

CURRICULUM VITAE

June 2018

Harsimran Singh Baweja PT PhD

Director, Neuromechanics and Neuroplasticity Laboratory

CSU Instructional Technology Fellow - Immersive Learning

SDSU Smart Health Research Institute

SDSU Center for Clinical and Cognitive Neuroscience

School of Exercise and Nutritional Sciences

College of Health and Human Services

San Diego State University

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EDUCATION

Pennsylvania State University

Postdoctoral Fellowship

Fall-2013

Motor Neuroscience

(Motor lateralization and robotics)

University of Florida

Doctor of Philosophy

Summer-2012

Biobehavioral Sciences

(Aging Neurophysiology and Motor Neuroscience)

Sardar Patel University (India)

Bachelor of Physical Therapy

Spring-2005

Physical Therapy

Title of Dissertation -

Doctor of Philosophy - Amount of visual feedback and movement control and learning in older adults.

Bachelor of Physical Therapy - Diagnosing neck pain: Causes, Prevention and Physiotherapy.

TEACHING POSITIONS

Associate Professor (with Tenure)

Fall 2018 -

San Diego State University

DPT 760 Neurosciences

4 Units (Spring)

DPT 830 Cardiopulmonary Therapy
4 Units (Fall)

DPT 897 Doctoral Research
1 Unit (Fall and Spring)

DPT 889 Doctoral Project
2 Units (Fall and Spring)

ENS 798 Grad Special Study 3 Units
(Fall and Spring)

ENS 499 Independent Study 1-3 Units (Spring & Fall)

Assistant Professor

San Diego State University

Fall 2014 – Spring 2018

DPT 760 Neurosciences
4 Units (Spring)

DPT 830 Cardiopulmonary Therapy
4 Units (Fall)

DPT 897 Doctoral Research
1 Unit (Fall and Spring)

DPT 889 Doctoral Project
2 Units (Fall and Spring)

ENS 798 Grad Special Study 3 Units
(Fall and Spring)

ENS 499 Independent Study 1-3 Units (Spring & Fall)

Instructor

Texas A & M University

Fall 2009-Fall 2010

KINE 606: Motor Neuroscience I (3 Units)

Teaching Assistant

West Chester University of Pennsylvania

Spring 2007- Fall 2007

Exercise Physiology & Biomechanics Labs for
Undergrad and Graduate courses
Strength Training (3 Units)

Instructor

Institute of Physical Medicine and Rehabilitation,
Hyderabad, India

Summer 2005-Fall 2006

BPT IIrd Year - Biomechanics

BPT IIIrd Year – Clinical Orthopaedic Assessment

BPT IVth Year – Orthopaedic Rehabilitation and
Sport Injuries

RESEARCH POSITIONS

Associate Professor (with tenure)

San Diego State University
San Diego, CA

Fall 2018 –
Neuromechanics and Neuroplasticity in Movement
Disorders

Assistant Professor

San Diego State University
San Diego, CA

Fall 2014 – Summer 2018
Neuromechanics and Neuroplasticity in Movement
Disorders

Postdoctoral Research Fellow

Pennsylvania State University, College of Medicine,
Hershey PA

Fall 2012-Fall 2013
Motor Lateralization, Stroke Rehabilitation and
Robotics

Postdoctoral Research Fellow

Pennsylvania State University, College of Health and
Human Development, State College, PA

