

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: GRAMPUROHIT, NAMRATA D

eRA COMMONS USER NAME (credential, e.g., agency login): NAMRATAG

POSITION TITLE: Assistant Professor, Thomas Jefferson University

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
LTM Medical College, University of Mumbai, India	B. Sc.	04/2000	Occupational Therapy
Seth GS Medical College, University of Mumbai	M. O. Th	04/2002	Occupational Therapy
University of Washington, Seattle, WA	PhD	06/2016	Rehabilitation Science

A. Personal Statement

I am excited to participate in this mixed-methods study to understand the perceptions of people with neurological injuries towards rehabilitation particularly related to the use of technology. The DTSA funding can help support a critical aspect of research that seeks to better understand the individuals who will potentially benefit from the use of these emerging technologies in rehabilitation.

My role on this study would be to help develop the questions on the survey and focus groups with my background as an occupational therapist for over 15 years. I can also oversee and participate in data collection with experience on other research projects involving adults with neurological conditions such as stroke, cerebral palsy, and spinal cord injury. I can also assist in training of research assistants, graduate assistants, or Occupational therapy residents with my experience in graduate level teaching for the past two years as an Assistant Professor. I can also assist with analysis and interpretation of the data with my clinical experience, doctoral training, and related dissertation work involving focus groups.

I have worked on past projects with Dr. Mulcahey and value the high quality rigorous research that she and her team have done to advance the field of rehabilitation in general and neurological conditions in particular.

Relevant publications are as follows:

- **Grampurohit, N.** (2016) *Preliminary development of the hand and arm function measure in people with neurological conditions*. (Doctoral dissertation) Retrieved by Research works University of Washington. Accession 2016-04-06T16:28:50Z
- **Grampurohit, N.**, Slavin, M., Ni, P., Kozin, S., Jette, A., Mulcahey, MJ. Sensitivity of the Cerebral Palsy Profile of Health and Function: Upper Extremity Domain to Change Following Musculoskeletal Surgery. *Journal of Hand Surgery*. (Accepted)
- Dent, K., **Grampurohit, N.**, Thielen, C., Sadowsky, C., Davidson, L., Taylor, H., Bultman, J., Gaughan, J., Marino, R., & Mulcahey, MJ. (2018). Evaluation of the Capabilities of the Upper Extremities Test (CUE-T) in Children with Tetraplegia. *Topics in Spinal Cord Injury Rehabilitation*. 24(3), 239-251.
- House, G., Burdea, G., **Grampurohit, N.**, Polistico, K., Roll, D., Damiani, F. (2017). Integrative Upper-Limb Rehabilitation with BrightArm Duo™ in the Sub-acute Phase of Recovery Post-stroke. *Journal of Medical Robotics Research*. 2 (2): 1740004 (12 pages)

B. Positions and Honors

Positions and Employment (chronological order)

2002-2004 Lecturer in Occupational Therapy. Dr. DYP Medical College, Kolhapur. India.
2004-2005 School Occupational Therapist. Bethel School District, Graham, WA
2005-2014 Staff Occupational Therapist. Evergreen Hospital and Medical Center, Kirkland, WA
2010-2014 Occupational Therapist. Skilled nursing facility, Career Staff LLC, Lynwood, WA
2012-2014 Teaching assistant, Department of Rehabilitation Medicine, University of Washington, Seattle, WA
2013 Teaching Associate. Division of Occupational Therapy, University of Washington, Seattle, WA
2015-pres Research Occupational Therapist Consultant, Bright Cloud International Corp., Highland Park, NJ
2016-2017 Assistant Professor (Tenure track), University of the Sciences, Philadelphia, PA
2017-pres Assistant Professor (Research track), Thomas Jefferson University, Philadelphia, PA

Honours and Awards (chronological order)

