

# CURRICULUM VITAE

**Teresa Jacobson Kimberley, PhD, PT**  
United States of America

## PROFESSIONAL ADDRESS

School of Health and Rehabilitation Sciences  
MGH Institute of Health Professions  
Charlestown Navy Yard  
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## IDENTIFYING INFORMATION

### Education

Degree	Institution	Date Degree Granted
B.S.	University of Minnesota, Minneapolis, MN Physical Therapy	1994
Ph.D.	University of Minnesota, Minneapolis, MN Rehabilitation Science, Minor: Neuroscience	2002

### Certifications, Licenses

Minnesota Board of Physical Therapy, License # 5459	1994-present
Massachusetts Board of Physical Therapy, pending	

### Academic Appointments

Professor, MGH Institute of Health Professions School of Health and Rehabilitation Science, Department of Physical Therapy, Boston, MA	2017-present
Distinguished Visiting Scholar, University of Technology Sydney Division of Physiotherapy, Graduate School of Health Sydney, NSW, Australia	2016
University of Minnesota, Twin Cities Campus, Department of Rehabilitation Medicine, Divisions of Physical Therapy and Rehabilitation Science	2003-2017
Associate Professor with tenure	2012-2017
Graduate Faculty, Senior member	2003-present

Assistant Professor	2003–2012
University of Minnesota, Twin Cities Campus, Department of Biomedical Engineering, Graduate Faculty	2014-present
University of Minnesota, Twin Cities Campus, Department of Neuroscience, Graduate Faculty	2014-present
University of Minnesota, Twin Cities Campus, Department of Kinesiology, Graduate Faculty	2007-present

### **Clinical/Hospital Appointments**

Director of Rehabilitation, St. Peter Community Hospital, St. Peter, MN	1997-1998
Staff Physical Therapist, Institute for Athletic Medicine, St. Paul, MN	1995-1996
Staff Physical Therapist, Courage Center, Minneapolis, MN	1994-1995

### **Consulting Positions**

Stroke Rehabilitation Advisory Board, Acorda Pharmaceuticals	2015
Stroke Rehabilitation Advisory Consultant, Microtransponder Inc.	2011-2016
Stroke Functional Electrical Stimulation Consultant, Otto Bock Health Care	2009
Dystonia Medical Research Foundation and National Institutes of Health, Advisory board member on research priorities for Focal Dystonia Rehabilitation Research	2007
Élan Pharmaceutical Company, Spasticity Advisory Board	2001

### **Membership and Offices in Professional Organizations**

Institute for Engineering in Medicine, UMN, Member	2014-present
National Spasmodic Dysphonia Association, Member	2012-present
Dystonia Coalition, Member	2009-present
Society for Neuroscience, Member	2003-present
American Physical Therapy Association Member, Section Member: neurology, education, and research	1993-present
Director of Research, Neurology Section	2009-2013
American Congress of Rehabilitation Medicine, Member	2011-2013
American Society of Neurorehabilitation, Member	2015-present

### **HONORS AND AWARDS FOR RESEARCH WORK, TEACHING, PUBLIC ENGAGEMENT, AND SERVICE**

Distinguished Visiting Professor, University of Technology, Sydney	2016
Training in Grantsmanship for Rehabilitation Research (TIGRR) fellowship	2015
Outstanding Leadership and Service to the Neurology Section,	2013

American Physical Therapy Association

University of Minnesota representative to Mid-Career Women in Medicine Faculty Professional Development Seminar. Austin, TX	2013
University of Minnesota, Graduate and Professional Student Assembly (GAPSA) <i>Outstanding Academic Adviser</i>	2012
Golden Synapse Award, Journal of Neurologic Physical Therapy. <i>For the most outstanding article published in JNPT.</i>	2008
Post-Professional Student Research Award, Neurology Section, American Physical Therapy Association	2003
Minnesota Medical Foundation Thorne Award for Outstanding Achievement in the Area of Stroke	2001
Foundation for Physical Therapy, Promotion of Doctoral Studies I Fellowship	2000
Named Scientist-in-training member of Stroke Council of American Heart Association, Stroke Association Division	2000
American Heart Association, Stroke Association Division, Young Investigator Award	2000
Outstanding Contributor and Employee of the Year, Institute for Athletic Medicine	1996

**Awards garnered by trainees under my advisement**

Doctoral Dissertation Fellowship, University of Minnesota Rebekah Summers, DPT (advisee)	2017-2018
Rudolph A Ptak Fellowship, University of Minnesota Physical Therapy Rebekah Summers, BS (advisee)	2016
Postdoctoral Fellowship, MnDRIVE Cecilia Prudente, PhD, PT (mentee)	2016-2017
Clinical Research for Rare Diseases, National Institutes of Health, travel award Cecilia Prudente, PhD, PT (mentee)	2016
Dystonia Coalition travel award, Rebekah Summers (advisee)	2016
Best poster, 2nd Annual MN Neuromodulation Symposium for poster "Effect of rTMS and Sensorimotor Retraining in Focal Dystonia". Rebekah Schmidt, BS (advisee)	2014
Doctoral Summer Research Fellowship	07/01/2013-08/30/2013

Clinical and Translational Science Institute, University of Minnesota Assessment of Strength, Fatigue and Recovery evoked by peripheral magnetic stimulation and transcranial magnetic stimulation Joyce Trost, PT (co-advisee)	
Meritorious Poster, American Speech and Hearing Association Sharyl Samargia, SLP, PhD (advisee)	2013
American Association of University Women, Dissertation writing award Sharyl Samargia, SLP, PhD candidate (advisee)	2013
Sigma Xi Society award for undergraduate research Rebekah Schmidt, BS (undergraduate mentee)	2012
Neuromuscular Plasticity Scholar, University of Florida Michael Borich, DPT, PhD candidate (advisee)	2010
Dissertation Fellowship Award, University of MN for Michael Borich, DPT, PhD candidate (advisee)	2009-10
Minnesota Speech Language and Hearing Association Dissertation Award for Sharyl Samargia, SLP, CCCP, PhD student (advisee)	2009
University of MN Block Grant Fellowship Michael Borich, DPT, PhD student (advisee)	2008

## RESEARCH AND SCHOLARSHIP

### Grants and Contracts

#### Current

1. Role: Principal Investigator  
1R01DC015216-01A1  
National Institutes of Health (NIH): National Institute for Deafness and Communication Disorders (NIDCD)  
*Multimodal Assessment of Neurophysiology in Focal Dystonia*  
01/01/2017 - 12/31/2021

2. Role: co-Investigator (Van de Winckle)  
Study MT-St-02 Stroke  
Microtransponder Inc.  
*A Randomized Pilot Study Assessing Vagus Nerve Stimulation (VNS) During Rehabilitation for Improved Upper Limb Motor Function after Stroke (MicroTransponder's Vivistim System)*  
8/19/2017 – 12/31/2018 (projected)

#### Completed

3. Role: Principal Investigator  
Study MT-St-02 Stroke  
Microtransponder Inc.

*A Randomized Pilot Study Assessing Vagus Nerve Stimulation (VNS) During Rehabilitation for Improved Upper Limb Motor Function after Stroke (MicroTransponder's Vivistim System)*  
04/15/2015 – 8/19/2017