Fall 2012-Fall 2013
Motor Lateralization, Stroke Rehabilitation and
Robotics

Research Assistant

University of Florida, Gainesville, FL

Summer 2010-Summer 2012
Aging Neurophysiology and Motor Neuroscience

Research Assistant

Texas A & M University, College Station, TX

Spring 2008-Summer 2010
Aging Neurophysiology and Motor Neuroscience

Research Assistant

West Chester University of Pennsylvania, West
Chester, PA

Spring 2007-Fall 2007
Motor Control and Human Performance

CLINICAL POSITIONS

Lead Physical Therapist

Hyderabad Cricket Team, *Hyderabad, India*

Summer 2005 – Fall 2006

Resident Physical Therapist

Osmania General Hospital, *Hyderabad, India*

Summer 2005 – Fall 2006
ICU, Burns & Plastic Surgery, Orthopedics Surgery

Lead Physical Therapist

Jaya Rehabilitation Center and Research Institute,
Kutch, India

Summer 2004-Fall 2006
Prosthetics and Orthotics

Physical Therapist Licensure

Florida Department of Health, Physical Therapist

#29030 (Active)

PROFESSIONAL GROWTH – BEFORE TENURE

A. Refereed Journal Articles – (Graduate Student, * Undergraduate Student)**

1. Goble DJ, Rauh MJ, Baweja HS. (2018) Normative Data for the BTrackS Balance Test Concussion Management Tool: Results from 10045 Athletes Aged 8-21yrs. *Journal of Athletic Training* (in press)

2. Goble DJ, **Baweja HS. (2018)** Postural Sway Normative Data across the Adult Lifespan: Results from 6,280 Individuals on the BTrackS™ Balance Test. *Geriatric and Gerontology International* (in press)
3. Goble DJ, **Baweja HS. (2018)** Normative Data for the BTrackS™ Balance Test of Postural Sway: Results from 16,357 Community-Dwelling Individuals Aged 5-100 Years. *Physical Therapy* (Epub ahead of print) **(Q1 – impact factor 2.526 Physical Therapy)** Senior author
4. O'Connor SM, Khan E, **Baweja HS**, Goble DJ. **(2018)** A Point of Application Study to Determine the Accuracy, Precision and Reliability of the BTrackS Balance Plate for Center of Pressure Measurement. *Journal of Biomechanics*: 71, 277-280. **(Q1 – impact factor 2.496, Biomedical Engineering, Biophysics, Orthopedics and Sports medicine, Rehabilitation and Sports Science)** Equal contribution senior author.
5. Goble DJ, Hearn MC**, **Baweja HS. (2017)** Combination of BTrackS and Geri-Fit as a targeted approach for assessing and reducing the postural sway of older adults with high fall risk. *Clinical Interventions in Aging* **10**; 12:351-357. ECollections 2017 **(Q1 – impact factor 2.651 Geriatrics and Gerontology)** <https://www.ncbi.nlm.nih.gov/pubmed/28228655>. Senior Author
6. Hearn M**, Levy SS, **Baweja HS**, Goble DJ. **(2017)** The BTrackS Balance Test for Concussion Management is Resistant to Practice Effects. (Epub ahead of print) *Clinical Journal of Sports Medicine*. <https://www.ncbi.nlm.nih.gov/pubmed/28452829> Equal contribution senior author
7. Benedict S**, Fields R*, Hinshaw J**, **Baweja HS**, Goble DJ. **(2017)** Effects of Fatigue on the BTrackS Balance Test for Concussion Management. *International Journal of Athletic Therapy and Training* 22(4): 23-28. <https://doi.org/10.1123/ijatt.2016-0086> **(Q3, Physical Therapy, Sports Therapy and Rehabilitation)** Equal contribution senior author
8. Domingo AR, Diek M**, Goble KM, Maluf KS, Goble DJ, **Baweja HS (2017)**. Short Duration Therapeutic Massage Reduces Resting Upper Trapezius Muscle Activity. *NeuroReport*. 8;28 (2):108-110 <https://www.ncbi.nlm.nih.gov/pubmed/27977513> **(Q3 – impact factor 1.644, Neuroscience – misc.)** Senior author
9. O'Connor SJ, **Baweja HS**, Goble DJ. **(2016)** Validation of BTrackS force plates with an inverted pendulum. *Journal of Biomechanics*. 8; 49(16): 4142-4145 <https://www.ncbi.nlm.nih.gov/pubmed/27789036> **(Q1 – impact factor 2.496, Biomedical Engineering, Biophysics, Orthopedics and Sports medicine, Rehabilitation and Sports Science)** Equal contribution first author
10. Larkin-Kaiser KA, Borsa PA, **Baweja HS**, Moore MA*, Tillman MD, George SZ, Christou EA. **(2016)** Photobiomodulation delays the onset of skeletal muscle fatigue in a dose-dependent manner. *Lasers Med Sci*. 2016 Sep; 31(7): 1325-32 <http://www.ncbi.nlm.nih.gov/pubmed/27305924> **(Q1 - impact factor 2.461, Surgery)**
11. Goble DJ, Manyak KA**, Abdenour TE, Rauh MJ, **Baweja HS (2016)**. An Initial Evaluation of the BTrackS Balance Plate and Sports Balance Software for Concussion Diagnosis. *International Journal of Sports Physical Therapy*. 11(2): 149-55 <http://www.ncbi.nlm.nih.gov/pubmed/27104048>
12. **Baweja HS**, Kwon MH, Onushko TL, Wright DL, Corcos DM, Christou EA **(2015)**. Processing of visual information compromises the ability of older adults to control fine novel motor tasks during acquisition. *Experimental Brain Research* 233(12): 3475-88. <http://www.ncbi.nlm.nih.gov/pubmed/27104048> **(Q2 - impact factor 2.395, Neuroscience – misc)**
13. Onushko TL, **Baweja HS**, Christou EA **(2013)**. Practice improves motor control in older adults by increasing the motor unit modulation from 13 to 30 Hz. *Journal of Neurophysiology* 110(10): 2393-401. <http://www.ncbi.nlm.nih.gov/pubmed/23986564> **(Q1 - Impact factor 2.887, Neuroscience – misc)**
14. Fox EJ, **Baweja HS**, Kim CK, Kennedy DM, Vaillancourt DE, & Christou EA **(2013)**. Modulation of force below 1Hz: Age-associated differences and the effect of magnified visual feedback. *PLOS One* 8(2): e55970. <http://www.ncbi.nlm.nih.gov/pubmed/23409099> **(Q1 - impact factor 2.806, Medicine)**
15. **Baweja HS**, Kwon MH, Christou EA **(2012)**. Magnified visual feedback exacerbates positional variability in older adults due to altered modulation of the primary agonist muscle. *Experimental Brain Research* 222(4): 355-64. <http://www.ncbi.nlm.nih.gov/pubmed/22948735> **(Q2 - impact factor 2.395, Neuroscience – misc)**

