# JANICE JENNIFER ENG, BSc (PT/OT), PhD CURRICULUM VITAE 2023

## 1. CONTACTS

Janice Eng, University Killam Professor & Canada Research Chair, Department of Physical Therapy, University

of British Columbia Phone: (604) 714-4117 E-mail: janice.eng@ubc.ca

Co-Director, Centre for Aging SMART at Vancouver Coastal Health

Web-pages: <a href="https://neurorehab.med.ubc.ca">https://neurorehab.med.ubc.ca</a> <a href="https://fameexercise.com">https://fameexercise.com</a> <a href="https://www.scireproject.com">www.scireproject.com</a>

https://agingsmart.ca www.rehabresearchprogram.com

## 2. EMPLOYMENT AND APPOINTMENTS

| Title  | Dates     |
|--|-----------|
| Co-Director, Centre of Aging SMART at Vancouver Coastal Health 50-faculty, 120           | 2022-     |
| trainee research centre (SMART = Solutions to improve Mobility, Activity, Rehabilitation |           |
| and Technology)  |           |
| University Killam Professor  | 2021-     |
| Associate Dean, UBC Faculty of Graduate and Postdoctoral Studies                         | 2015-2018 |
| Acting Head, UBC Department of Physical Therapy, Faculty of Medicine                     | 2014      |
| Director, Rehabilitation Research Program, Vancouver Coastal Health Research Institute   | 2008-2022 |
| 11-faculty, 50 trainee research centre   |           |
| UBC Health Research Advisor, Office of the VP Research & International                   | 2008-2014 |
| University Delegate for the Canadian Institutes of Health Research                       | 2008-2014 |
| Professor, UBC Dept of Physical Therapy, Faculty of Medicine, University of BC           | 2006-     |
| Associate Professor, UBC School of Rehabilitation Sciences                               | 2002-2006 |
| Associate Director, International Collaboration on Repair Discoveries                    | 2002-2005 |
| Assistant Professor, UBC School of Rehabilitation Sciences, Faculty of Medicine          | 1997-2002 |
| Lecturer, University of Toronto  | 1989-1990 |
| Physical Therapist, Hospital for Sick Childrens, Toronto                                 | 1986-1990 |
| Physical Therapist, Physiotherapy Associates, Toronto                                    | 1985-1989 |
| Registered physical therapist  | 1985-     |

### 3. TRAINING

| University              | Degree    | Subject Area                    | Dates     |
|-------------------------|-----------|---------------------------------|-----------|
| University of BC        | BSc Rehab | Physical & Occupational Therapy | 1981-1985 |
| University of Toronto   | MSc       | Biomedical Engineering          | 1987-1989 |
| University of Waterloo  | PhD       | Kinesiology                     | 1990-1994 |
| Simon Fraser University | Post-doc  | Neurophysiology                 | 1994-1996 |

# 4. AWARDS

| Name of Award                                    | Award Organization                    | Year |
|--|---------------------------------------|------|
| Honorary Doctorate                               | McMaster University                   | 2023 |
| Hnatyshyn Lecture (Named for the 24th Governor   | Heart and Stroke Foundation of Canada | 2022 |
| General of Canada, this lectureship recognizes a |                                       |      |
| healthcare professional who has made a           |                                       |      |
| significant and positive impact in the field of  |                                       |      |
| stroke and brain health)                         |                                       |      |

