

Brenda Brouwer

Dean (Interim), Smith School of Business
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Education

- PhD Institute of Medical Science, University of Toronto 1990
 Thesis title: *Corticospinal Projections in Man: Are they Altered in Cerebral Palsy?*
- MSc School of Physical and Occupational Therapy, McGill University 1986
 Thesis title: *Quantitative Analysis of Below-Knee Child Amputee Gait: A Comparison Between the SACH and Single-Axis Foot Components.*
- BSc Department of Kinesiology, University of Waterloo 1980

Employment

- 2019 - Dean (Interim), Smith School of Business, Queen's University
- 2018-2019 Head, Academic Partnerships, Vector Institute for Artificial Intelligence (AI)
Reporting to the executive director and chief executive officer, my mandate was to build a team to develop and implement an AI talent development and mobilization strategy. This involved working with Ontario universities to build and expand AI master's education and with industry to support a talent pipeline of well-trained graduates with the skills, competencies and knowledge that organizations at the forefront of AI in Canada seek. [This was a secondment from Queen's University to the Vector Institute that followed the completion of my administrative term]
- 2012-2018 Vice-Provost and Dean, School of Graduate Studies, Queen's University
Reporting to the Provost and Vice-Principal Academic, my role was to provide administrative and academic leadership to promote the expansion and development of graduate credentials including professional and applied advanced degrees, excellence and innovation in graduate education, the establishment of policies and best practices that support academic excellence and career preparedness for students and post-doctoral fellows, enhancement of the student experience fostering interdisciplinary connectivity, community engagement, and global citizenship.

- 2010-2012 Interim Vice-Provost and Dean, School of Graduate Studies, Queen's University
See above for position overview
- 2005-2010 Associate Dean, School of Graduate Studies, Queen's University
Reporting to the Associate Vice-Principal Academic and Dean (Graduate Studies) my role was to promote academic program development and new training opportunities for students which included the implementation of a pan-university, multi-faceted professional development program ([Expanding Horizons](#)), managing supervisor-graduate student issues in the STEM programs, and creating new opportunities to support student success as well-being.
- 2002-present Professor, School of Rehabilitation Therapy and School of Kinesiology and Health Studies (previously School of Physical and Health Education), Centre for Neuroscience Studies, Queen's University
Director of the Human Motor Performance Research Lab from 2002-2010, Chair of the Life Sciences Division, School of Graduate Studies from 2002-2004
- 2001-2002 Acting Director, School of Rehabilitation Therapy (~4-month coverage for a medical leave), Queen's University
- 1996-2002 Associate Professor, School of Rehabilitation Therapy and School of Physical & Health Education (now School of Kinesiology & Health Studies), Queen's University
Graduate Program Chair (Rehabilitation Science) from 1996-2002
- 1990-1996 Assistant Professor, School of Rehabilitation Therapy and School of Physical & Health Education commencing in 1995, Queen's University
Graduate Program Chair (Rehabilitation Science) from 1992-1996
- 1989-1990 Research Associate, Playfair Neuroscience Unit, University of Toronto
- 1980-1984 Director, Community Programs and Services, Town of Frobisher Bay, Northwest Territories (now Iqaluit, Nunavut). *Reporting to the Town Manager my role was to provide leadership of the community services staff to develop, deliver and promote recreational and community programs and manage the community's facilities (arena, pool and community centre)*

Significant University Administrative Committee Membership (last 10 years)

- 2012-18, 2019 - Provost's Advisory Committee on Budget – *Comprised of vice-principals, deans, shared services directors and faculty representatives to provide advice on the budget model to ensure it reflects transparent and appropriate incentives to stimulate revenue growth and efficiently and effectively attribute activity costs required to support the academic enterprise. Review budget submissions from faculties, schools and shared service units and advise on resource allocation as part of annual budget process.*
- 2011-18, 2019 - Provost's Management Committee (aka Provost and Deans Group) – *Monthly meetings to deliberate issues, strategies and policies that affect the university, with a primary focus on academic operations.*