4. Role: Principal Investigator  
Research Grant  
National Spasmodic Dysphonia Association (NSDA)  
*Pathophysiology in Spasmodic Dysphonia: a combined fMRI and TMS study*  
03/01/2015-08/01/2017

5. Role: Co-investigator  
Magistro Family Research Grant (Gillick)  
Foundation for Physical Therapy  
*Novel neuromodulatory interventions in pediatric hemiparesis*  
01/01/15-12/31/16

6. Role: Principal Investigator  
R21DC012344-01  
National Institutes of Health (NIH): National Institute for Deafness and Communication Disorders (NIDCD)  
*The Pathophysiology of Spasmodic Dysphonia: a TMS study*  
04/01/2012-12/31/2015

7. Role: Co-Investigator  
Research Grant (Lowe)  
Bob Allison Ataxia Research Center (BAARC)  
*Inexcitability of the muscle plasmalemma and strength loss in Duchenne Muscular Dystrophy*  
05/22/2015-06/22/2016

8. Role: Principal Investigator  
NS067501 Dystonia Coalition Career Development Award  
Office of Rare Diseases Clinical Research Network, Funding provided by National Institute of Neurological Disorders & Stroke (NINDS) of the National Institutes of Health (NIH)  
*Determining the Efficacy of Synergistic Intervention with rTMS and Rehabilitation in Focal Hand Dystonia*  
06/01/2011-12/31/2013

9. Role: Co-Investigator  
1D31HP70119-01 (Kane)  
Department of Health and Human Services Administration (HRSA)  
*Minnesota Area Geriatric Education Center (MAGEC)*  
01/01/2008-2010

10. Role: Co-Investigator  
1D31HP70119-01 (Kane)  
Department of Health and Human Services Administration (HRSA)  
*Minnesota Area Geriatric Education Center (MAGEC)*  
01/01/2000-12/31/2005

11. Role: Principal Investigator  
Investigator Initiated Research Grant

Dystonia Medical Research Foundation  
*rTMS in Focal Hand Dystonia*  
04/15/2008-04/14/2010

12. Role: Co-Investigator  
Infrastructure investment Initiative (I3) (Engel, He, Lim, Olman, Sullivan, Thomas)  
Office Vice President for Research, University of Minnesota  
*New infrastructure for campus-wide access to 3T MRI*  
01/01/2011-12/31/2016

13. Role: Co-Investigator  
Pilot project grant (Lim)  
Institute for Engineering in Medicine, University of Minnesota  
*Enhancing non-invasive neuromodulation in neurological and psychiatric disorders using a paired paradigm*  
01/09/2014-07/01/2015

14. Role: Co-Investigator  
Community Collaboration Grant (Carey and Oddsson)  
Clinical Translational Science Institute, University of MN  
*Real vs. Sham rTMS Combined with Conventional Therapy in Acute Stroke*  
01/01/2013-03/01/2015

15. Role: Principal Investigator  
4090-9224-12  
Minnesota Medical Foundation, Faculty Development Grant  
*Optimizing Neuromodulation to Increase Inhibition*  
01/01/2012-12/31/2013

16. Role: Principal Investigator  
Research Grant  
Minnesota Medical Foundation  
*Cortical mapping of sensory and motor areas in healthy individuals and individuals with focal hand dystonia*  
04/15/2008-04/14/2010

17. Role: Principal Investigator  
GIA  
University of Minnesota Graduate School  
*Reproducibility of fMRI in the Healthy and Stroke Population*  
01/01/2005-06/30/2007

## **Publications**

### **Peer-Reviewed Publications**

1. Pirio Richardson S, Altenmüller E, Alter K, Alterman RL, Chen R, Frucht S, Furuya S, Jankovic J, Jinnah HA, **Kimberley TJ**, Lungu C, Perlmutter JS, Prudente CN and Hallett M. Research Priorities in Limb and Task-specific Dystonias. *Front.Neurol.* 2017;8;170. doi: 10.3389/fneur.2017.00170

2. **Kimberley TJ**, Body LA, Novak I, Fowler E, Larsen D. Stepping up to rethink the future of rehabilitation: IV Step considerations and inspirations. *Journal of Neurologic Physical Therapy* 2017 Jul;41 Suppl 3 Supplement, IV STEP Special Issue:S63-S72. doi: 10.1097/NPT.000000000000182. PubMed PMID: 28628598.  
  
**Kimberley TJ**, Novak I, Boyd L, Fowler E, Larsen D. Stepping Up to Rethink the Future of Rehabilitation: IV STEP Considerations and Inspirations. *Pediatric Physical Therapy*. 2017 Jul;29 Suppl 3 Supplement, IV Step 2016 Conference Proceedings Supplement:S76-S85. doi: 10.1097/PEP.0000000000000435. PubMed PMID: 28654481.
3. Chen M, Summers RL, Goding GS, Samargia S, Ludlow CL, Prudente CN, **Kimberley TJ**. Evaluation of the Cortical Silent Period of the Laryngeal Motor Cortex in Healthy Individuals. *Frontiers in Neuroscience*. 2017 Mar 7;11:88. doi: 10.3389/fnins.2017.00088. eCollection 2017. PubMed PMID: 28326007
4. Summers RL, Chen M, **Kimberley TJ**. Corticospinal excitability measurements using transcranial magnetic stimulation are valid with intramuscular electromyography. *PLOS One*. 2017;12(2). PMID:28231250, DOI 10.1371/journal.pone.0172152
5. Carey JR, Chappuis DM, Finkelstein MJ, Frost KL, Leuty LK, McNulty AL, Oddsson LIE, Seifert EM, **Kimberley TJ**. Importance and Difficulties of Pursuing rTMS Research in Acute Stroke: A Perspective. *Physical Therapy Journal*, 2017: 97:310–319 DOI: 10.1093/ptj/pzx005
6. Cassidy JM, Chu H, Chen M, **Kimberley TJ**, Carey JR. Interhemispheric inhibition measurement reliability in stroke: a pilot study. *Neuromodulation*, 2016: 19(8):838-846, DOI: 10.1111/ner.12459.
7. Dawson J, Pierce D, Dixit A, **Kimberley TJ**, Tarver RM, Hilmi O, McLean J, Forbes K, Kilgard M, Rennaker R, Cramer S, Walters M, Engineer N. Safety, Feasibility and Efficacy of Vagus Nerve Stimulation Paired with Arm Rehabilitation Following Ischaemic Stroke. *Stroke*, 2016; 47: 143-150 DOI: 10.1161/STROKEAHA.115.010477.
8. Samargia S, Schmidt R, **Kimberley TJ**. Cortical silent period reveals differences between muscle tension dysphonia and adductor spasmodic dysphonia. *Neurorehabilitation and Neural Repair*, 30(3):221-232, 2016;1-12. DOI: 10.1177/1545968315591705
9. Chen M, Deng H, Schmidt RL, **Kimberley TJ**. Low frequency repetitive transcranial magnetic stimulation targeted to PMC followed by M1 modulates excitability differently from PMC or M1 stimulation alone. *Neuromodulation*, 2015 Aug 26. DOI:10.1111/ner.12337.
10. **Kimberley TJ**, Schmidt RL, Chen M, Dykstra D, Buetefisch CM. Mixed effectiveness of rTMS and retraining in the treatment of focal hand dystonia. *Frontiers Neuroscience*, 2015;9:385. DOI: 10.3389/fnhum.2015.00385.
11. Cassidy JM, Chu H, Anderson DC, Krach LE, Snow L, **Kimberley TJ**, Carey JR. A Comparison of Primed Low-Frequency Repetitive Transcranial Magnetic Stimulation Treatments in Chronic Stroke. *Brain Stimulation*, 2015. DOI: 10.1016/j.brs.2015.06.007.
12. **Kimberley TJ**, Borich MR, Schmidt RS, Carey JR, Gillick BT. Focal hand dystonia: individualized intervention with repeated application of repetitive transcranial magnetic