| Tier 1 Canada Research Chair in Neurological      | Government of Canada                        | 2022-   |
|---|---|---------|
| Rehabilitation (renewed)                          |   | 2029    |
| Killam University Professor (highest honour       | University of British Columbia              | 2021    |
| conferred on a UBC faculty)                       |   |         |
| Jules M. Rothstein Golden Pen Award for           | American Physical Therapy Association       | 2021    |
| Scientific Writing                                |   |         |
| Honorary Doctorate in Rehabilitation Sciences     | Laval University                            | 2020    |
| Distinguished Lecturer in Rehabilitation Sciences | Edmonton, Alberta                           | 2019    |
| Research  |   |         |
| Greene Lecturer in Physical Therapy               | Springfield College, USA                    | 2017    |
| Tier 1 Canada Research Chair in Neurological      | Government of Canada                        | 2016-22 |
| Rehabilitation                                    |   |         |
| Distinguished Medical Lecturer                    | Faculty of Medicine                         | 2016    |
| UBC Excellence in Research Lecturer               | Vancouver Institute                         | 2015    |
| Distinguished Achievement Award for Overall       | Faculty of Medicine                         | 2012    |
| Excellence  |   |         |
| Excellence in Mentoring Early Career Faculty      | Faculty of Medicine                         | 2010    |
| Inducted Fellow                                   | Canadian Academy of Health Sciences         | 2009    |
| Jonas Salk Award (Lifetime Achievement in         | March of Dimes                              | 2009    |
| reducing physical disability)                     |   |         |
| Woman of Distinction (Lifetime Achievement)       | YWCA  | 2010    |
| Distinguished Accomplishment                      | Faculty of Medicine, University of BC       | 2007    |
| Senior Scholar Award                              | Michael Smith Foundation for Health         | 2008-13 |
| Provincial Career Scientist Award                 | Research                                    |         |
| Killam Research Prize                             | Killam Trust                                | 2006    |
| Health Research Foundation Research Award         | Canadian Institutes of Health Research: For | 2004    |
|   | top standing in the New Investigator        |         |
|   | Competition – rank of 2/90                  |         |
| Scholar Award                                     | Michael Smith Foundation for Health         | 2003-08 |
| Provincial Career Scientist Award                 | Research                                    |         |
| New Investigator Award                            | Canadian Institutes of Health Research      | 2003-08 |
|   | National Career Scientist Award             |         |
| Outstanding Young Alumnus                         | University of BC                            | 2002    |
| Recognition of Research                           | Physiotherapy Assoc BC                      | 2002    |
| Scholar Award                                     | BC Health Research Foundation               | 1998-02 |
| Provincial Career Scientist Award                 |   |         |

## 5. PEER-REVIEWED GRANTS

Lifetime operating grant total over \$95 million and lifetime \$35 million in infrastructure grants (Canadian Foundation of Innovation and matching funds). Continuous funding from Medical Research Council of Canada/Canadian Institutes of Health Research (CIHR) from 1999. Select grant examples follow as PI: SMART Labs (\$5.1 million, 2023, Canadian Foundation of Innovation and BC Knowledge Development Fund); Virtual Seated Exercise Program for Stroke (\$615,825, 2022-2026, CIHR); Foundation Grant (\$2.5 million, 2015-2022, CIHR); i-GRASP for upper limb treatment (\$403,446, 2020-2023, Natural Sciences and Engineering Council/CIHR); Robotic Exoskeletons for Walking Recovery (\$220,000, 2016-2018, Heart and Stroke Foundation of Canada). Some select examples of co-PI or co-I: Accelerating Clinical Trials – Canada (co-PI, \$38 million, 2023-2026, CIHR); STROKECOG Platform: Innovative Clinical Trials Training Initiative (co-I, \$

\$2.9 million, 2023-2026, CIHR); Stroke Recovery Clinical Trials Platform (co-PI, \$1.5 million, 2016-19); Strategic Training Program in Rehabilitation and Quality of Life (co-PI, \$2.1 million, 2004-2010, CIHR).

#### 6. RESEARCH HIGHLIGHTS

My research program aims to enhance the recovery from neurological conditions, particularly from stroke and spinal cord injury. My research span from clinical trials to implementation science. I have been a recipient of provincial or national career scientist awards from the start of my appointment. I have published over 300 peer-reviewed journal articles. I am listed in the top 1% of the most cited scientists in the world across all fields based on the 100,000 Citation Database (Ioannidis et al. PLoS Biol 2020.18(10)). My work has an H-index of 68 in Web of Science (15,849 citations) and 103 in Google Scholar (81,980 citations).

Complete List of Published Work: <a href="https://www.ncbi.nlm.nih.gov/pubmed/?term=Eng+JJ">https://www.ncbi.nlm.nih.gov/pubmed/?term=Eng+JJ</a>
In the below, I highlight representative papers for each area and an \* indicates that the publication was led by one of my trainees.