- 2011-18, 2019 - Strategic Enrolment Management Group – *Comprised of all deans as well as faculty, staff and student representatives to assist the university in establishing, achieving and maintaining optimum enrolment along with program mix and quality. This includes oversight of graduate and undergraduate enrolment management planning and policy.*
- 2010-18 Graduate Executive Council (Chair) – *Comprised of the associate deans of the School of Graduate Studies and of the Faculties/Schools, the Chairs of the Faculty Graduate Councils and graduate student representatives to review and develop policies, processes and best practices in matters related but not limited to: admissions standards for graduate studies, graduate degree requirements, progress through graduate degrees, completion of degree requirements, appeals of graduate students. Also reviews proposals for new programs and makes recommendations to Senate.*
- 2017 Graduate Enrolment Task Force (Chair) – *Comprised of all Faculty associate deans (graduate studies) as well as faculty, staff and student representatives to conduct a comprehensive strengths, weaknesses, opportunities and threats (SWOT) analysis and make recommendations to the Provost to inform strategic enrolment planning.*
- 2015-16 Review of the Senate Advisory Research Committee, SARC (Chair) – *Establish a representative review committee to advise on the composition, mandate, and functions of SARC as the primary advisory body on research-related strategy, policy development and review, and university research initiatives.*
- 2010-18 Numerous Appointment Committees for senior leadership positions including Dean searches (Faculties of Law, Education, Health Sciences, Arts & Science, Student Affairs, and Engineering & Applied Science), Provost searches and Vice-Principal searches (VP Research, VP Advancement).

Recent Non-University Administrative Roles

- 2017-19 Past-President, Canadian Association for Graduate Studies
- 2015-17 President, Canadian Association for Graduate Studies
- 2015-16 Past-Chair, Ontario Council of Graduate Studies, Council of Ontario Universities
- 2014-15 Chair, Ontario Council of Graduate Studies, Council of Ontario Universities

Scholarly and Professional Activities (key activities over last 10 years)

- 2019 Quality Assurance Process Audit, University of Victoria (Ministry of Advanced Education, Skills and Training, BC)
- 2018 Review of the Faculty of Graduate and Post-Doctoral Studies, University of British Columbia

- 2014-2018 Ontario Universities Council on Quality Assurance. *Decanal delegate from the ON Council for Graduate Studies; responsibilities included the review of submissions from Ontario Universities for new undergraduate and graduate programs as well as major modifications to existing programs.*
- 2017-18 Council of Ontario Universities Highly Skilled Workforce Steering Committee *Focus on the incorporation of experiential learning/training opportunities into undergraduate and graduate programs.*
- 2017 Review and evaluation of the Dean of Graduate Studies, Concordia University, QC
- 2017 Fonds de Recherche du Quebec/Canada Foundation for Innovation Panel Chair
- 2015 Review of the Faculty of Graduate Studies – Dalhousie University, NS
- 2014-2015 Editorial Board Chair, Canadian Association of Graduate Studies. *Report on the landscape of interdisciplinary graduate programs in Canada*
- 2011-2013 Council of Graduate Studies (United States), Advisory Group member for *Completion and Attrition in STEM Master’s Programs*
- 2004-2011 Associate Editor, Archives of Physical Medicine and Rehabilitation
- 2010 Canadian Institutes of Health Research (CIHR) – Institute of Aging; Scientific Review Committee for pilot projects in aging (IAP)
- 2009 Evaluation Site Team, Rehabilitation Science program, University of Montreal (Conférence des Recteurs et des Principaux des Universités du Québec, CREPUQ)

Awards and Honours

- 2010 Ontario Rehabilitation Research Advisory Network Leadership Award (recognition of research contribution)
- 2007 Faculty of Health Sciences Education Award (Excellence in Teaching)
- 2004 Nominated for the Rick Gallup Prize for Excellence in Research (Heart and Stroke Foundation of Ontario)
- 1998 Distinguished Visiting Scholar - Faculty of Science. University of Adelaide, Australia
- 1998 Gordon and Jean Southam Fellowship, Association of Commonwealth Universities (United Kingdom)
- 1991 Nomination for the Richmond Prize for Research in Cerebral Palsy, American Academy for Cerebral Palsy and Developmental Medicine