- stimulation. *Archives of Physical Medicine and Rehabilitation*, 2015;96(4);S122-S128. DOI:10.1016/j.apmr.2014.07.426.
13. Gillick BT, Krach LE, Feyma T, Rich TL, Moberg K, Menk J, Cassidy J, **Kimberley T**, Carey JR. Safety of primed repetitive transcranial magnetic stimulation and modified constraint-induced movement therapy in a randomized controlled trial in pediatric hemiparesis. *Archives of physical medicine and rehabilitation*. 2015; S104-S113. DOI:10.1016/j.apmr.2014.09.012.
  14. Bradnam L, Frasca J, **Kimberley TJ**. Direct current stimulation of primary motor cortex and cerebellum and botulinum toxin A injections in a person with cervical dystonia. *Brain Stimulation*, 2014; 7(6);909-911. DOI: 10.1016/j.brs.2014.09.008.
  15. Samargia S, Schmidt R, **Kimberley TJ**. Shortened cortical silent period in adductor spasmodic dysphonia: Evidence for widespread cortical excitability. *Neuroscience Letters*. 2014; 560C: 12-15. DOI: 10.1016/j.neulet.2013.12.007.
  16. Deng H, **Kimberley TJ**, Durfee WK, Dressler BL, Steil C, Carey JR. Combined Statistical Analysis Method Assessing Fast vs. Slow Movement Training in a Single-Case with Cerebellar Stroke. *Physical Therapy*. 2013; 93(5): 649-660. DOI: 10.2522.ptj.20120121.
  17. **Kimberley TJ**, Borich MR, Arora S, Siebner HR. Multiple sessions of low-frequency repetitive transcranial magnetic stimulation in focal hand dystonia: clinical and physiological effects. *Restorative Neurology and Neuroscience*. 2013; 31 (5): 533-542. DOI:10.3233/RNN-120259.
  18. **Kimberley TJ** & Pickett KA. Differential activation in the primary motor cortex during individual digit movement in focal hand dystonia vs. healthy. *Restorative Neurology and Neuroscience*. 2012; 30: 247-254. DOI:10.3233/RNN-2012-110183.
  19. Borich MR & **Kimberley TJ**. Using actigraphy and transcranial magnetic stimulation to assess the relationship between sleep and visuomotor skill learning. *Restorative Neurology and Neuroscience*. 2012; 30: 81-90. DOI: 10.3233/RNN-2011-0622.
  20. Olman CA, Pickett KA, Schallmo MP, **Kimberley TJ**. Selective BOLD responses to individual finger movements measured with fMRI at 3T. *Human Brain Mapping*. 2012; 33 (7): 1594-1606. DOI: 10.1002/hbm.21310
  21. Borich MR & **Kimberley TJ**. Both sleep and wakefulness support consolidation of continuous, goal-directed, visuomotor skill. *Experimental Brain Research*. 2011; 214 (4): 619-630. DOI:10.1007/s00221-011-2863-0.
  22. Borich MR, Furlong M, Holsman D, **Kimberley TJ**. Goal-directed visuomotor skill learning: off-line enhancement and the importance of the primary motor cortex. *Restorative Neurology and Neuroscience*. 2011; 29 (2): 105-113. DOI:10.3233/RNN-2011-0584.
  23. **Kimberley TJ** & DiFabio RP. Visualizing the effects of rTMS in a patient sample: small N vs. group level analysis. *PLOS ONE*. 2010; 5 (12): e15155. DOI 10.1371/journal.pone.0015155.



24. **Kimberley TJ**, Samargia SA, Moore LG, Shakya JK, Lang CE. Comparison of amounts of practice during rehabilitation for traumatic brain injury and stroke. *Journal of Rehabilitation Research and Development*. 2010; 47 (9): 851-862. DOI:10.1682/JRRD.2010.02.0019.
25. Borich MR, Arora S, **Kimberley TJ**. Lasting effects of repeated rTMS application in focal hand dystonia. *Restorative Neurology and Neuroscience*. 2009; 27: 55-65. DOI: 10.3233/RNN-2009-0461.
26. **Kimberley TJ**, Borich MR, Prochaska KD, Perkins AE, Poepping J. Establishing the definition and reliability of cortical silent period calculation in subjects with focal hand dystonia and healthy subjects. *Neuroscience Letters*. 2009; 464: 84-87. DOI:10.1016/j.neulet.2009.08.029.
27. Lang CE, MacDonald RJ, Reisman DS, Boyd L, **Kimberley TJ**, Schindler-Ivens SM, Hornby TG, Ross SA, Scheets PL. Observation of amounts of movement practice provided during stroke rehabilitation. *Archives of Physical Medicine and Rehabilitation*. 2009; 90 (10): 1692-1698. DOI:10.1016/j.apmr.2009.04.005.
28. Samargia SA & **Kimberley TJ**. Motor and cognitive outcomes in children after functional hemispherectomy. *Journal of Pediatric Physical Therapy*. 2009; 21 (4): 356-361. DOI: 10.1097/PEP.0b013e3181bf710d.
29. Carey JR, Evans CD, Anderson DC, Bhatt E, Nagpal A, **Kimberley TJ**, Pascual-Leone A. Safety of 6-Hz primed low frequency rTMS in stroke. *Neurorehabilitation and Neural Repair*. 2008; 22: 185-192. DOI: 10.1177/1545968307305458.
30. **Kimberley TJ**, Birkholz DD, Hancock RA, VonBank SM, Werth TN. Reliability of fMRI during a continuous motor task: assessment of analysis techniques. *Journal of Neuroimaging*. 2008; 18: 18-27. DOI: 10.1111/j.1552-6569.2007.00163.x.
31. **Kimberley TJ**, Kandekar G, Borich MR. fMRI reliability in subjects with stroke. *Experimental Brain Research*. 2008; 186 (1): 183-190. DOI: 10.1111/j.1552-6569.2007.00163.x.
32. **Kimberley TJ**, Lewis SM, Strand C, Darst Rice B, Hall S, Slivnik P. Neural substrate of cognitive load changes during a motor task in subjects with stroke. *Journal of Neurologic Rehabilitation*. 2008; 32: 110-117. DOI: 10.1097/NPT.0b013e318183d716.
33. **Kimberley TJ**, Lewis, SL. Understanding neuroimaging. *Physical Therapy*. 2007; 87: 670-683. DOI: 10.2522/ptj.20060149.
34. **Kimberley TJ**, Skraba L, Spencer J, VanGorp E, Walker S. Neural substrates for motor-imagery in severe hemiparesis. *Neurorehabilitation and Neural Repair*. 2006; 20 (2): 268-277. DOI: 10.1177/1545968306286958.
35. Carey JR, Anderson K, **Kimberley TJ**, Lewis SM, Auerbach EJ, Ugurbil K. fMRI Analysis of Ankle Movement Tracking Training in Single Subject with Stroke. *Experimental Brain Res*. 2004; 154: 281-290. DOI: 10.1007/s00221-003-1662-7