16. Kwon MH, **Baweja HS**, Christou EA (2012). Ankle variability is amplified in older adults due to lower EMG power from 30-60 Hz. *Human Movement Science* 31(6): 1366-78. <http://www.ncbi.nlm.nih.gov/pubmed/23089330> (Q2 - impact factor 1.84, Orthopedics and Sports Medicine)
17. Neto OP, Lindheim H, Marzullo AC, **Baweja HS**, Christou EA (2012). Practice induces neural adaptations differ for shortening and lengthening contractions. *European Journal of Applied Physiology* 112(11): 3709-20. <http://www.ncbi.nlm.nih.gov/pubmed/22350459> (Q1 - impact factor 2.13, Orthopedics and Sports Medicine)
18. **Baweja HS**, Neto OP, Patel BK, Christou EA (2011). The interaction of visual feedback and respiratory amplitude on force control and muscle activation. *Human Movement Science* 30(6): 1022-38. <http://www.ncbi.nlm.nih.gov/pubmed/21546109> (Q2 - impact factor 1.84, Orthopedics and Sports Medicine)
19. Kwon MH, **Baweja HS**, Christou EA (2011). Age-associated differences in positional variability are exacerbated with lower limb contractions. *Journal of Motor Behavior* 43(5): 357-60. <http://www.ncbi.nlm.nih.gov/pubmed/21809912> (Q2 - impact factor 1.478, Orthopedics and Sports Medicine)
20. Neto OP, **Baweja HS**, Christou EA (2010). Increased voluntary drive is associated with changes in the common oscillations from 13-60 Hz of interference but not rectified electromyography. *Muscle and Nerve* 42(3): 348-54. <http://www.ncbi.nlm.nih.gov/pubmed/20589885> (Q2 - impact factor 2.605, Clinical Neurology)
21. **Baweja HS**, Kennedy DM, Vu JL, Vaillancourt DE, Christou EA (2010). Greater amount of visual feedback decreases force variability by reducing force oscillations from 0-1 and 3-7 Hz. *European Journal of Applied Physiology* 108(5): 935-43. <http://www.ncbi.nlm.nih.gov/pubmed/19953262> (Q1 - impact factor 2.13, Orthopedics and Sports Medicine)
22. **Baweja HS**, Patel BK, Martinkewiz JD, Vu JL, Christou EA (2009). Removal of visual feedback alters muscle activity and reduces force variability during constant isometric contractions. *Experimental Brain Research* 197: 35-47. <http://www.ncbi.nlm.nih.gov/pubmed/19544059> Q2 - impact factor 2.395, Neuroscience – misc)