## a) Implementation of upper extremity stroke programs world-wide

My team developed GRASP (Graded Repetitive Arm Supplementary Program) which is a novel treatment delivery model comprising a self-managed homework exercise program which provided an effective and inexpensive method for improving arm recovery after stroke. This multi-site RCT was published in the high impact journal Stroke (impact 7.0) in 2009. I also developed GRASP tools to increase the uptake of the intervention (https://neurorehab.med.ubc.ca/grasp/). This website hosts the manual and resources free for download and tracks the sites and clinicians who implement the program. GRASP is now utilized in 8700 sites over 58 countries (and is now standard of care in BC). The use of an inpatient supplementary arm exercise program was added to the 2010 Canadian Stroke Clinical Practice Guidelines care based on my multi-site trial and the World Health Organizations Recommended Treatments for Stroke Rehabilitation. A published 2019 national survey (Stockley et al. 2019) found that 35% of UK stroke therapists now use GRASP with their patients. I also helped to move GRASP into local community centres which provides an inexpensive pathway for patients to improve their upper extremity function. During the pandemic, I worked with the March of Dimes Canada to develop a virtual GRASP program, then published its effectiveness and helped to roll this program out across Canada so people with stroke could receive services to improve their arm and hand when many in-person programs had shut down. The March of Dimes continues to operate this program to provide a safe and an inexpensive pathway for patients to improve their upper extremity function after stroke. GRASP is used extensively by other groups as a means of intensive exercise while being coupled with modalities like brain stimulation. We have recently developed sensors to monitor activities during upper limb practice and this led to the trainees spinning off a company that now commercializes sensors for rehabilitation (TENZR Health) and has over 20 employees.

- Harris JE\*, Eng JJ, Miller WC, Dawson AS. A self-administered graded repetitive arm supplementary program (GRASP) improves arm function during inpatient stroke rehabilitation: A multi-site randomized controlled trial. Stroke. 2009;40:2123-2128.
- Connell LA\*, McMahon NE\*, Harris JE\*, Watkins CL, Eng JJ. A formative evaluation of the implementation of an upper limb stroke rehabilitation intervention in clinical practice: a qualitative interview study. Implementation Science. 2014;9:90 (12 pages).
- Simpson LA\*, Eng JJ, Chan M. H-GRASP: the feasibility of an upper limb home exercise program monitored by phone for individuals post stroke. Disabil Rehabil. 2017;39:874-882.
- Sadarangani GP, Jiang X, Simpson LA\*, Eng JJ, Menon C. Force myography for monitoring grasping in individuals with stroke with mild to moderate upper-extremity impairments: a preliminary investigation in a controlled environment. Front Bioeng Biotechnol. 2017 Jul 27;5:42. (11 pages)
- Simpson LA\*, Mow A\*, Menon C, Eng JJ. Validity and reliability of a new wearable device to capture dose of upper limb activity after stroke. Stroke. 2019;50:3643-3646.

- Yang CL\*, Waterson S, Eng JJ. Implementation and evaluation of the virtual Graded Repetitive Arm Supplementary Program (GRASP) for individuals with stroke during the COVID-19 pandemic and beyond. Phys Ther. 2021 Mar 4:pzab083. (9 pages)
- Simpson LA\*, Barclay R, Bayley MT, Dukelow SP, MacIntosh BJ, MacKay-Lyons M, Menon C, Mortenson WB, Peng TH, Pollock CL, Pooyania S, Teasell R, Yang CL, Yao J, Eng JJ. Virtual Arm Boot Camp (V-ABC): study protocol for a mixed-methods study to increase upper limb recovery after stroke with an intensive program coupled with a grasp count device. Trials. 2022 Feb 8;23(1):129. (12 pages)

## b) Implementation of lower extremity stroke programs in British Columbia and beyond

My team developed the Fitness and Mobility Exercise (FAME) Program (<u>fameexercise.com</u>) for stroke, which is a group community-based program. We showed in a series of randomized controlled trials (including a 11-site, 186 patient trial) that FAME improved cardiovascular fitness, bone density, postural reflexes, walking, balance, and reduced falls over active controls (e.g., weight-bearing exercises, tai chi). We published the <u>first study</u> with a primary outcome of cognition to demonstrate that exercise (using FAME) can improve cognition after stroke in JAMA Open (2022). Over 500 sites over 21 countries have reported implementing FAME with a variety of populations, including stroke, Parkinson's disease, and frail older adults. The actual use is likely larger given the free access to the manuals. We have worked with partners to implement FAME in all five BC health authorities in 12 community sites that now operate and sustain the program. FAME is accredited through the BC Parks and Recreation Association with an instructor certification program. FAME is implemented in several international sites, including Tasmania in Australia.