36. **Kimberley TJ**, Carey JR, Lewis SM, Dorsey L, Lojovich J, Auerbach EW, Ugurbil K. Electrical stimulation driving functional improvements and cortical changes in subjects with stroke. *Experimental Brain Res.* 2004; 154: 450-460. DOI: 10.1007/s00221-003-1695-y
37. **Kimberley TJ** & Carey JR. Neuromuscular Electrical Stimulation in Stroke Rehabilitation. *Minnesota Medicine.* 2002; 85 (4): 34-37. PMID: 11975052
38. Carey JR, **Kimberley TJ**, Lewis SM, Dorsey L, Rundquist P, Ugurbil K. Analysis of fMRI and Finger Tracking Training in Subjects with Chronic Stroke. *Brain.* 2002; 125: 773-788. doi.org/10.1093/brain/awf091

### **Chapters in Books**

1. **Kimberley TJ**, Pickenbrock H, Zetterberg L (scheduled 2017). Treatment strategies for the rehabilitation of dystonia. In: Dressler, Altenmüller and Krauss (eds). *Treatment of Dystonia.* Cambridge University Press, Cambridge UK. Chapter 57
2. **Kimberley TJ**, Skraba L, Spencer J, VanGorp E, Walker S (2005). Neural substrates for motor-imagery in severe hemiparesis. In: Gantchev N (ed) *From basic motor control to functional recovery IV.* Marin Drinov, Sophia, pp 230-237.

### **Editorial Activities**

1. **Kimberley TA**, Schubert MC. **Complex Cases: A Force for Change.** *J Neurol Phys Ther.* 2017 Jul;41(3):143-144. doi: 10.1097/NPT.000000000000192. PubMed PMID: 28628547.

### **Presentations**

#### **Invited Oral Presentations at International Professional Meetings, Conferences, etc.**

1. **Kimberley TJ.** Physical and Occupational therapy in focal dystonia. Summer School of Rehabilitation in Movement Disorders. Fresco Institute for Italy/ New York University. Vicenza, Italy, 06/29/2017-07/01-2017
2. **Kimberley TJ**, Body LA, Novak I, Fowler E, Larsen D. Step IV: Prevention, Prediction, Plasticity, and Participation, Summary Panelary speaker. Columbus Ohio, July 2016.
3. **Kimberley TJ**, Bradnam L. Can non-invasive brain stimulation improve dystonia? Western Sydney University. Penrith, NSW Australia. March 21, 2016.
4. **Kimberley TJ.** Clinical implications of non-invasive brain stimulation. Australia Physiotherapy Association. Sydney, NSW Australia. March 15. 2016.
5. **Kimberley TJ.** Non-invasive neuromodulation: implications for rehabilitation. University of Technology Sydney Graduate Schools of Health Distinguished Lecture. Sydney, Australia. June 1, 2016.

6. **Kimberley TJ.** 2<sup>nd</sup> Loss of inhibition as a New Concept for Rehabilitation. International Conference of Rehabilitation of Dystonia. Panelary speaker. Hannover, Germany May 4, 2016.
7. **Kimberley TJ.** The influence of physical therapy on brain activity. First International Conference on Rehabilitation of Dystonia: keynote presenter and panel member. Hannover, Germany. May 2013.

**Invited Oral Presentations at National Professional Meetings, Conferences, etc.**

1. Kimberley TJ. Beyond the snapshot: spasmodic dysphonia and your brain. National Spasmodic Dysphonia Association. Nashville, TN. May 6, 2017.
2. Prudente C, **Kimberley TJ.** Research priorities in limb and task-specific dystonia. 7<sup>th</sup> Dystonia Coalition meeting. Rockville, MD, March 4, 2016.
3. Chen M, **Kimberley TJ.** Pathophysiology of Spasmodic Dysphonia: a combined TMS and fMRI study. National Spasmodic Dysphonia Association Research Workshop. Des Plaines, IL. April 29, 2016.
4. **Kimberley TJ.** Neuroanatomy for Physical Therapy. American Physical Therapy Association, Minneapolis, MN, September 2015.
5. **Kimberley TJ.** Physical Therapy for Spasmodic Torticollis. National Spasmodic Torticollis Association, New Orleans, LA, October 2012.
6. **Kimberley TJ.** Motor and non-motor benefits of rehabilitation in spasmodic torticollis. National Spasmodic Torticollis Association, New Orleans, LA, October 2012.
7. **Kimberley TJ.** Determining the efficacy of synergistic intervention in focal hand dystonia with rTMS and sensorimotor retraining. Fourth annual Dystonia Coalition Conference-National Institutes of Health, Rare Diseases Network, Chicago, IL, September 2012.
8. **Kimberley TJ.** The Role of Physical Therapy in Cervical Dystonia: limits of knowledge and recommendations for future. Second annual Dystonia Coalition conference: Conference on Research Priorities for Cervical Dystonia-National Institutes of Health, Rare Diseases Network, Atlanta, GA, October 2010.
9. **Kimberley TJ.** Current understanding of rehabilitation in focal dystonia. Second Dystonia Medical Research Foundation-National Institutes of Health, NINDS Workshop on Dystonia: Recent Advances and Future Directions, Bethesda, MD, June 2006.
10. **Kimberley TJ.** Neuromotor characterization in focal hand dystonia. Dystonia Medial Research Foundation, Atlanta, Georgia, September 2005.
11. Butler AJ, **Kimberley TJ,** Sullivan KA. Neuroimaging and Stroke Recovery. Combined Sections, American Physical Therapy Association, Neurology Section, New Orleans, LA, February 2005.