B. Invited Editorials

23. **Baweja HS (2017) Editorial:** Towards objective quantification of traditionally subjective clinical assessments: The dichotomy between clinical science and healthcare delivery. *Journal of Neurology and Neurorehabilitation Research*, 2(2): 1-2.

B. Letters to Editor

24. **Baweja HS & Goble DJ. (2017) Letter to the Editor:** On the nature of clinical assessment with low sensitivity for concussion related balance deficits. *Journal of Sports Rehabilitation*. Jul 17:1-7. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/28714770> (Q2 - impact factor 1.413, Sports Medicine and Athletic Training)

C. Publications in review/revision

25. Soria SM*, Manyak KA**, Rauh MJ, Kovacks AJ, Goble DJ, **Baweja HS. (2017)** Post-concussion recovery timeline of postural stability in a Division 1 baseball athlete. (In review). *JAMA Neurology*.
26. **Baweja HS**, Barba D, Litvan I, Filoteo JV, Lessig SL (2017). Kinetic augmentation of deep brain stimulation programming. *JAMA Neurology* (in review)

C. Publications in preparation

1. Rizeq HN**, Plows AC*, Nguyen IN*, Ruelos KDF*, Ramos J, Robles C, Goble DJ, **Baweja HS**. (2017) Lets talk about secs: Are there gender differences in young distracted drivers?
2. **Baweja HS**, Fong C, Schiehser DM, Filoteo JV. (2017) Second-order procedural learning in not different in motor subtypes of Parkinson's Disease (in preparation)
3. **Baweja HS**, Larkin KA & Christou EA (2017). Training older adults with low-gain visual feedback facilitates motor learning. (In Preparation)
4. **Baweja HS**, Burke MM**, Taylor BP**, Litvan I, Gilbert PE, Filoteo JV, Goble DJ (2017). Effect of dual-tasking on balance and postural sway in Parkinson's disease (in preparation)
5. Rizeq H**, Taylor BP**, Goble DJ, Gilbert PE, **Baweja HS** (2017). Dual-tasking inhibits postural control in older adults. (in preparation)
6. **Baweja HS**, Rhoden E, McElroy C, Filoteo JV, Goble DJ, Litvan I. (2017) Postural control deficits in atypical Parkinson's disease. (in preparation)
7. Hearn M**, Taylor BP**, Gilbert PE, Filoteo JV, Sarkar M, Goble DJ, **Baweja HS**. (2017). Low-frequency oscillations in postural sway vary with sensory weighting: Implications for fall-risk in Parkinson's disease. (In preparation)
8. **Baweja HS**, Soria SM, Manyak KA, Goble DJ. (2017) Acute postural control deficits following concussions. (In preparation)
9. Goble DJ, **Baweja HS** (2017). Normative data for postural sway and balance in high school and collegiate athletes. (In preparation)
10. Larkin KA, **Baweja HS**, Borsa PA & Christou EA (2017). Phototherapy prolongs time to task failure in older adults. (In preparation)