Invited speaker

- 2019 Public Health Sciences Day, plenary speaker: *Artificial Intelligence with Strings Attached* Queen’s University, Kingston, October 4
- 2019 Science to Business: Academia to Industry. *Artificial Intelligence and Machine Learning in Industry* (panellist) Queen’s University, Kingston, May 10

- 2019 Data Day 6.0 (panellist) *The Transformative Power of Data, AI and Mobilizing Talent*, Carleton University, Ottawa, March 26
- 2018 Teaching and Learning Outcomes Forum. *Graduate Learning Outcomes: Getting to Acceptance*. University of Alberta, Edmonton, March 16
- 2018 Symposium: What can AI do for population health? (panellist) *Building AI Capacity*. University of Toronto, Toronto, November 14
- 2017 Friends of CIHR Policy Roundtable: *The Future of Graduate Education in Canada: New Directions*, Ottawa, November 1
- 2017 Global Summit: Graduate Education 2030: Imagining the Future (Council of Graduate Schools) *Globalization in Higher Ed: So Much More Than Counting International Students*. Anchorage, Alaska, September 10-12
- 2016 Restructuring the PhD dissertation (Council of Graduate Schools) *The Canadian Experience*, Washington, DC December 8
- 2016 Lumina Foundation: PhD Outcomes *Outcomes-Based Curricula and Research Training*, Washington, DC September 27-28
- 2016 *Graduate Outcomes – a Canadian Perspective*, Athabasca University, Athabasca, September 2016
- 2015 Council of Graduate Schools Annual Meeting, panellist: *Implications of Big Data in Graduate Education: A Global Conversation*, Seattle, Washington December 2-5
- 2015 Friends of CIHR Policy Roundtable: *Does Canada have Too Many PhDs?* Ottawa, December 7-8
- 2015 Global Leader's Summit: Big Data in Graduate Studies, *Super-Size Me – Big Data Comes of Age*, National University of Singapore, Singapore, September 7-29
- 2013 Council of Graduate Schools Annual Meeting (panellist) *Graduate Education: An International Conversation*. San Diego CA December 4-7
- 2013 Global Leaders' Summit: Graduate Education and the Promises of Technology Globalization of Graduate Education. *Online Graduate Education: Curricular Innovations*, Central European University, Hungarian Academy of Sciences, Budapest, September 30-October 2
- 2012 Global Leaders' Summit: From Brain Drain to Brain Circulation: Graduate Education for Global career pathways. *Do We Really Understand Career Expectations of Students?* Technische Universität München, Bavaria, Germany, September 4-6
- 2011 Council of Graduate Studies' New Dean's Institute and Summer Workshop (panellist) *A Freshman Dean's Reflections*, Monterey, California. July 9-11,
- 2010 National Science Foundation and Council of Graduate Studies [Completion and attrition in STEM disciplines](#). Alexandria, Virginia, April
- 2009 CIHR Young Investigators Forum (Institute of Circulatory and Respiratory Health) *Preparing and writing your grant application*. Ottawa, May.
- 2008 American Congress of Rehabilitation Medicine and the American Society of Neurorehabilitation Joint Educational Conference. *Tackling challenges of research training opportunities through Collaboration*. Toronto, Oct. 14-18.