**Invited Oral Presentations at Local and Regional Professional Meetings, Conferences, etc.**

1. **Kimberley TJ**, Carey JC, Recovering from stroke, treatment guidelines and emerging therapies. Neurology update for Primary Care conference. Minneapolis, MN, March, 2017
2. Schmidt R, Chen M, Prudente C, **Kimberley TJ**. Neuromodulation and Dystonia: addressing abnormal neurologic findings. Center for Clinical Movement Science Research Day. Minneapolis, MN May 2015
3. Schmidt, R, **Kimberley TJ**. rTMS and retraining improves Self-perceived function in Focal Hand Dystonia. MN APTA Spring Conference. St. Paul, MN April 2015
4. **Kimberley, TJ**. Non-invasive neuromodulation for rehabilitation. University of MN, Department of Neuroscience, April 2014.
5. **Kimberley TJ**. Application of neuroimaging and neuromodulation in a focal dystonia model: implications for rehabilitation. University of MN, Rehabilitation Science Seminar, October 2013.
6. **Kimberley TJ**. How the emerging research in focal dystonias inform rehabilitation. Allina Health Systems, St. Paul, MN, November 2012.
7. **Kimberley TJ**, Samargia S. Too much or not enough: the science supporting dose in rehabilitation. Allina Health Systems, Minneapolis, MN, October 2010.
8. **Kimberley TJ**, Nuckley D. The use of student response systems as a tool to increase teaching effectiveness. University of MN, May 2010.
9. **Kimberley TJ**, Borich MR, Pickett KA, Rust S. Neuroanatomy review with clinical correlation. University of MN, December 2009.
10. **Kimberley TJ**, Pickett KA. 7<sup>th</sup> Bi-annual Minnesota Workshop on High Field Imaging, Spectroscopy, and MR Imaging of Brain Function. University of MN, October 2009.
11. **Kimberley TJ**, Pickett KA. 6<sup>th</sup> Bi-annual Minnesota Workshop on High Field Imaging, Spectroscopy, and MR Imaging of Brain Function. University of MN, October 2007.
12. Carey JR, **Kimberley TJ**, Lojovich J. Updates in Neuroplasticity: how current research applies to Neurorehabilitation. 7<sup>th</sup> Annual Jack Allison Memorial Lecture, November 2006.
13. **Kimberley TJ**. Neuroanatomy and Neurological Rehabilitation Continuing Education Series. University of MN, October-November, 2005.
14. **Kimberley TJ**. Botulinum Toxin as a Tool to Facilitate Cortical Reorganization in Subject with Stroke. University of MN, Neurology Grand Rounds, October 2004.
15. **Kimberley TJ**. Facilitating Brain Reorganization After Injury: Evidence from Rehabilitation Interventions. 5<sup>th</sup> Annual Brain Injury Conference, Health East, Minneapolis, MN, October 2004.

16. **Kimberley TJ.** Non-surgical Trends in Spasticity Management. University of MN, Community Continuing Education, August 2004.
17. **Kimberley TJ.** Cortical Plasticity, Future treatment implications. University of MN, Neurology Grand Rounds, October 2003.

#### **Peer-Reviewed International Oral (Platform) Presentations at Professional Meeting**

1. **Kimberley TJ,** Francisco, G, Yozbatiran N, Cramer S, Wolf S, Engineer N, Pierce, D, Tarver WB, Smith, P, Wigginton S, Prudente C, Dawson J. A Randomized Double-Blind Pilot Study Assessing Vagus Nerve Stimulation (VNS) During Rehabilitation for Improved Upper Limb Motor Function after Stroke (MT-St-02) – Long-Term follow-up. International Neuromodulation Society. Edinburgh, Scotland. May 30, 2017
2. Dawson J, Francisco G, Yozbatiran N, Cramer S, Wolf S, Engineer N, Pierce, D, Tarver WB, Smith P, Wigginton J, **Kimberley TJ.** A Randomized Blinded Study of Vagus Nerve Stimulation (VNS) During Rehabilitation for Improved Upper Limb Motor Function after Stroke (MT-St-02) – Follow-up through 90-days. International Neuromodulation Society. Edinburgh, Scotland. May 30, 2017
3. Dawson J, Francisco G, Yozbatiran N, Cramer S, Wolf S, Engineer, N, Pierce D, Tarver BW, Smith P, Wigginton J, **Kimberley TJ.** A Randomized Double-Blind Pilot Study Assessing Vagus Nerve Stimulation (VNS) During Rehabilitation for Improved Upper Limb Motor Function After Stroke. International Stroke Conference, Houston, Texas. *\*Accepted for late breaking abstract*
4. Dawson JD, Engineer N, Pierce D, **Kimberley TJ,** Tarver B, Dixit A, Walters M, Cramer S. Vagus Nerve Stimulation Paired with Rehabilitation Improves Upper Limb Recovery after Chronic Ischemic Stroke. 2192375. International Stroke Conference, Nashville, TN, February 2014. *\*Accepted for late breaking abstract*
5. **Kimberley TJ,** Zetterberg L. Current and emerging trends in physical therapy in dystonia. Second International Congress on Treatment of Dystonia, Hannover, Germany, May 2013.
6. October 2012: Boyd LA, Borich MR, **Kimberley TJ.** How can brain imaging and stimulation inform rehabilitation? American Congress of Rehabilitation Medicine/ American Society of Neurorehabilitation International meeting, Vancouver, BC, Canada, October 2012: *\*selected as keynote address*
7. **Kimberley TJ,** Skraba L, Spencer J, VanGorp E, Walker S. Neural substrates for motor imagery: a study with fMRI. IV Motor Control Conference MCC2005, Sophia, Bulgaria, September 2005.
8. **Kimberley TJ,** Carey JR. Electrical stimulation on hand function recovery and cortical reorganization in subjects with stroke. 14<sup>th</sup> International World Conference in Physical Therapy, Barcelona, Spain, June 2003.

#### **Peer-Reviewed National Oral (Platform) Presentations of Educational Sessions**

1. Carmel J, Perez M, Harel N, **Kimberley TJ**. Paired stimulation to strengthen spared synapses after neural injury. American Society for Neurorehabilitation. Baltimore, Maryland. November 10, 2017 (planned)
2. **Kimberley TJ**, Prudente C, MacKinnon C, Gillick BT. Neuromodulation: Harnessing Neuroplasticity with Brain Stimulation and Rehabilitation. Combined Sections Meeting of the APTA, Neurology Section, San Antonio, Texas, February 2016
3. Borich MR, Furlong M, Holsman D, **Kimberley TJ**. Does Repetitive Transcranial Magnetic Stimulation (rTMS)-Induced Inhibition of the Primary Motor Cortex Following Visuospatial motor Skill Training Affect performance? Combined Sections Meeting of the APTA, Neurology Section, San Diego, CA, February 2010.
4. Strand C, **Kimberley TJ**. Neural substrate of cognitive load changes in subjects with stroke. Minnesota APTA Conference, Minneapolis, MN, April 2008.
5. **Kimberley TJ**, Khandekar, G. Influence of motor imagery ability on SMA and pSMA cortical activation. Combined Sections Meeting of the APTA, Neurology Section, San Diego, CA, February 2006.
6. **Kimberley TJ**, Carey JR. EMG-triggered electrical stimulation on hand function recovery and cortical reorganization in subjects with stroke. Combined Sections Meeting APTA, Boston, MA, February 2003.
7. **Kimberley TJ**, Carey JR. EMG-triggered electrical stimulation on hand function recovery and cortical reorganization in subjects with stroke. Combined Sections Meeting of the APTA, Neurology Section, Boston, MA, February 2002.
8. Lenz AR, Schindler JD, Zaruba BJ, Carey JR, **Kimberley TA**. Effects of caffeine on information processing and cortical activity in elderly women. Combined Sections Meeting of the APTA, Neurology Section, San Antonio, TX, February 2001.
9. Carey JR, **Kimberley TJ**, Lewis SM. Change in fMRI and hand function in a patient with stroke following finger tracking. National Physical Therapy Conference, Anaheim, CA, June 2001.
10. **Kimberley TJ**, Carey JR, Lewis SM. fMRI Examination of cortical reorganization and hand function recovery following tracking training in subjects with stroke. Combined Sections Meeting of the APTA, Neurology Section, San Antonio, TX. February 2001.