2000 Graduate school top rank, University of Mumbai, India.
2002 Smt. Tara Bastikar Award for top rank, University of Mumbai, India.
2004 National Board Certification in Occupational Therapy
2005 State of Washington Occupational Therapy License
2010 Graduate top scholar, University of Washington, Seattle, WA
2014 State of New Jersey Occupational Therapy License
2016 State of Pennsylvania Occupational Therapy License
2017 Nomination to Bright Idea Award for Innovation in Teaching at University of the Sciences, PA
2018 Most Impactful Rehabilitation Technology Award to Bright Cloud International Corp at Launch Pad Rehabilitation Technology Innovation Competition at 2018 Annual Meeting of the American Congress of Rehabilitation Medicine
2018 National Science Foundation American Women in Science Award for New Jersey Technology Accelerator
2018 Early Career Poster Award Spinal Cord Injury Interdisciplinary Special Interest Group, Annual Conference of the American Congress of Rehabilitation Medicine

C. Contributions to Science

- a. My early interests in innovative solutions to functional impairments prompted the survey and synthesis of current evidence. I systematically reviewed the literature for the efficacy of adhesive taping in people post-stroke as follows:
 - **Grampurohit, N. D.**, Pradhan, S. P., & Kartin, D. (2015) Efficacy of adhesive taping as an adjunct to physical rehabilitation to influence body structure and function in persons with stroke: A Systematic Review. *Topics in Stroke Rehabilitation*. 22(1), 72-82.
- b. I was able to work as a Research Occupational Therapist with a group of engineers to develop technology related to virtual reality in people with stroke and brain injury. This research contributed to the evidence for high intensity game based rehabilitation. Related publications are:
 - House, G., Burdea, G., Polistico, K., Roll, D., Kim, J., **Grampurohit, N.**, Damiani, F., Keeler, S., Hundal, J., & Pollack S. Integrative rehabilitation chronic post-stroke in skilled nursing facilities: the design and evaluation of the BrightArm Duo. *Disability and Rehabilitation-Assistive Technology*. 2015;July 28, 1-12.
 - House G, Burdea G, Polistico K, **Grampurohit N**, Damiani F, Keeler S, Hundal J, & Pollack S. A rehabilitation first – nursing home tournament between teams of chronic post-stroke residents. *Games for Health*. 2016;5(1), 75-83.
 - House G, Burdea G, **Grampurohit N**, Polistico K, Roll D, & Damiani F. Integrative Upper-Limb Rehabilitation with BrightArm Duo in the Early Sub-acute Phase of Recovery Post-stroke. *Journal of Medical Robotics Research*. Special Issue on Rehabilitation Robotics. 2017;2(2). 12 pp.

- Benham, S., Kang, M., **Grampurohit, N.** (2018) Immersive Virtual Reality for the Management of Pain in Community-Dwelling Older Adults. *Occupational Therapy Journal of Research: Occupation, Participation, and Health*. Special Issue on Robotics, AI, Automations, and Relationship to Health and Occupational Therapy. (Accepted)
- c. As I got interested in outcomes and measurement, my dissertation work enabled me to review the currently existing measures of upper limb function in people with neurological conditions to understand the needs within this area. I was able to work with my research team to develop preliminary item banks for hand and arm function in this population through the use of multiple focus groups. The dissertation is as follows:
- **Grampurohit N.** (2016) *Preliminary development of the hand and arm function measure in people with neurological conditions*. (Doctoral dissertation) Retrieved by Research works University of Washington. Accession 2016-04-06T16:28:50Z
- d. I was able to further gain mentoring and research experience with senior researchers in my current position and able to expand my contributions towards the field of outcomes research in neurological conditions.
- **Grampurohit, N.**, Slavin, M., Ni, P., Kozin, S., Jette, A., Mulcahey, MJ. Sensitivity of the Cerebral Palsy Profile of Health and Function: Upper Extremity Domain to Change Following Musculoskeletal Surgery. *Journal of Hand Surgery*. (Accepted)
 - Dent, K., **Grampurohit, N.**, Thielen, C., Sadowsky, C., Davidson, L., Taylor, H., Bultman, J., Gaughan, J., Marino, R., & Mulcahey, MJ. (2018). Evaluation of the Capabilities of the Upper Extremities Test (CUE-T) in Children with Tetraplegia. *Topics in Spinal Cord Injury Rehabilitation*. 24(3), 239-251.
 - Van de Winckel, A., Jarrar, M., **Grampurohit, N.** Erlich-Jones, L., (2018) Instrument Summary Tearsheet: ABILHAND. *Archives of Physical Medicine and Rehabilitation*. (In press)

Total publications: 8 Journal Articles, 19 Conference Papers, 1 Doctoral Dissertation.