- 2005 Workplace Safety and Insurance Board Seminars *What does manual tracking have to do with cumulative trauma?* November
- 2004 Manitoba Physiotherapists Association, *Strength and endurance training in neurological disorders*, Two-day workshop, Winnipeg, Manitoba, April
- 2004 Faculty of Rehabilitation Medicine, *Motor cortical (re)organization: implications for function* University of Alberta, Edmonton, February
- 2003 International Conference on Cerebral Palsy. *Patterns of muscle activity in cerebral palsy – is the brain sending the wrong message?*, Quebec City, April
- 2003 Ontario Physical Therapy Association Provincial Congress, *What does manual tracking ability have to do with cumulative trauma disorders?* May
- 2003 Congress on Neuroplasticity *Motor cortical modulation – specificity and relationship to function*, Quebec City, May
- 2002 Ontario Association of Children’s Rehabilitation Services Conference *Strength training in neurological populations*. Richmond Hill, Ontario. November 4-5
- 2001 Centre Interdisciplinaire de recherche en Readaptation et Integration Sociale *Identifying mechanisms associated with disordered movement control in cerebral palsy*. Quebec City, Que. April 11-12.
- 2001 Association of Canadian Ergonomists, Regional congress. *Quantifying disability in upper limb cumulative trauma disorders*, Toronto, March 31.
- 1999 International Society for Biomechanics - special symposium *A neuromuscular basis for why some children respond better to serial casting than others*, Calgary, Alberta August 8-13
- 1999 14th International Symposium of the International Society for Posture and Gait *Balance and posture in stroke*. Waterloo, Ontario July 15-18
- 1997 University of South Australia *Evidence for altered neural wiring following neurological trauma*. Distinguished Visiting Research Fellow February
- 1992 Annual Spinal Cord Injury Research Symposium *Alterations in corticospinal output following spinal cord injury in man*. Vancouver, B.C. October

Externally Awarded Grant, Contracts and Awards

Year	(Ind)ividual or (Gr)oup ¹	Source and Title	Type	Amount
2015-17	Gr (PI)	Merz Pharma, Inc <i>Case-series to determine whether Xeomin modifies gait kinematics in stroke as detected by wearable sensors</i>	Operating	\$12,249
2013-14	Gr (Co-PI)	Ministry of Training, Colleges and Universities.	Innovation	\$1,200,000

¹ PI and co-PI role: inception of project, responsibility for grant writing, day-to-day running of project, and dissemination of findings. Co-I: substantial contribution to all aspects of the project particularly methodology, analysis and dissemination

Year	(Ind)ividual or (Gr)oup ¹	Source and Title	Type	Amount
		<i>Ontario consortium for the development of online graduate professional skills modules (MyGradSkills.ca)</i>		
2011-14	Gr (PI)	Heart and Stroke Foundation Ontario <i>Biomechanical, neuromuscular and cardiorespiratory costs of stair negotiation in healthy individuals and persons with stroke</i>	Operating	\$198,740
2011-14	Gr (Co-I)	Craig H Neilsen Foundation <i>From Research to Clinic: Translation of Functional MRI of the Human Spinal Cord (spinal fMRI)</i>	Operating	\$275,000 USD
2009-13	Gr (Co-PI)	Canadian Institutes for Health Research (CIHR) <i>Efficacy of physical therapy intervention for the early treatment of acute ankle sprains identified in emergency departments: an RCT</i>	Clinical Trial	\$741,776
2011-12	Gr (Co-I)	CIHR <i>Does diabetes mellitus-induced vestibular system dysfunction contribute to higher prevalence of balance and mobility impairment in community-dwelling diabetic elderly?</i>	Pilot project	\$ 45,965
2011-12	Gr (Co-I)	J.P. Bickell Foundation <i>Diabetes, vestibular dysfunction and balance</i>	Operating	\$57,750
2009-11	Gr (Co-I)	Southeastern Ontario Academic Medical Association <i>Measuring objective changes in physical, psychological and radiographic status of patients awaiting hip or knee replacement surgery</i>	Operating	\$120,000
2006-10	Gr (PI)	Heart and Stroke Foundation Ontario <i>Client-centered tune-ups: do they enhance physical capacity, mobility function and community reintegration after stroke?</i>	Operating	\$680,736
2008-09	Gr (Co-PI)	CIHR <i>Measuring objective changes in physical, psychological and radiographic status of patients awaiting hip or knee replacement surgery</i>	Operating	\$76,207