### **Poster Abstract Presentations at Professional Meetings**

#### **International Poster Presentations**

1. **Kimberley TJ**, Smith P, Yozbatiran N, Dawson J, Prudente CN, Engineer N. Vagus nerve stimulation paired with rehabilitation improves upper limb recovery after chronic ischemic stroke. IV STEP, Columbus, Ohio, July 2016.

2. Prudente CN, Zhihao L, Schmidt R, **Kimberley TJ**, Sathian K, Jinnah HA. Functional imaging of isometric head rotation in cervical dystonia. IV STEP, Columbus, Ohio, July 2016.
3. Frost KL, Chen M, Cassidy J, Snow L, Van de Winckel A, **Kimberley T**, Carey JR. Investigating different interstimulus intervals of paired associative stimulation in people with stroke. IV Step conference, Columbus, Ohio, July 2016.
4. **Kimberley TJ**, Chen M, Schmidt R. Pathophysiology of spasmodic dysphonia: a combined TMS and fMRI study. First International Brain Stimulation Conference, Singapore, Singapore, February 2015
5. **Kimberley TJ**, Borich MB. Repeated application of rTMS in focal hand dystonia: a multiple-baseline, single-subject design. The 2nd North American Meeting on Transcranial Magnetic Stimulation and NeuroImaging in Cognition and Behavior, Quebec City, Quebec, Canada, June 2011.
6. **Kimberley TJ**, Borich MB, Siebner HR. Effect of repeated sessions of rTMS given during an active motor state in patients with focal hand dystonia. Movement Disorders Society 13th International Congress, Paris, France, June 2009.
7. Pickett K, **Kimberley TJ**, Konczak J. Kinaesthetic deficits in basal ganglia disorders: Psychophysical sensitivity thresholds and brain imaging data. Congress of the International Society of Electrophysiology and Kinesiology, Niagara Falls, Ontario, Canada, June 2008.

#### **National Poster Presentations**

1. Prudente CN, Chen M, Summers RL, Goding G, Samargia S, Ludlow C, **Kimberley TJ**. Cortical excitability is not different between healthy controls and people with laryngeal dystonia. Conference on Rare Disease, National Institutes of Health, Washington D.C., November 2016
2. Summers RL, Chen M, Prudente CN, **Kimberley TJ**. Cerebellar tDCS Interferes with Cortical Excitability During a Motor Training Task. University of Minnesota Neuromodulation Symposium, April 14-15, 2016, Minneapolis, MN
3. Chen M, Summers RLS, **Kimberley TJ**. Laryngeal motor cortex excitability assessment using transcranial magnetic stimulation. Minnesota Neuromodulation Symposium. Minneapolis, MN. April 2016.
4. Chen M, **Kimberley TJ**. Can Short-Interval intracortical inhibition be modulated by low frequency repetitive transcranial magnetic stimulation. Minnesota Neuromodulation Symposium. Minneapolis, MN. April 2016.
5. Chen M, Prudente CN, Summers RLS, **Kimberley TJ**. Functional Connectivity between TMS Hotspot and Task fMRI Activations in People with Spasmodic Dysphonia. The University of Minnesota Institute for Engineering in Medicine retreat conference. Minneapolis, MN. September 2016.

6. Frost K, Chen M, Cassidy J, Van de Winckel A, Snow L, **Kimberley TJ**, Carey JR. Effect of different interstimulus intervals of paired associative stimulation in people with chronic stroke. Minnesota Neuromodulation Symposium. Minneapolis, MN. April 2015.
7. **Kimberley TJ**, Chen M, Schmidt RL, Lim KO, Camchong J. TMS of laryngeal muscles to investigate cortical excitability in spasmodic dysphonia. Minnesota Neuromodulation Symposium. Minneapolis, MN. April 2015.
8. Schmidt RL, Chen M, **Kimberley TJ**. Inherent Variability of TMS Outcomes in a Single Subject. Minnesota Neuromodulation Symposium. Minneapolis, MN. April 2015.
9. **Kimberley TJ**, Chen M, Schmidt R. Pathophysiology of spasmodic dysphonia: a combined TMS and fMRI study. Society for Neuroscience, 47.17 Washington DC, November 2014.
10. Chen M, Schmidt R, **Kimberley TJ**. Low frequency rTMS applied to PMC followed by M1 revealed greater cortical inhibition compared to PMC or M1 alone. Society for Neuroscience, Washington DC, November 2014.
11. Schmidt R, Chen M, Buetefisch C, **Kimberley TJ**. Effect of rTMS and sensorimotor retraining in focal dystonia. Minnesota Neuromodulation Symposium, Minneapolis, MN, April 2014\* *selected as best student poster.*
12. Chen M, Schmidt RL, Camchong J, Mueller BA, Lim KO, **Kimberley TJ**. Pathophysiology of Spasmodic Dysphonia: a combined TMS and fMRI study. Minnesota Neuromodulation Symposium, Minneapolis, MN, April 2014.
13. Chen M, Schmidt RL, Vik K, **Kimberley TJ**. Spasmodic dysphonia brain excitability assessment using thyroarytenoid muscle EMG responses to TMS over laryngeal motor cortex. Minnesota Neuromodulation Symposium, Minneapolis, MN, April 2014.
14. Golob L, Chen M, Schmidt RL, **Kimberley TJ**. Novel method to induce inhibition in primary motor cortex by repetitive transcranial magnetic stimulation. Minnesota Neuromodulation Symposium, Minneapolis, MN, April 2014.
15. Chen M, **Kimberley TJ**. Minimizing the TMS artifact from the MEP signal. Minnesota Neuromodulation Symposium, Minneapolis, MN, April 2013.
16. Moore M, **Kimberley TJ**. Comparing cortical excitability in focal dystonia using transcranial magnetic stimulation. Combined Sections of the APTA, San Diego, CA, January 2013.
17. Deng J, Buetefisch CM, **Kimberley TJ**. The effect of rTMS and sensorimotor retraining in focal hand dystonia. Society for Neuroscience, San Diego, CA, October 2012.
18. Chapman E, Glesne J, Pickett KA, **Kimberley TJ**. fMRI During Individuated Finger Movements. Combined Sections Meeting of the APTA, Neurology Section, San Diego, CA, February 2010.
19. Haberman E, Smith J, Borich MR, **Kimberley TJ**. Effect of Repeated Sessions of rTMS given during an active motor state in patients with focal hand dystonia. Combined Sections Meeting of the APTA, Neurology Section, San Diego, CA, February 2010.