D. Refereed Book Chapters

Baweja HS. Neuro-electrochemistry of Movement in *Grieve's Modern Musculoskeletal Physiotherapy*, 4th Edition, Elsevier Publications, ISBN -13: 978-0702051524, 2015

E. Conference Podium and Poster Presentations (* upcoming meetings)

1. **Baweja HS**, Middleman A, Dib N, Harrington A, Stewart A, Fellow J, Edwards E, Carper E, Mahar MT, Conrad ME. An Objective Battery of Sensorimotor and Cognitive Tests to Assess Effects of work Shift Length on Healthcare Workers: A Proof-of-Principle Study. HFES Healthcare Symposium, Boston, MA 2018.
2. Hearn MC**, **Baweja HS**. Acrophobic? Let's walk the plank. 11th Annual Student Research Symposium, SDSU. San Diego, CA. March 2018***[SDSU President's Award for Best Presentation \(Graduate\) to Mason Hearn](#)
3. Rizeq HN**, Goble DJ, **Baweja HS**. Low-frequency oscillations in postural sway scale with dual-tasking and fall risk in older adults. 11th Annual Student Research Symposium, SDSU. San Diego, CA. March 2018***[CHHS Dean's Award for Best Presentation \(Graduate\) to Hedaya Rizeq](#)
4. Parupudi V*, Rizeq HN**, Goble DJ, **Baweja HS**. An alternative to the timed up and go for stratifying fall risk. 11th Annual Student Research Symposium, SDSU. San Diego, CA. March 2018
5. Plows A, Rizeq HN, Nguyen IN, Goble DJ, **Baweja HS**. Effects of distracted driving in young adults. 47th Annual Meeting of the Society for Neuroscience, Neuroscience 2017, Washington DC
6. Hearn MC, Nahab FB, Filoteo JV, Litvan I, Goble DJ, **Baweja HS**. Low frequency oscillations in postural sway scale with fall risk and sensory weighting in Parkinson's disease. 47th Annual Meeting of the Society for Neuroscience, Neuroscience 2017, Washington DC
7. Ajrawi SA**, Mohanty S, Sarkar M, Rao R, Mihoyska A, **Baweja HS**. Investigating feasibility of multiple UHF passive RFID transmitters using backscatter modulation scheme in Brain Computer Interface applications. IEEE ComSoc - International Symposium on Performance Evaluation of Computer and Telecommunication Systems. June 2017
8. Kovacs AJ, Miles G**, Ross K*, **Baweja HS**. Thinking outside the block: External focus shortens

