rehabilitation Medicine Convention, Jacksonville, USA, September.
- Leroux, A.** (2002). Improvements in balance and mobility after exercise training in elderly individuals with stroke. *Archives of Physical Medicine and Rehabilitation*, 83 (10): 1492. Presentation at the American Congress of Rehabilitation Medicine Convention, Philadelphia, USA, October.
- Leroux, A.**, Pinet, H. and Fragapane, M. (2001). Effects of a group exercise program on the motor skill-related components of physical fitness in elderly people who have had stroke and have been discharged from rehabilitation. *Canadian Journal of Applied Physiology*, 26 (5): 495. Presentation at the Canadian Society for Exercise Physiology Convention, Montréal, Canada, October.
- Hébert, J., Duval, C., Lafontaine, D., Panisset, M., **Leroux, A.** and Boucher, J.P. (2000). Effects of manual therapy on muscle rigidity in Parkinson's disease. *Medicine and Science in Sports and Exercise*, 32(5)(Suppl): S149. Presented at the American College of Sports Medicine Convention. Indianapolis, USA, June.
- Leroux, A.**, Fung, J. and Barbeau, H. (1998). Postural adaptation to inclined walking in normal and spinal cord injured subjects. *Society for Neuroscience Abstracts*, 24: 150. Presented at the Society for Neuroscience Meeting, Los Angeles, USA, November.
- Leroux, A.**, Pépin, A., Fung, J. and Barbeau, H. (1996). Adaptation du patron locomoteur durant la marche en plan incliné chez les sujets normaux et les blessés médullaires (BM). *Médecine Sciences*, 12(2)(Suppl):33.

- Leroux, A., Pépin, A., Fung, J. and Barbeau, H. (1996).** Adaptation of the walking pattern to graded walking in normal and spinal cord injured subjects. *Society for Neuroscience Abstracts*, 22: 1851c. Presented at the Society for Neuroscience Meeting, Washington, USA, November.
- Leroux, A., Boucher, J.P. and Bélanger, M. (1995).** Pain and reflex inhibition in patello-femoral dysfunction (PFD). *Medicine and Science in Sports and Exercise*, 27(5)(Suppl): S171. Presented at the American College of Sports Medicine Convention. Minneapolis, USA, June.
- Coutu, M., Leroux, A., King, MA., Lefebvre, R. and Boucher, J.P. (1995).** Effects of open and closed chain exercises on quadriceps function. *Medicine and Science in Sports and Exercise*, 27(5)(Suppl): S 106. Presented at the American College of Sports Medicine Convention. Minneapolis, USA, June.
- Hébert, J., Ferry, B., Leroux, A., Poumarat, G. and Boucher, J.P. (1995).** The effects of static knee position on human triceps surae. *Medicine and Science in Sports and Exercise*, 27(5)(Suppl): S 172. Presented at the American College of Sports Medicine Convention. Minneapolis, USA, June.
- Leroux, A., Lefebvre, R., Poumarat, G., Vanneville., G. and Boucher, J.P. (1994).** Vastus Medialis function investigated through electrical stimulation. *Medicine and Science in Sports and Exercise*, 26(5)(Suppl): S11. Presented at the American College of Sports Medicine Convention. Indianapolis, USA, June.
- Leroux, A., Lefebvre, R., Boucher, J.P. and Poumarat, G. (1994).** Rôle du vaste interne étudié par la stimulation électrique. *Recueil des résumés de communications du 62^e Congrès de l'ACFAS. Annales de l'ACFAS*, vol. 62: 333. Presented at the Association canadienne française pour l'avancement de sciences Convention, Montréal, Canada, June.
- Lefebvre, R., Leroux, A., Poumarat, G., Vanneville, G., and Boucher, J.P. (1994).** Vastus medialis: Anatomical and functional considerations and implications. *Medicine and Science in Sports and Exercise*, 26(5)(Suppl): S12. Presented at the American College of Sports Medicine Convention. Indianapolis, USA, June.
- Lefebvre, R., Leroux, A., Boucher, J.P., Poumarat, G. and Vanneville, G. (1994).** Vaste interne: considérations et implications anatomiques et fonctionnelles. *Recueil des résumés de communications du 62^e Congrès de l'ACFAS. Annales de l'ACFAS*, vol. 62: 333. Presented at the Association canadienne française pour l'avancement de sciences Convention, Montréal, Canada, June.
- Leroux, A., Boucher, J.P. and Lefebvre, R. (1993).** Patello-femoral dysfunctions and the vastus medialis: anatomical and functional considerations. *Proceedings of the international conference on spinal manipulation: FCER: Arlington, VA: 24-25.*

Accepted conference presentations (abstracts):

Leroux, A., Hovington, C.L. and Pinet, H. Relation between weight-bearing asymmetry and functional performance after stroke. Presentation at the XVIIIth Conference on Postural and Gait Research, Burlington, Vermont (USA), July 2007.

Hovington, C.L., Nadeau, S. and **Leroux, A.** Investigation of the Spatio-Temporal Parameters and Cardiorespiratory Responses during the 6-Minute Walk Test in Healthy Elderly Subjects. Presentation at the XVIIIth Conference on Postural and Gait Research, Burlington, Vermont (USA), July 2007.

Pelland L, Joss B, **Leroux A**, Charbonneau E, Cybulski J. Adaptive control of stair descent behaviour. Presentation at the XVIIIth Conference on Postural and Gait Research, Burlington, Vermont (USA), July 2007.