My team developed a high intensity inpatient protocol (DOSE Trial - Determining Optimal postStroke Exercise) that was a 6-site RCT over 3 provinces which demonstrated that high walking repetition and aerobic intensity progressed by wearable sensors to monitor heart rate and walking steps in the first months after stroke improved walking outcomes 12 months later. This <u>study</u> was published in Stroke. We are currently using this protocol (now called the Walk N Watch protocol) in a 12-site, 300 sample <u>implementation RCT</u>. I have undertaken numerous others studies to improve lower limb function after stroke, including functional electrical stimulation, robotic exoskeletons and pharmacologicals. I am a co-PI of an ongoing 8-site Health Canada regulated drug trial to determine the combined effects of intensive exercise and fluoxetine on motor recovery (funded by Brain Canada).

- Marigold DS\*, Eng JJ, Dawson AS, Inglis JT, Harris JE\*, Gylfadóttir S\*. Exercise leads to faster postural reflexes, improved balance and mobility, and reduced falls in older persons with chronic stroke. J Am Geriatri Soc. 2005;53:416-423.
- Pang MY\*, Eng JJ, Dawson AS, McKay HA, Harris JE\*. A community-based fitness and mobility exercise program for older adults with chronic stroke: a randomized, controlled trial. J Am Geriatr Soc. 2005;53:1667-74.
- Rand D,\* Eng JJ, Liu-Ambrose T, Tawashy AE\*. Feasibility of a 6-month exercise and recreation program to improve executive functioning and memory in individuals with chronic stroke. Neurorehabil Neural Repair. 2010;24:722-9.
- Bird ML\*, Mortenson WB, Eng JJ. Evaluation and facilitation of intervention fidelity in community exercise programs through an adaptation of the TIDier framework. BMC Health Serv Res.2020;17:31
- Klassen TD\*, Dukelow SP, Bayley MT, Benavente O, Hill MD, Krassioukov A, Liu-Ambrose T, Pooyania S, Poulin MJ, Yao J, Eng JJ. Higher doses improve walking recovery during stroke inpatient rehabilitation. Stroke 2020;51:2639-2648.
- Louie DR\*, Mortenson WB, Durocher M, Schneeberg A, Teasell R, Yao J, Eng JJ. Efficacy of an exoskeleton-based physical therapy program for non-ambulatory patients during subacute stroke rehabilitation: a randomized controlled trial. J Neuroeng Rehabil. 2021;18(1):149.
- Lui M\*, McKellar K, Cooper S, Eng JJ, Bird ML\*. Evaluating the impact of a training program to support transitioning from the hospital to the community for people after stroke: a community case study. BMC Health Serv Res. 2022;22:30

Liu-Ambrose T, Falck RS, Dao E, Best JR, Davis JC, Bennett K, Hall PA, Hsiung GR, Middleton LE, Goldsmith CH, Graf P, Eng JJ. Effect of exercise training or complex mental and social activities on cognitive function in adults with chronic stroke: A randomized clinical trial. JAMA Netw Open. 2022 Oct 3;5(10):e2236510 (12 pages)

# c) Development of International Rehabilitation Clinical Practice Guidelines

I have been a core member and author of international teams for stroke practice guidelines sponsored by the American Heart Association and American Stroke Association. I led the development of consensus-based core recommendations on Knowledge Implementation sponsored by the International Stroke Recovery and Rehabilitation Roundtable. This information provides credible guidance to clinicians from leading clinician-scientists. My own research studies are cited in a number of international stroke guidelines including the Canadian (4 of my studies cited), Australian (5 cited), American (18 cited) and UK Stroke Guidelines (5 cited), demonstrating the high quality of my trials which provide evidence for changing practice. I have been a core member of the team developing the Paralyzed Veterans of America Guidelines which are one of the most respected and cited guidelines in the field of spinal cord injury. I am a co-author of the PVA Bowel Management and Bone Health Guidelines (2020). I was also a member of the World Health Organization Stroke Rehabilitation Committee which is developing a core set of rehabilitation interventions.