20. Borich MR, **Kimberley TJ**. Does rTMS-induced inhibition of the primary motor cortex following visuospatial motor skill training affect retention? Society for Neuroscience, Chicago, IL, 2009.
21. **Kimberley TJ**, Borich MR, Siebner HR. Effect of repeated sessions of rTMS given during an active motor state in patients with focal hand dystonia. Society for Neuroscience, Chicago, IL, 2009.
22. Samargia S, Borich MR, **Kimberley TJ**. Effect of rTMS in oromandibular dystonia. Society for Neuroscience, Chicago, IL, 2009.
23. Moore L, Shakya JK, Samargia S, Lang CE, **Kimberley TJ**. Comparison of the type and amount of activity in clinical practice between patients with CVA and TBI. Combined Sections Meeting of the APTA, Neurology Section, Las Vegas, NV, February 2009.
24. **Kimberley TJ**, Darst Rice B, Hall S, Slivnik, P, Strand C. Brain activation and motor performance during changes in cognitive load in subjects with stroke. Combined Sections Meeting of the APTA, Neurology Section, Nashville, TN, February 2008.
25. **Kimberley TJ**, Khandekar G. Reliability of fMRI in subjects with Stroke. Combined Sections Meeting of the APTA, Neurology Section, Nashville, TN, February 2008.
26. **Kimberley TJ**, Darst Rice B, Hall S, Slivnik, P, Strand C. Brain activation and motor performance during changes in cognitive load in subjects with stroke. Society for Neuroscience, San Diego, CA, October 2007.
27. Borich MB, **Kimberley TJ**. The effect of 5-day rTMS treatment for focal hand dystonia. Society for Neuroscience, San Diego, CA, October 2007.
28. **Kimberley TJ**, Birkholtz D, VonBank S. Reliability of Functional magnetic resonance imaging during a motor task in healthy subjects. Combined Sections Meeting of the APTA, Neurology Section, Boston, MA, February 2007.
29. **Kimberley TJ**, Simura KJ, Flanders M. Neuromuscular dysfunction in focal hand dystonia. Combined Sections Meeting of the APTA, Neurology Section, San Diego, CA, February 2006.
30. **Kimberley TJ**, Simura KJ, Flanders M. Neuromuscular dysfunction in focal hand dystonia. Society for Neuroscience Meeting, Washington DC, November 2005.
31. **Kimberley TJ**, Skraba L, Spencer J, VanGorp E, Walker S. Neural substrates for motor-imagery in severe hemiparesis. III Step Conference; Linking Movement Science and Intervention, Salt Lake City, UT, July 2005.
32. **Kimberley TJ**, Skraba L, Spencer J, VanGorp E, Walker S. Imagery in severe hemiparesis: A study with functional MRI. Combined Sections Meeting of the APTA, Neurology Section, New Orleans, LA, February 2005.

#### **State Poster Presentations**

1. Chen M, Nelson BG, Mesfin Y, Markovitz CD, Camchong J, Mackinnon C, Carey JR, **Kimberley TJ**, Lim HH, Lim KO. Enhancing noninvasive neuromodulation in neurological and psychiatric disorders using a paired paradigm: progress towards clinical trials. The University of Minnesota Institute for Engineering in Medicine Retreat Conference, Minneapolis, MN, September 2014.
2. Sokolowski S, Wallner K, Weyer L, William T, Wooldridge C, Schmidt R, Chen M, **Kimberley TJ**. Low Frequency rTMS Applied to PMC Followed by M1 Revealed Greater Cortical Inhibition Compared to PMC or M1 Areas Alone. MNPTA Spring Conference, St. Paul, MN, April 2014.
3. Hayes S, Schmidt C, Stephens N, Tonsager K, Viele R, Schmidt R, Chen M, **Kimberley TJ**. Validation of fine-wire EMG for TMS and rTMS cortical modulation. MNPTA Spring Conference, St. Paul, MN, April 2014.
4. Schmidt R, Chen M, Deng H, Buetefisch CM, **Kimberley TJ**. Effect of rTMS and sensorimotor retraining in focal dystonia. Center for Clinical Movement Science Symposium, Minneapolis, MN, April 2013.
5. Moore M, Gress S, Lauer E, Mallas A, Meidl A, Meister N, Monroe D, Morlock C, Schlicht R, **Kimberley TJ**. Comparing cortical excitability in focal dystonias using TMS. APTA Spring Conference, Minneapolis, MN, April 2012.
6. Hayes L, Herron M, Ivanoff G, Kelly S, Borich M, **Kimberley TJ**. Short and long-term effects of repetitive transcranial magnetic stimulation in patients with focal hand dystonia. APTA Spring conference, Minneapolis, MN, April 2011.
7. Haberman EM, Smith JC, Borich MR, **Kimberley TJ**. Effect of repeated sessions of rTMS given during an “active motor state” in patients with focal hand dystonia. Minnesota APTA Spring conference, Minneapolis, MN, April 2009.
8. Holsman D, Furlong M, Borich M, **Kimberley TJ**. Does rTMS-induced inhibition of the primary motor cortex following visuospatial motor skill training affect performance? Center for Clinical Movement Science Research Day Symposium, April 2009.
9. Haberman EM, Smith JC, Borich MR, **Kimberley TJ**. Effects of rTMS on cortical excitability and handwriting measures in patients with focal hand dystonia. Center for Clinical Movement Science Research Day Symposium, April 2009.
10. Moore L, Shakya J, Samargia S, Lang C, **Kimberley TJ**. The type and amount of activities in clinical practice in patients with CVA and TBI. Minnesota APTA Spring Conference, Minneapolis, MN, April 2008.
11. Mundfrom S, Perkins A, Poepping J, Prochaska K, Borich M, **Kimberley TJ**. The effect of 5-day treatment of rTMS in focal hand dystonia. Minnesota APTA Conference, Minneapolis, MN, April 2008.
12. **Kimberley TJ**, Samargia S, Moore, L, Shakya J. Type and amount of activities in clinical practice in patients with CVA and TBI. Minnesota APTA Conference, Minneapolis, MN, April 2008.

13. **Kimberley TJ, Skraba LL, Spencer JA, Van Gorp EA, Walker SR.** Imagery in severe hemiparesis: a study with fMRI. Minnesota APTA Conference, Mankato, MN, October 2003.

### **Other Key Activities and Accomplishments**

**Proposal to the Minnesota Legislature to amend the Minnesota Data Practices Act for a Scholarly Exemption.** Co-led efforts from University Senate committees: Faculty Consultative Committee, Research, Senate Committee on Faculty Affairs, Academic Freedom and Tenure to draft and seek Faculty Senate approval for amendment to exempt in progress scholarly work and confidential information from Minnesota Data Practice Act requests. 2016-2017

**MnDRIVE (Minnesota's Discovery, Research and Innovation Economy) Brain Health group for Non-Invasive Neuromodulation, Executive Committee member.** Worked with other executive committee member (Dr. Bin He and Dr. Kelvin Lim) to develop the interdisciplinary non-invasive brain stimulation lab, including hiring and training staff, purchasing, and developing policy and procedures. I also served as primary liaison to the Clinical and Translational Science Institute (CTSI)

**News story feature:** Fox 9: *A new trial at the UMN is helping stroke victims regain their strength*  
<http://www.fox9.com/news/66740376-story> Dec 30, 2015

WCCO radio, Roshini Rajkumar  
*Do we use all of our brain function?* Aug 3, 2015

### **TEACHING AND CURRICULUM DEVELOPMENT**

#### **University of Minnesota**

#### **Course/Lecture List: 2003-2017**

#### **Doctor of Physical Therapy**

##### **Role: Instructor and Coordinator**

PT 7000: Neurologic Theory and Neuroscience, 2 credits  
PT 8193: Research Seminar, 6 credits  
PT 8132: Research Seminar, 1 credit  
PT 8131: Current Literature Seminar, 2 credits  
PT 6282: Scientific Foundations II: Neuromotor Control, 3 credits  
PMed 6000: Neuroanatomy Module, 3 credits