Year	(Ind)ividual or (Gr)oup ¹	Source and Title	Type	Amount
2006-07	Gr (PI)	CIHR <i>Timely and effective clinical management of soft tissue injuries: A team approach to acute care and rehabilitation</i>	Team Development	\$100,000
2006-07	Gr (Co-PI)	CIHR <i>Testing a new model of dynamic stability: a multi-site project to identify fall risk</i>	Pilot project	\$50,000
2005-07	Gr (PI)	Allergan Inc The effects of botulinum toxin a (btx-a) on plantarflexor spasticity, stiffness and gait in chronic stroke	Operating	\$85,000 USD
2004-07	Gr (PI)	Heart and Stroke Foundation Ontario <i>Does mental practice promote cortical reorganization and improve hand function?</i>	Operating	\$152,000
2002-07	Gr (PI)	Canada Foundation for Innovation <i>An integrated rehabilitation science laboratory for the evaluation, rehabilitation and restoration of function</i>	Infrastructure	\$307,207
2002-07	Gr (PI)	Ontario Innovation Trust <i>An integrated rehabilitation science laboratory for the evaluation, rehabilitation and restoration of function</i>	Infrastructure	\$307,207
2005-06	Gr (co-PI)	Reseau Provincial de Recherche en Adaption et Readaptation (REPAR) <i>Relations entre la recuperation fonctionnelle et la reorganization Cerebrale</i>	Operating	\$15,000
2004-06	Gr (Co-I)	Change Foundation <i>Mushkegowuk Territory –Community Rehabilitation Aides Project</i>	Operating	\$100,000
2004-06	Gr (Co-I)	Ministry of Health and Long-Term Care <i>Interdisciplinary approach to fall prevention and risk reduction in older adults</i>	Operating	\$238,000
2001-04	Gr (PI)	Heart and Stroke Foundation Ontario <i>Is central inhibition altered following stroke and does it relate to function?</i>	Operating	\$84,683
2001-03	Gr (PI)	Work and Safety Insurance Board Ontario <i>Development of a tool to evaluate cumulative trauma disorders (CTD)</i>	Operating	\$65,350

Year	(Ind)ividual or (Gr)oup ¹	Source and Title	Type	Amount
2001-03	Gr (Co-I)	Heart and Stroke Foundation Ontario <i>Reducing disability in chronic stroke through physical conditioning</i>	Operating	\$162,000
2000-03	Gr (PI)	Drummond Foundation <i>A randomized control trial evaluating the effectiveness of two programs in reducing fear of falling and improving quality of life in community dwelling seniors</i>	Operating	\$65,652
2000-01	Gr (Co-I)	Neurotrauma Foundation <i>Women with spinal cord injury: the impact of aging</i>	Operating	\$21,000
1998-00	Gr (Co-I)	Heart and Stroke Foundation Ontario <i>Reducing disability in chronic stroke through physical conditioning</i>	Operating	\$80,191
1997-98	Gr (Co-I)	Canada Fitness and Lifestyle Association <i>Association between physical and psychosocial variables in elderly at risk of falling</i>	Operating	\$10,035
1996-98	Gr (Co-I)	Heart and Stoke Foundation Ontario – Special Initiative <i>Reducing disability in chronic stroke through physical conditioning</i>	Operating	\$105,501
1996-97	Ind	American Paralysis Foundation <i>Convergence of descending volleys in spinal cord injury</i>	Operating	\$24,838 USD
1996-97	Ind	Developmental Consulting Program (CP Ontario) <i>The effectiveness of serial casting in cerebral palsy and idiopathic toe-walkers</i>	Operating	\$5,000
1995-97	Gr (PI)	Heart and Stroke Foundation Ontario <i>Does visual feedback enhance balance retraining following stroke?</i>	Operating	\$43,885
1994-96	Ind	Easter Seal Research Institute <i>Do ankle muscles share common cortical inputs?</i>	Operating	\$20,000
1994	Ind	Global Upholstery <i>Evaluation of ObusForme chairs – users' satisfaction and pain relief</i>	Operating	\$3,550
1992-94	Ind	Atkinson Foundation <i>Ankle pathomechanics in cerebral palsy - the effect of heelcord lengthening</i>	Operating	\$39,300