- reactions times in collegiate sprinters. NASPSPA, San Diego, CA. June 2017
9. **Baweja HS**, Hearn MC**, Gilbert PE, Filoteo JV, Litvan I, Goble DJ. Low-frequency oscillations in postural sway scale with sensory weighting and fall risk in Parkinson's disease. USC Brain Repair and Neuroplasticity Retreat, Lake Arrowhead, CA, USA. May 2017
 10. Rizeq HN**, Plows AC*, Nguyen IN*, Kristel DF Ruelos*, Goble DJ, **Baweja HS**. Lets talk about secs: Are there gender differences in young distracted drivers? 31st Annual CSU Student Research Competition. California Polytechnic University, San Luis Obispo, CA. April 28-29, 2017
 11. Rizeq HN**, Nguyen IN*, Goble DJ, **Baweja HS**. Lets talk about secs: Gender differences in distracted driving. 10th Annual Student Research Symposium, SDSU. San Diego, CA. March 2017 *****SDSU President's Award for Best Presentation (Graduate) to Hedaya Rizeq**
 12. Hearn MC**, Goble DJ, **Baweja HS**. Sensory weighting of posture: implications for fall-risk in Parkinson's disease. 10th Annual Student Research Symposium, SDSU. San Diego, CA. March 2017
 13. **Baweja HS**, Romero M**, Castagner E**, Kress A**, Vasko B**, Rabanal MJ**, Rauh MJ, Goble DJ. Lifespan Normative Data for the BTrackS™ Balance Test. Combined Sections Meeting of the American Physical Therapy Association. Feb 15 - 18, 2017. San Antonio, TX.
 14. Soria SM*, Rauh MJ, Goble DJ, **Baweja HS**. Postural control deficits in collegiate athletes following mild concussions within the first 48 hours, 5th International Consensus Conference on Concussion in Sport, October 27-28, 2016. Berlin, Germany. [British Journal of Sports Medicine. 51 \(11\), A55. \(Q1 – impact factor 6.724, Physical Therapy, Sports Medicine and rehabilitation\)](#)
 15. Burke MM, Taylor BP, Erram JS, Filoteo JV, Gilbert PE, Goble DJ, **Baweja HS**. *Postural control with concurrent cognitive tasks in Parkinson's disease patients*. 46th Annual Meeting of the Society for Neuroscience, Neuroscience 2016, 12-16 Nov, San Diego, CA.
 16. Erram JS, Taylor BP, Gilbert PE, Goble DJ, **Baweja HS**. Dual tasking diverts attention from postural control in older adults. 46th Annual Meeting of the Society for Neuroscience, Neuroscience 2016, 12-16 Nov, San Diego, CA.
 17. Soria SM, Rauh MJ, Goble DJ, **Baweja HS**. *Acute postural control deficits in Division I college athletes following mild concussions*. 46th Annual Meeting of the Society for Neuroscience, Neuroscience 2016, 12-16 Nov, San Diego, CA.
 18. Frenchik CA, Soria SM, Rauh MJ, Goble DJ, **Baweja HS**. *Normative data for the BTrackS Sports Balance Test in school and college athletes*. 46th Annual Meeting of the Society for Neuroscience, Neuroscience 2016, 12-16 Nov, San Diego, CA.
 19. Graff CD, **Baweja HS**, Goble DJ. Implementation of BTrackS for assessment of balance in individuals with stroke. 46th Annual Meeting of the Society for Neuroscience, Neuroscience 2016, 12-16 Nov, San Diego, CA.
 20. Kovacs AJ, Camic CL, Bradley LE, Griffith P, Durham EA, Miller TL, **Baweja HS**. *Differential activation of the leg muscles during cycling interacts with transition to running in triathletes*. 46th Annual Meeting of the Society for Neuroscience, Neuroscience 2016, 12-16 Nov, San Diego, CA.
 21. Cerna A, Crooks K, Gere R, Kniefel N, Santos C, Goble DJ, **Baweja HS**. *Balance Tracking Systems (BTrackS): A reliability study of center of pressure metrics for single leg balance*. 2nd Annual DPT Poster session, May 11th, 2016. SDSU. San Diego CA.
 22. Taylor BP, Gilbert PE, Goble DJ, **Baweja HS**. Dual tasking diverts attention from postural control in older adults. 30th Annual California State University Student Research Competition. Bakersfield CA. April 29-30, 2016
 23. Soria SM, Goble DJ, **Baweja HS**. Postural control deficits in Division I athletes: the first 48 hours following mild concussions. 9th Annual Student Research Symposium, SDSU. San Diego, CA. March 2016
 24. Frenchik C, Goble DJ, **Baweja HS**. Maturation of postural sway is influenced by gender. 9th Annual Student Research Symposium, SDSU. San Diego, CA. March 2016
 25. Taylor BP, Gilbert PE, Goble DJ, **Baweja HS**. Dual tasking inhibits postural control in older adults. 9th Annual Student Research Symposium, SDSU. San Diego, CA. March 2016 *****SDSU President's Award for Best Presentation (Graduate) to Brad Taylor**