- Billinger SA, Arena R, Bernhardt J, Eng JJ, Franklin BA, Johnson CM, MacKay-Lyons M, Macko RF, Mead GE, Roth EJ, Shaughnessy M, Tang A. Physical activity and exercise recommendations for stroke survivors: a statement for healthcare professionals from the American Heart Association/American Stroke Association. Stroke. 2014;45:2532-53.
- Winstein CJ, Stein J, Arena R, Bates B, Cherney LR, Cramer SC, Deruyter F, Eng JJ, Fisher B, Harvey RL, Lang CE, MacKay-Lyons M, Ottenbacher KJ, Pugh S, Reeves MJ, Richards LG, Stiers W, Zorowitz RD. Guidelines for Adult Stroke Rehabilitation and Recovery: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. Stroke. 2016;47:e98-e169.
- Forman DE, Arena R, Boxer R, Dolansky MA, Eng JJ, Fleg JL, Haykowsky M, Jahangir A, Kaminsky LA, Kitzman DW, Lewis EF, Myers J, Reeves GR, Shen WK. Prioritizing Functional Capacity as a Principal End Point for Therapies Oriented to Older Adults With Cardiovascular Disease: A Scientific Statement for Healthcare Professionals From the American Heart Association. Circulation. 2017;135(16):e894-e918.
- Walker MF, Hoffmann TC, Brady MC, Dean CM, Eng JJ, Farrin AJ, Felix C, Forster A, Langhorne P, Lynch EA, Radford KA, Sunnerhagen KS, Watkins CL. Improving the development, monitoring and reporting of stroke rehabilitation research: Consensus-based core recommendations from the Stroke Recovery and Rehabilitation Roundtable. Int J Stroke. 2017;12:472-479.
- Eng JJ, Bird ML, Godecke E, Hoffmann TC, Laurin C, Olaoye OA, Solomon J, Teasell R, Watkins CL, Walker MF. Moving stroke rehabilitation research evidence into clinical practice: Consensus-based core recommendations from the Stroke Recovery and Rehabilitation Roundtable. Int J Stroke. 2019;14:766-77.
- MacKay-Lyons M, Billinger SA, Eng JJ, Dromerick A, Giacomantonio N, Hafer-Macko C, Macko R, Nguyen E, Prior P, Suskin N, Tang A, Thornton M, Unsworth K. Aerobic Exercise Recommendations to Optimize Best Practices in Care After Stroke: AEROBICS 2019 Update. Phys Ther. 2020;100:149-156

### d) Leader of the Spinal Cord Injury Rehabilitation Evidence Project

Since 2005, I am leading an international team of over 70 faculty across 6 countries for the Spinal Cord Injury Research Evidence (SCIRE), a knowledge translation platform of evidence and outcome measures. SCIRE (<a href="https://scireproject.com">https://scireproject.com</a>) has received more than 1/4 million download requests annually. In addition, over 70 peer-reviewed journal articles have been published from the project so far. A published evaluation of SCIRE showed that this web-based knowledge resource is a relatively inexpensive method to increase access to evidence-based information, increase knowledge of the evidence, inform changes to the health providers' practice, and influence their clinical decision making (<a href="English et al. J Med Internet Res 2014">English et al. J Med Internet Res 2014</a>). Given SCIRE's credibility, a formal partnership was established with the Paralyzed Veterans of America (PVA) and the SCIRE

team provides the search and extraction for the PVA Consortium for Spinal Cord Medicine clinical practice guidelines.