Year	(Ind)ividual or (Gr)oup ¹	Source and Title	Type	Amount
1991-93	Ind	Rick Hansen Man in Motion <i>Corticospinal reorganization following spinal cord injury in man</i>	Operating	\$54,000
1992	Ind	Myalgia Encephalomyelitis Kingston <i>Motor evoked potentials in chronic fatigue syndrome</i>	Operating	\$2,000
1991-92	Ind	Easter Seal Research Institute <i>Altered corticospinal projections in cerebral palsy</i>	Operating	\$45,000
1991	Ind	J.P. Bickell Foundation <i>Central mechanisms of fatigue and post-polio syndrome</i>	Operating	\$21,500
1991	Ind	Ontario federation for Cerebral Palsy <i>Altered cortical projections in cerebral palsy</i>	Operating	\$4,755

Refereed Publications

(^s=trainee; ^c= senior author/PI &/or supervisor)

Bielska IA^s, Brison R, Brouwer B, Day A, Janssen I, Johnson AP, Pickett W. Is recovery from ankle sprains negatively affected by obesity? *Annals of Physical and Rehabilitation Medicine* 628-13, 2018 [10.1016/j.rehab.2018.08.006](https://doi.org/10.1016/j.rehab.2018.08.006)

Brouwer B^c, Bryant D, Garland SJ. Effectiveness of client-centred ‘tune-ups’ on community reintegration, mobility, and quality of life after stroke: a randomized controlled trial. *Physical Medicine and Rehabilitation* 99:1325-32, 2018

Cohen JW^s, Ivanova TD, Brouwer B^c, Miller KJ, Bryant D, Garland SJ^c. Do performance measures of strength, balance and mobility predict quality of life and community reintegration after stroke? *Physical Medicine and Rehabilitation* 99:713-19, 2018

Brison R^c, Day A, Pelland L, Aiken A, Pickett W, Brouwer B^c Effect of early supervised physical therapy on recovery from acute ankle sprain: A randomised controlled trial. *British Medical Journal* doi: <https://doi.org/10.1136/bmj.i5650> November 2016

Miller K^s, Pollock C, Brouwer B^c, Garland SJ^c. Use of Rasch analysis to evaluate and refine the Community Balance and Mobility scale for use in ambulatory community-dwelling adults following stroke. *Physical Therapy* 96:1648-57, 2016

Ridgway HM^s, Bisson EJ^s, Brouwer B^c. A review of the physical demands of stair negotiation in healthy aging and following stroke. *Physical Medicine Rehabilitation International* 2:1057-66, 2015.

Beaulieu LD^s, Masse-Alarie H, Brouwer B^c, Schneider C^c. Noninvasive neurostimulation in chronic stroke: a double-blind randomized sham-controlled testing of clinical and corticomotor effects. *Topics in Stroke Rehabilitation* 22:8-17, 2015

Novak AC^S, Li Q, Yang S, Brouwer B^C. Energy flow analysis of the lower extremity during gait in persons with chronic stroke. *Gait and Posture* 41:580-5, 2015.

Laudanski A^S, Brouwer B^C, Li Q^C. Activity classification in persons with stroke based on frequency features. *J HealthCare Eng.* 37:180-6, 2015.

Beaulieu LD^S, Masse-Alarie H, Brouwer B^C, Schneider C^C. Brain control of volitional ankle tasks in people with chronic stroke and in healthy individuals. *J Neurol Sci* 338: 148-55, 2014

Laudanski A^S, Brouwer B^C, Li, Q^C. Measurement of lower limb joint kinematics *using inertial sensors during stair ascent and descent in healthy older adults and stroke survivors* *J. Healthcare Eng* 4:555-76, 2013.

Zhang J-T, Novak AC^S, Brouwer B^C and Li Q^C Concurrent validation of Xsens MVN measurement of lower limb joint angular kinematics. *Physiological Measurement* 34(8):N63-9, 2013.

Coriolano, K^S., Aiken, A.B. Harrison, M., Brouwer, B., Pukall, C., Groll, D. Changes in Knee Pain, Perceived Need for Surgery, Physical Function and Quality of Life after Dietary Weight Loss in Obese Women Diagnosed with Knee Osteoarthritis. *J Obesity Weight Loss Ther.* 3 (3):172-177, 2013

Novak AC^S, Brouwer B^C Kinematic and kinetic evaluation of the stance phase of stair ambulation in persons with stroke and healthy adults: a pilot study. *J Appl Biomech* , 29(4):443-52, 2013.