#### **Doctor of Physical Therapy and Medical School**

##### **Role: Co-Instructor**

NSc 6111: Medical Neuroscience and Neuroanatomy, 5 credits

#### **Rehabilitation Science**

##### **Role: Instructor and Coordinator**

RSc 8282: Problems in Human Movement, 4 credits  
RSc 5294: Rehabilitation Science Independent Study, 1-2 credits  
RSc 8100: Dissemination of Research Discoveries in Rehabilitation Science, 1 credit  
RSc 8185: Problems in Rehabilitation Science, 2 credits

RSc 8100: Rehabilitation Science Independent study, 2 credits

### **Geriatric Physical Therapy Residency**

Director of Research

### **Contributing Instruction and Guest Lectures**

PT 8131: Research Seminar, 1 contact hr

PT 8058: Human Anatomy for Physical Therapy: Human Brain and Central Nervous System introduction, 4 contact hrs

PT 6287: Clinical Neurorehabilitation: neuroanatomy and neuroplasticity for stroke, 2 contact hrs

PT 6293: Essentials of Rehabilitation Research. Lecture topics: Power, Reliability, Minimal clinically important difference, and single subject design, 6 contact hrs

PT 7010: Topics in Geriatric Research, critical appraisal of literature, 2 contact hrs

Occupational Therapy Program, Pathophysiology of Stroke, 2 contact hrs

PT 1001: Introduction to Physical Therapy, 1 contact hr

RSc 8100: PhD Rehabilitation Science Seminar guest lecture, 2 contact hrs

NSCI 4794W: Writing intensive directed research, 15 contact hrs

BME 4710: Directed Research, 10 contact hrs

Kin 3696: Directed Research, 10 contact hrs

PMed 5122: Neurological Rehabilitation, 2 contact hrs

PT 6280: Clinical Assessment; Lab Instructor, 4 contact hrs

PT 6283: Musculoskeletal Rehabilitation I; Lab Instructor, 6 contact hrs

PT 6231: Biomechanics; Lab Instructor, 2 contact hrs

### **Collaborative Efforts and Activities**

Chair for Neuroscience and neurorehabilitation curriculum review for Division of Physical Therapy accreditation, University of Minnesota, 2017

Committee Chair for Neuroscience and Neurorehabilitation Curriculum Review and Development for Program in Physical Therapy, University of Minnesota, Fall 2013-2015

Neuroplasticity Regional Course development team, American Physical Therapy Association Neurologic Section, Spring 2011-2013

### **ADVISING AND MENTORING**

#### **Master's Theses Directed**

Gauri Kandahar, PT, MS, Motor imagery in stroke: a study with fMRI, 09/01/2004 – 06/01/2007

#### **Master's Dissertation Committees**

Wha Yoo, 2007-2010

Ashima Nagpal, 2004-2008

#### **Doctoral Students Advised** (*Academic advising for all or part of graduate student's program*)

Joyceann Trost, PT (co-advisor with Dawn Lowe), 2013-present, Rehabilitation Science, University of Minnesota

Rebekah Schmidt, BS, PhD/DPT program, 2012-present, Rehabilitation Science, University of Minnesota

Sharyl Samargia, SLP, PhD: 09/01/2007 – 08/15/2012, Rehabilitation Science, University of Minnesota

Current position: Professor and Interim Director, Speech and Hearing Science at University of Wisconsin, River Falls. River Falls, WI.

Kristen Picket, MS, PhD, 09/01/2007–07/15/2010 (co-advisee in Kinesiology, Dr. Juergen Konczak). Rehabilitation Science, University of Minnesota

Post-Doctoral fellowship, Washington University, St. Louis. Gammon Earhart, PT, PhD, mentor.

Current position: Assistant Professor Department of Kinesiology, Program in Occupational Therapy, University of WI, Madison. Madison, WI.

Michael Borich, DPT, 09/01/2006 – 12/01/2010, Rehabilitation Science, University of Minnesota

Post-Doctoral Associate in Neurology, University of British Columbia, Vancouver, BC. Lara

Boyd, PhD, PT, mentor. Current position: Assistant Professor Department of Physical Therapy, Emory University, Atlanta, GA.

### **Post-doctoral fellows supervised**

Cecilia Prudente, PT, PhD, University of Minnesota: 2015-2017

Mo Chen, PhD University of Minnesota: 2012 - 2014

Huiqiong Deng, MD, PhD University of Minnesota: 2011-2013

### **PROFESSIONAL SERVICE AND PUBLIC OUTREACH**

#### **Service to The Discipline/Profession/Interdisciplinary Area(s)**

Program committee member American Society for Neuro Rehabilitation (ASNR)	2017-present
Director of Research, Academy of Neurology Board of Directors American Physical Therapy Association (APTA)	2009-2013
Academy of Neurology APTA Strategic Planning Meeting Co-Chair	Spring 2011
Strategic planning co-chair for Research Agenda for Academy of Neurology, APTA	Fall 2010
Neuro Portal Team for PTnow, APTA	2010-2011

### **SCIENTIFIC ACTIVITIES**

#### **Editorships/Journal Reviewer Experience**

Associate Editor, Journal of Neurologic Physical Therapy January 2015 – present  
Guest editor of Special Issue on Rehabilitation for Rare and Complex Diseases (July 2017)

Associate Editor for Restorative Neurology and Neuroscience Journal June 2011-present

Ad hoc Invited Reviewer:

Extramural reviewer for Project Demonstrating Excellence (PDE), Union Institute and University. 2007, 2008, 2009

Manuscript Reviewer (selected):

Archives of Physical Medicine and Rehabilitation, Medical Science Monitor, Brain, Physical Therapy, Neural Rehabilitation and Neural Repair, Journal of Neuroimaging, Neuroimage, Motor Control, Movement Disorders, Journal of Neuroscience, Human Brain Mapping, Journal of Neurophysiology, Frontiers in Neuroscience

**Review panels for external funding agencies, foundations, etc.**

Scientific Review Panel:

Foundation for Physical Therapy Scientific Review Board member 01/01/2014- 12/31/2017

Ad hoc Grant Peer Review Panels:

National Institutes of Health (NIH) Center for Scientific Review 04/14/2017  
Motor Function, Speech and Rehabilitation Study Section (MFSR) member

The Stroke Association (United Kingdom) 04/2017

Canadian Institutes of Health, Collaborative Health Research projects 11/2013

Dystonia Coalition Travel Stipend Award Committee 06/2012, 06/2013

Dystonia Medical Research Foundation grant review panel 02/2013

Department of Defense, Congressionally Directed Medical Research Program Investigator Initiated Research Award (FY12) 11/2012

Department of Defense, Congressionally Directed Medical Research Program Investigator Initiated Research Award (FY12). Investigator Initiated research award, Peer Reviewed Medical Research Program 04/2012

Dystonia Medical Research Foundation grant review panel 02/2011

External Promotion and Tenure Review

Case Western Reserve University 2016

University of British Columbia, Vancouver, BC 2015

Georgia State University 2014

**Organization of conferences, workshops, panels, symposia**

Second International Conference on Treatment of Dystonia. 2016, Hannover Germany

Treatment of Dystonia. Board member May 2015, Hannover Germany

First International Conference on Rehabilitation of Dystonia, Preconference session with  
International Conference on the Treatment of Dystonia, May 2013. Hannover Germany