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*John*

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**Brenda Brouwer**

Professor, Rehabilitation Science, Neuroscience, and Kinesiology & Health Studies  
 Queen's University  
 Kingston, ON

**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(hons) Department of Kinesiology, University of Waterloo 1980

**Employment**

- 2022 - Senior Advisor, Academic Innovation, Queen's Health Sciences
- 2019 - 2021 Dean (Interim), Smith School of Business, Queen's University  
*In addition to decanal responsibilities I had a mandate to make headway on recommendations following an environmental scan/climate survey of Smith School of Business that was conducted during my tenure.*
- 2018-2019 Head, Academic Partnerships, Vector Institute for Artificial Intelligence (AI)  
*Reporting to the executive director & 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 partners to ensure 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 in the School of Graduate Studies].*
- 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 and 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, Executive Committee for the development of the Neuroscience graduate program.*
- 2001-2002 Acting Director, School of Rehabilitation Therapy (~4-month coverage for the Director's 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, launch of PhD (Rehabilitation Science) program.*
- 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) and staffing.*

### **Significant University Administrative Committee Membership (last 10 years)**

- 2012-18, 2019 - 21 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 and the institutions vision & strategic goals. Review budget submissions from faculties, schools and shared service units and advise on resource allocation as part of annual budget process.*

- 2011-18, 2019 - 21 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 - 21 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 relevant policies.*
- 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: admission standards for graduate studies, graduate degree requirements, progress through graduate degrees, completion of degree requirements, graduate student appeals. Also review 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**

- 2020- Member, Board of Directors, Fields Institute for Research in Mathematical Sciences  
Member, Strategy Committee and Executive Committee, Fields Institute Chair, Equity, Diversity and Inclusion Committee
- 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
- 2013-19 Canadian Association of Graduate Studies – Tri-Agency Consultative Committee

### **Graduate and Post-Doc Supervision (Career total, sole supervision)**

Master's theses: 24 completed (all within 19 to 30 months)

Doctoral theses: 1 ongoing; 6 completed (all but one completed in  $\leq$  48 months; one in 54 months)

Post-doctoral Fellows: 5 trainees

Advisory committees in other departments:

MSc/MASc committees: 23

PhD committees: 12

### **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. <i>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.</i> |
| 2017-18   | Council of Ontario Universities Highly Skilled Workforce Steering Committee <i>Focus on the incorporation of experiential learning/training opportunities into undergraduate and graduate programs.</i>   |
| 2017      | Review and evaluation of the Dean of Graduate Studies, Concordia University, QC   |
| 2017      | Fonds de Recherche du Quebec/Canada Foundation for Innovation (CFI) Panel Chair   |
| 2015      | Review of the Faculty of Graduate Studies – Dalhousie University, NS  |
| 2014-2015 | Editorial Board Chair, Canadian Association of Graduate Studies. <i>Report on the landscape of interdisciplinary graduate programs in Canada</i>  |
| 2011-2013 | Council of Graduate Studies (United States), Advisory Group member for <i>Completion and Attrition in STEM Master's Programs</i>  |
| 2004-2011 | Associate Editor, Archives of Physical Medicine and Rehabilitation  |
| 2004-11   | Associate Editor, Archives of Physical Medicine and Rehabilitation  |
| 2010 -12  | Canadian Institutes of Health Research (CIHR) – Institute of Aging; Scientific Review Committee for pilot projects in aging (IAP)   |

## Awards and Honours

2021	Recognition of Service to the Smith Commerce Community (presented by the Commerce Society)
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

2021	Panelist: <i>Promoting Equity, Diversity, Inclusion and Belonging in Canadian Business Schools</i> Business Schools' Association of Canada (BSAC) June 2021 (Virtual)
2020	Panelist: <i>Graduating into a Crisis: entering the workforce during the COVID Recession</i> C.D. Howe Institute, November 24
2019	Public Health Sciences Day, plenary speaker: <i>Artificial Intelligence with Strings Attached</i> Queen's University, Kingston, October 4
2019	Science to Business: Academia to Industry. <i>Artificial Intelligence and Machine Learning in Industry</i> (panellist) Queen's University, Kingston, May 10
2019	Data Day 6.0 (panellist) <i>The Transformative Power of Data, AI and Mobilizing Talent</i> , Carleton University, Ottawa, March 26
2018	Teaching and Learning Outcomes Forum. <i>Graduate Learning Outcomes: Getting to Acceptance</i> . University of Alberta, Edmonton, March 16
2018	Symposium: What can AI do for population health? (panellist) <i>Building AI Capacity</i> . University of Toronto, Toronto, November 14
2017	Friends of CIHR Policy Roundtable: <i>The Future of Graduate Education in Canada: New Directions</i> , Ottawa, November 1
2017	Global Summit: Graduate Education 2030: Imagining the Future (Council of Graduate Schools) <i>Globalization in Higher Ed: So Much More Than Counting International Students</i> . Anchorage, Alaska, September 10-12
2016	Restructuring the PhD dissertation (Council of Graduate Schools) <i>The Canadian Experience</i> , Washington, DC December 8
2016	Lumina Foundation: PhD Outcomes <i>Outcomes-Based Curricula and Research Training</i> , Washington, DC September 27-28
2016	<i>Graduate Outcomes – a Canadian Perspective</i> , Athabasca University, Athabasca, September 2016
2015	Council of Graduate Schools Annual Meeting, panellist: <i>Implications of Big Data in Graduate Education: A Global Conversation</i> , 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*