Yang, S^S, Zhang T, Novak AC^S., Brouwer B^C, Li Q^C. Estimation of Spatio-Temporal Parameters for Post-Stroke Hemiparetic Gait Using Inertial Sensors. *Gait and Posture.* 37:354-358, 2013

Bielska IA, Pickett W, Brison R, Brouwer B, Johnson AP. Health Care Resource Utilization after Acute Ankle Sprains. *Jagiellonian University Press Health Research Papers - Public Health and Administration*; 10(2): 106-110, 2012.

Novak AC^S, Brouwer B^C Strength and aerobic requirements during stair ambulation in persons with chronic stroke and healthy adults. *Arch Phys Med Rehabil* 93:683-9, 2012

Trachter R^S, Faris M. Brouwer B, McLean L. Performance on a manual tracking task differentiates individuals at risk of developing carpal tunnel syndrome from those not at risk. *J Electromyogr Kinesiol* 21:998-1003, 2011

Pruzynski A^S, Kurtzer I^S, Nashed J^S, Omrani M^S, Brouwer B, Scott S. Primary motor cortex underlies multi-joint integration for fast feedback control. *Nature* 478: 387-90, 2011

Novak AC^S, Li Q, Yang S^S, Brouwer B^C Mechanical energy transfers across lower limb segments during stair ascent and descent in young and healthy older adults. *Gait & Posture* 34:384-90, 2011

Reid S^S, Novak AC^S, Brouwer B, Costigan PA. Relationship between stair ambulation with and without a handrail and centre of pressure velocities during stair ascent and descent. *Gait & Posture* 34:529-32, 2011

Novak AC^s, Brouwer B^c. Sagittal and frontal lower limb joint moments during stair ascent and descent in young and older adults. *Gait & Posture* 33:54-60, 2011.

McIntyre N, Rombough R^s, Brouwer B^c. Relationships between calf muscle density and muscle strength, mobility and bone status in stroke survivors with subacute and chronic lower limb hemiparesis. *J Musculoskeletal and Neuronal Interactions*. 10:249-55, 2010.

Novak A^s, Reid S^s, Costigan PA, Brouwer B^c The biomechanical demands of stair negotiation in older adults (review article). *Lower Extremity review* 2:48-51, 2010.

Hovington C^s, Brouwer B^c Guided motor imagery: does strategy matter? *J Neurorehabil and Neural Repair* 24:851-7, 2010

Knorr S, Brouwer B, Garland J. Validity of the community balance and mobility scale in community-dwelling individuals after stroke. *Arch Phys Med Rehabil*. *Arch Phys Med Rehabil* 91:890-6, 2010.

Brouwer B^c, Parvataneni K^s, Olney SJ. A comparison of gait biomechanics and metabolic requirements of overground and treadmill walking in people with stroke. *Clin Biomech*, 24:729-34, 2009

Novak AC^s, Olney SJ, Bagg S, Brouwer B^c Gait changes following botulinum toxin A treatment in stroke. *Topics in Stroke Rehabilitation* 16:367-76, 2009.

Duclos C, Desjardins P, Nadeau S, Delisle A, Gravel D, Brouwer B, Corriveau H. Assessment of the dynamic stability during everyday activities with a new model of equilibrium based on the destabilizing and stabilizing forces. *J. Biomech* 42:379-82, 2009.

Egan R, Stockley D, Brouwer B, Tripp DA, Stechyson N. Relationship between area of academic concentration, supervisory style, student needs, and best practices. *Studies in Higher Education* 34:337-345, 2009

Parvataneni K^s, Ploeg L, Olney SJ, Brouwer B^c. Kinematic, kinetic and metabolic parameters of treadmill versus overground walking in healthy older adults. *Clin Biomech* 24: 95-100, 2009.

Aiken A, Pelland L, Brison R, Pickett W. Brouwer B^c Short term natural recovery of ankle sprains following discharge from emergency care. *JOSPT* 38:566-71, 2008.