### 7. NATIONAL AND INTERNATIONAL SCHOLARLY LEADERSHIP

In 2018/19, I led a 10-person working group, informed by a 20-person international advisory, to develop international recommendations for moving stroke rehabilitation research evidence to practice with the following outputs:

- Eng JJ, Bird ML, Godecke E, Hoffmann TC, Laurin C, Olaoye OA, Solomon J, Teasell R, Watkins CL, Walker MF. Moving stroke rehabilitation research evidence into clinical practice: Consensus-based core recommendations from the Stroke Recovery and Rehabilitation Roundtable. Int J Stroke. 2019;14:766-77.25.
- Bernhardt J, Urimubenshi G, Gandhi DBC, Eng JJ. Stroke rehabilitation in low-income and middle-income countries: a call to action. Lancet. 2020 Oct 31;396(10260):1452-1462.
- Gururaj S, Bird ML, Borschmann K, Eng JJ, Watkins CL, Walker MF, Solomon JM; SRRR2 KT working group. Evidence-based stroke rehabilitation: do priorities for practice change and feasibility of implementation vary across high income, upper and lower-middle income countries? Disabil Rehabil. 2021 Apr 13:1-8.

### 8. INCREASING RESEARCH CAPACITY

I am committed to increasing research capacity in rehabilitation in Canada and beyond. I have formally mentored over 20 junior faculty within my university (and many more informally) and was the recipient of the University Award for Excellence in Mentoring (2010) for contributions in mentoring early career faculty. I was the co-PI of a \$2.1 million Strategic Training Program Grant (Training Program in Quality of Life in Rehabilitation) awarded from CIHR (2004-2010). Our program provided training to over 200 doctoral students, which increased the capacity of the Canadian health research community. As Director of the Rehabilitation Research Program (2008-2022), and now co-Director of the Centre for Aging SMART at Vancouver Coastal Health (2022-), I oversee a vibrant training program for over 120 trainees.

I have supervised 11 MSc, 8 PhD and 13 post-doc students (total 32) as primary supervisor and 20 have attained university academic positions (e.g., A Tang is Assistant Dean, McMaster University; D Rand is Head, Occupational Therapy, University of Tel Aviv, Israel; B Sakakibara is Assistant Professor and Michael Smith Scholar, University of British Columbia; M Ashe is Canada Research Chair, University of British Columbia; M Pang is Professor, Hong Kong Polytechnic University). I have sat on an additional 35 thesis committees.

## 9. HIGHLIGHTS OF SERVICE ACTIVITY

I have held several key administrative roles including Associate Dean of UBC Graduate and Postdoctoral Studies; Health Research Advisor of the UBC VP Research; and co-Director, Centre for Aging SMART at Vancouver Coastal Health (a UBC Senate-approved Centre). Select examples follow:

## **University Service**

- Director, Rehabilitation Research Program (2008-2022). I created, developed and directed the Rehabilitation Research Program in the Vancouver Coastal Health Research Institute, growing it from just myself to now 11 interdisciplinary faculty, 17 staff and over 50 trainees while ensuring resources for this expanded program.
- Co-Director, Centre for Aging SMART at Vancouver Coastal Health (2022-). This Centre is a Senate-approved Centre of the University of BC and one of 10 official centres of Vancouver Coastal Health Research Institute. In 2022, we merged the Rehabilitation Research Program with the Centre for Hip Health and Mobility to become the Centre for Aging SMART (Solutions to improve Mobility, Activity, Rehabilitation and Technology) at Vancouver Coastal Health. The Centre has over 50 faculty and 120 trainees.
- Chair, Promotion and Tenure Committee, Dept. of Physical Therapy (2016-2021)
- Member, Research Committee, Dept of Physical Therapy (2018-current)

- Member, Canada Research Chair University Internal Review Committee (2018-current)
- Associate Dean, Faculty of Graduate and Postdoctoral Studies (2014-17) overseeing a portfolio of awards and funding of \$34 million annually. In this position, I implemented a <u>mandatory minimum funding policy for doctoral studies</u> across the UBC campus which required extensive consultation across faculties, and formal approval by Senate. This was the first such university-wide policy to be implemented west of Ontario and has served to improve the quality of the student experience and provide a financially supportive environment.
- Health Research Advisor to the VP Research (2008-14) where I developed and implemented strategic plans to maximize health research productivity across the campus
- Associate Director, International Collaboration on Repair Discoveries (ICORD) (2002-2006)