	<i>basis for why some children respond better to serial casting than others, Calgary, Alberta August 8-13</i>
1999	<i>14<sup>th</sup> International Symposium of the International Society for Posture and Gait Balance and posture in stroke. Waterloo, Ontario July 15-18</i>
1997	<i>University of South Australia Evidence for altered neural wiring following neurological trauma. Distinguished Visiting Research Fellow February</i>
1992	<i>Annual Spinal Cord Injury Research Symposium Alterations in corticospinal output following spinal cord injury in man. Vancouver, B.C. October</i>

### Externally Awarded Grant, Contracts and Awards

Year	(Ind)ividual or (Gr)oup <sup>1</sup>	Source and Title	Type	Amount
2021	Ind	Mitacs Accelerate	Partnership	\$30,000
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. <i>Ontario consortium for the development of online graduate professional skills modules (MyGradSkills.ca)</i>	Innovation	\$1,200,000
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

<sup>1</sup> 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 <sup>1</sup>	Source and Title	Type	Amount
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
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

Year	(Ind)ividual or (Gr)oup <sup>1</sup>	Source and Title	Type	Amount
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
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

Year	(Ind)ividual or (Gr)oup <sup>1</sup>	Source and Title	Type	Amount
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
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

(<sup>s</sup>=trainee; <sup>c</sup>= senior author/PI &/or supervisor)

Bielska IA<sup>s</sup>, 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* 62:8-13, 2019

Brouwer B<sup>c</sup>, 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<sup>s</sup>, Ivanova TD, Brouwer B<sup>c</sup>, Miller KJ, Bryant D, Garland SJ<sup>c</sup>. 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<sup>c</sup>, Day A, Pelland L, Aiken A, Pickett W, Brouwer B<sup>c</sup> 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<sup>s</sup>, Pollock C, Brouwer B<sup>c</sup>, Garland SJ<sup>c</sup>. 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<sup>s</sup>, Bisson EJ<sup>s</sup>, Brouwer B<sup>c</sup>. 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<sup>s</sup>, Masse-Alarie H, Brouwer B<sup>c</sup>, Schneider C<sup>c</sup>. 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<sup>s</sup>, Li Q, Yang S, Brouwer B<sup>c</sup>. Energy flow analysis of the lower extremity during gait in persons with chronic stroke. *Gait and Posture* 41:580-5, 2015.

Laudanski A<sup>s</sup>, Brouwer B<sup>c</sup>, Li Q<sup>c</sup>. Activity classification in persons with stroke based on frequency features. *J HealthCare Eng.* 37:180-6, 2015.

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

Laudanski A<sup>s</sup>, Brouwer B<sup>c</sup>, Li, Q<sup>c</sup>. 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<sup>s</sup>, Brouwer B<sup>c</sup> and Li Q<sup>c</sup> Concurrent validation of Xsens MVN measurement of lower limb joint angular kinematics. *Physiological Measurement* 34(8):N63-9, 2013.

Coriolano, K<sup>s</sup>., 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<sup>s</sup>, Brouwer B<sup>c</sup> 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<sup>s</sup>, Zhang T, Novak AC<sup>s</sup>;; Brouwer B<sup>c</sup>, Li Q<sup>c</sup>. 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<sup>s</sup>, Brouwer B<sup>c</sup> 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<sup>s</sup>, 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<sup>s</sup>, Kurtzer I<sup>s</sup>, Nashed J<sup>s</sup>, Omrani M<sup>s</sup>, Brouwer B, Scott S. Primary motor cortex underlies multi-joint integration for fast feedback control. *Nature* 478: 387-90, 2011

Novak AC<sup>s</sup>, Li Q, Yang S<sup>s</sup>, Brouwer B.<sup>c</sup> 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<sup>s</sup>, Novak AC<sup>s</sup>, 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<sup>s</sup>, Brouwer B<sup>c</sup>. 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<sup>s</sup>, Brouwer B<sup>c</sup>. 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<sup>s</sup>, Reid S<sup>s</sup>, Costigan PA, Brouwer B<sup>c</sup> The biomechanical demands of stair negotiation in older adults (review article). *Lower Extremity review* 2:48-51, 2010.

Hovington C<sup>s</sup>, Brouwer B<sup>c</sup> 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<sup>c</sup>, Parvataneni K<sup>s</sup>, 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<sup>s</sup>, Olney SJ, Bagg S, Brouwer B<sup>c</sup> 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<sup>s</sup>, Ploeg L, Olney SJ, Brouwer B<sup>c</sup>. 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<sup>c</sup> Short term natural recovery of ankle sprains following discharge from emergency care. JOSPT 38:566-71, 2008.

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

Parvataneni K<sup>s</sup>, 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<sup>c</sup>, Faris M. Are deficiencies in manual tracking associated with upper extremity cumulative trauma disorders? J Occup Rehabil 17:63-72, 2007

Brouwer B<sup>c</sup>, Schryburt-Brown K<sup>s</sup> 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, Parvataneni K. A randomized controlled trial of supervised versus unsupervised exercise programs for ambulatory stroke survivors. Stroke 37: 476 – 481, 2006.

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