Barbic S^s, Brouwer B^c Hip strength in supine and standing in stroke. *Arch Phys Med Rehabil* 89: 784-7, 2008

Parvataneni K^s, Olney SJ, Brouwer B. Changes in muscle group work associated with changes in gait speed of persons with stroke. *Clin Biomech* 22:813-20. 2007

Brouwer B^c, Faris M. Are deficiencies in manual tracking associated with upper extremity cumulative trauma disorders? *J Occup Rehabil* 17:63-72, 2007

Brouwer B^c, Schryburt-Brown K^s Hand function and motor cortical output in stroke: are they related. *Arch Phys Med Rehabil*, 87:627-34, 2006.

Olney S, Nymark J, Brouwer B, Culham E, Day A, Heard J, Henderson M, Parvatenini K. A randomized controlled trial of supervised versus unsupervised exercise programs for ambulatory stroke survivors. *Stroke* 37: 476 – 481, 2006.

Smith LLM^s, Brouwer B^c The effectiveness of muscle vibration in modulating corticospinal excitability. *Journal of Rehabilitation Research and Development*. 42:787-84, 2005.

Mussleman K^s, Brouwer B^c Gender related differences in physical performance among seniors. *Journal of Aging and Physical Activity* 13:239-53, 2005.

Rydahl SJ^s, Brouwer B^c. Ankle stiffness and tissue compliance in stroke survivors: a validation of myotonometer[®] measurements. *Archives of Physical Medicine and Rehabilitation* 85:1631-7, 2004.

Brouwer B^c, Olney SJ. Aging skeletal muscle and the impact of resistance exercise. *Physiotherapy Canada* 56:80-7, 2004.

Brouwer B^c, Mussleman K^s, Culham E. Physical function and health status among seniors with and without a fear of falling. *Gerontology* 50:135-41, 2004

Pentland W^c, Walker J, Minnes P, Tremblay M, Brouwer B, Gould M. Occupational responses to mid-life and aging in women with physical disabilities. *Journal of Occupational Sciences* 10:21-30, 2003.

Brouwer B^c, Walker C, Rydahl S^s, Culham E. Reducing fear of falling in seniors through education and activity programs: a randomized trial. *Journal of American Geriatric Society*, 51:829-34, 2003

Binda S^s, Culham E, Brouwer B^c. Balance, muscle strength and fear of falling in older adults. *Experimental Aging Research*, 29:1-15, 2003

Brouwer B^c. & Olney SJ. Physical conditioning following stroke. *Synapse*, 22(3):6-10, 2002.

Pentland W^c, Walker J, Minnes P, Tremblay M, Brouwer B, Gould M. Women with spinal cord injury and the impact of aging. *Spinal Cord*. 40(8):374-87, 2002

Tirosh, O^s. & Brouwer, B^c The effects of isokinetically training the shoulder rotators through limited range. *Synapse*. 21:19-26, 2001

Brouwer B^c, Mazzoni C^s, Pearce GW. Tracking ability in subjects symptomatic of cumulative trauma disorder: does it relate to disability? *Ergonomics* 44:443-56, 2001

Brouwer B, Vale M^s, Nordstrom MA^c. Asymmetry of motor cortex excitability during a simple motor task: relationships with handedness and manual performance. *Experimental Brain Research*. 138:467-76, 2001

Walker C^s, Brouwer B^c, Culham E. Balance retraining following acute stroke: is visual feedback effective? *Physical Therapy* 80:886-895, 2000

Ridding MC, Brouwer B, & Nordstrom MA^c. Reduced interhemispheric inhibition in musicians. *Experimental Brain Research* 133:249-253, 2000

Brouwer B^c, Davidson LK, Olney SJ. Serial casting in idiopathic toe-walkers and children with spastic cerebral palsy. *Journal of Pediatric Orthopedics*. 20: 221-225, 2000

Ridding MC, Brouwer B., Miles TS, Pitcher JB, Thompson PD. Changes induced in motor cortex by peripheral nerve stimulation. *Experimental Brain Research* 131:135-143, 2000.

Brouwer B. Strength training in long term stroke survivors. *BioMechanics* 7:61-70, 2000 (Invited paper)

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