### **Professional Service**

- Local chair for the 2024 World Congress of Neurorehabilitation
- Health Standard Organization Spinal Cord Injury Technical Committee (mandate to develop standards for spinal cord injury practice in Canada), 2021-
- Co-Director, <u>CanStroke Recovery Platform</u> which is a 10-site national clinical trials platform to test new Canadian approaches in stroke recovery (2019-). We have brought together researchers in stroke rehabilitation in Canada to undertake high impact clinical trials to advance innovations in stroke recovery. Mentoring the next generation of scientists is a major component of this Platform.
- Board of Directors of the Heart and Stroke Foundation Canadian Partnership for Stroke Recovery (2016-)
- Board of Directors, Heart and Stroke Foundation Canadian Partnership for Stroke Recovery (2016-current)
- Rick Hansen Institute Care Committee (2015-2020)
- Board of Directors, Canadian Academy of Health Sciences (2011-2015)
- Member, CIHR External Working Group on Training (2015-2018)
- CIHR University Delegate for UBC (2008-2014) (facilitates interactions and communications with CIHR)
- University Delegates Advisory Committee (2011-2014) (provides support to the University Delegates Network and acts as a consultation group for CIHR on policies, programs and peer review)
- Editorial Board, Physical Therapy Journal (2006-2016)
- CIHR Peer-review Committee, Movement and Exercise (2008-2018)

## 10. INVITED NATIONAL AND INTERNATIONAL PRESENTATIONS

Over 130 lifetime invited national/international presentations. Select presentations from the past 5 years are provided:

Invited speaker "Implementation of evidence-based stroke rehabilitation research: Real-world success with complex protocols". International Active Aging Conference, Center for Multidisciplinary Research in Aging (CMRA) at Ben Gurion University of the Negev in Israel. Feb 23, 2023.

Invited Plenary Speaker. "Implementation of evidence-based stroke rehabilitation research: Real-world success with complex protocols." World Congress of Neurorehabilitation. Vienna. Dec 15, 2022.

Hnatyshyn Lecturer. "Moving stroke research to the community to benefit people with lived experience." Charlottetown, PEI. Oct 22, 2022.

Invited speaker. UK Stroke Forum. What is the optimal dose of exercise for walking recovery after stroke? Dec 2, 2021.

Invited speaker "Practical virtual rehabilitation and self-management techniques during COVID-19 for people living with stroke and VCI". Heart and Stroke Foundation of Canada (virtual). April 7, 2020 (720 attendees)

Invited speaker "Canadian Clinical Trial Infrastructure for Stroke Rehabilitation." International Stroke Recovery and Rehabilitation Alliance Showcase. Melbourne, Australia. Oct 30, 2019

Opening keynote speaker "Interventions to improve mobility after stroke: A journey from mechanisms and clinical trials to implementation science". International Society of Posture and Gait Congress. Edinburgh, UK, July 3, 2019.

- Invited keynote speaker "Interventions to improve rehabilitation intensity after stroke: From clinical trials to implementation science". Canadian Activity Based Therapy Summit. March 1, 2019. Toronto.
- Invited keynote speaker "Practical methods to delivering higher intensity exercise to improve lower extremity function after stroke". Brazil Neurophysiotherapy Congress. Oct 10, 2018
- Opening keynote speaker "Making room in rehabilitation for secondary stroke prevention strategies". Australasia Stroke Congress. Sydney, Aug 8, 2018
- Invited speaker "Practical lessons learned from the DOSE trial". World Congress of Neurorehabilitation, Mumbai, India, Feb 7, 2018.
- Invited speaker "An evidence-based Go-to Resource for SCI directed by people living with SCI". International Spinal Cord Society Annual Meeting. Dublin, Ireland, Oct 25, 2017.
- Invited Greene Lecturer in Physical Therapy "Opportunities to advance research in stroke rehabilitation "Springfield College, Massachusetts, April 6, 2017.
- Invited speaker "Wearable sensors to challenge arm and hand use after stroke". International Neurophysiotherapy Conference. London, UK, Mar 17, 2016