Complete list of Published work in:

<https://www.ncbi.nlm.nih.gov/pubmed/?term=Grampurohit+N>

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing

5R44AG044639-05 (Kim PI) 09/30/2016 – 05/31/2019
 National Institute of Health/NIA
 Arm Motor Rehabilitation, Entertainment and Cognition System for the Elderly
 The major goal of this project is to develop a bimanual early intervention therapy on the BrightArm Compact system to improve function, cognition and emotive state of elderly who are early sub-acute stage post-stroke.
 Role: Research Occupational Therapist

080-26000-R84006 (Marino PI) 2/23/2017 - 09/29/2019.
 National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR)
 Spinal Cord Injury Model System
 Feasibility of Telerehabilitation-Supported Home Activity-Based Rehabilitation for the Upper Extremity in Persons with Cervical Incomplete Spinal Cord Injury.
 Role: Research Occupational Therapist

American Academy of Developmental Medicine and Dentistry (Keller PI) 6/01/2018 – 05/31/2020
 WITH Foundation
 Evaluation of the Impact of an Assessment/Care Tool in Adults with Intellectual Disabilities and Dementia
 Role: Co-investigator

Completed (selected last 3 years)

- 1R43AG052290-01 (Kim PI) 09/30/2015 – 08/31/2018
National Institute of Health/NIA
Remote bimanual virtual rehabilitation for elderly with cerebral vascular disease
The goal of this project is to demonstrate the feasibility of the proposed BrightBrainer G system for use in home tele-rehabilitation of cerebrovascular disease survivors.
Role: Research Occupational Therapist
- 5053339515 (Pasquina PI) 02/03/2015 – 06/15/2018
Advanced Medical Technology Initiative (US Army)
Evaluation of a Novel Integrative and Intensive Virtual Rehabilitation Program for Service Members Post TBI
The major goal of this project is to perform a pilot feasibility study of BrightBrainer on service members post ABI (with and without upper extremity impairments). Study is clinic based and includes concurrent OT with two participants training side-by-side.
Role: Research Occupational Therapist
- Genesis Center for Aging Research and Education Grant (**Grampurohit PI**) 05/01/2017-05/01/2018
Feasibility of a Virtual Reality Intervention Program for Older Adults.
The goal of this project is to study the effect of a 6-week intervention with commercially available virtual reality system on pain, sleep, depression, anxiety, and quality of life for older adults at a senior center.
Role: Principal Investigator
- Dean's Fund Grant (**Grampurohit PI**) 07/01/2016-08/30/2017
University of the Sciences
A Pilot Study of the Hand and Arm Function Measure in People with Neurological Conditions
The goal of this project is to pilot the newly developed hand and arm function measure in people with neurological conditions.
Role: Principal Investigator
- 9R44AG044639-02A1 (House PI) 09/30/2012 – 08/31/2016
National Institute of Health/NIA
Arm Motor Rehabilitation, Entertainment and Cognition System for the Elderly
The major goal of this project is to develop a bimanual maintenance therapy on the BrightArm Duo system to improve function, cognition and emotive state of elderly stroke survivors who are skilled nursing facility residents.
Role: Research Occupational Therapist
- 1 R43 DA032224-01 (Burdea PI) 09/01/2012 – 08/31/2015
National Institute of Health/NIDA
Virtual reality system for cancer patients' shoulder pain and psychosocial impact
The major goal of this project is to determine the feasibility of the BrightArm Duo therapy system to improve quality of life in cancer survivors with chronic shoulder pain.
Role: Research Occupational Therapist
- Dissertation Research Grant (**Grampurohit PI**) 06/01/2013 – 09/11/2015
Walter C. and Anita C. Stolov Research Fund, Department of Rehabilitation Medicine, University of Washington.
The major goal of this project was preliminary development of an item bank to measure performance based and self-reported arm and hand function in people with neurological disorders.
Role: Principal Investigator