26. Erram JS, Burke MM, Taylor BP, Filoteo JV, Gilbert PE, Goble DJ, **Baweja HS**. Postural control with concurrent cognitive tasks in postural instability gait disorder vs. tremor dominant Parkinson's disease patients. 9th Annual Student Research Symposium, SDSU. San Diego, CA. March 2016 *****SDSU Provost's Award for Best Poster Presentation (Undergraduate) to Jyotika Erram**
27. Graff CD, **Baweja HS**, Goble DJ. Implementation of BTrackS for assessment of balance in individuals with stroke. 9th Annual Student Research Symposium, SDSU. San Diego, CA. March 2016 *****Compact Scholar Award for Best Undergraduate Oral Presentation to Carly Graff**
28. Kovacs AJ, Bradley L, Camic C, **Baweja HS**. Increased voluntary activation of the leg muscles during cycling interacts with transition to running in triathletes. NASPSPA, Montreal Quebec, Canada. June 2016
29. LT Monagle, PM Whiting, RA Bhatia, DJ Ehrlichman, **HS Baweja**, Rauh MJ. Injuries In Interscholastic Cross-country: Predicting Injuries Using Selected Lower Extremity Functional And Static Anatomic Measures. Journal of Orthopaedic & Sports Physical 46 (1), A191-A192
30. Frenchik C, Soria SM, Picardi D, Goble DJ, **Baweja HS**. Maturation of postural sway is not influenced by body mass index or gender. Society for Neuroscience, Chicago, IL. October 2015
31. Barbod C, Anderson D, Lane E, Seamen K, Wagner T, **Baweja HS**. Upper-limb Rehabilitation Virtual Reality Module Table. SDSU Senior Design Day, May 2015
32. Barnes M, Burt D, Ortiz J, Scholl M, **Baweja HS**, Goble DJ. Estimating Huntington's disease onset using a low-cost balance assessment. Annual DPT Project Poster Session. SDSU. May 2015
33. Hollenbeck B, Golding M, Lazaga A, Tran Q, **Baweja HS**, Goble DJ. Normative data for the Balance Tracking System (BTrackS): Future implications for brain injury evaluations. Annual DPT Project Poster Session. SDSU. May 2015
34. Whiting PM, Thompson LA, Bhatia RA, Ehrlichman DJ, **Baweja HS**, Rauh MJ. Injuries in interscholastic Cross-Country: Predicting injuries using selected lower extremity functional and static anatomic measures. Annual DPT Project Poster Session. SDSU. May 2015
35. **Baweja HS** & Sainburg RL. Asymmetry in interlimb transfer reveals hemispheric specialization for trajectory skill task. Society for Neuroscience, San Diego, CA. November 2013.
36. Christou EA, **Baweja HS**, Fox EJ, Onushko T, Kwon MH, Chen YT, Kim C, Larkin K. Aging, visual feedback and the control of fine motor tasks. Science of Human Movement and Sports Psychology. Seoul national University, Seoul, Korea, 2012.
37. Christou EA, Fox EJ, Onushko T, **Baweja HS**, Kwon MH, Chen YT, Kim C, Larkin K. Training Strategies to Enhance Motor Learning in Older Adults. KAHPERD International Sport Science Congress, Mokpo, Korea, 2012.
38. Christou EA, Fox EJ, Onushko T, **Baweja HS**, Kim C, Kwon M, Chen Y, Larkin KA. Training Protocols That Minimize Motor Output Variability Enhance Motor Learning in Older Adults. APTA Combined Sections Meeting, San Diego, CA. January 2013.
39. Larkin KA, **Baweja HS**, Borsa, PA & Christou EA. Phototherapy prolongs time to task failure in older adults. Society for Neuroscience, New Orleans, LA. November 2012.
40. Christou EA, Onushko TL, **Baweja HS** & Fox EJ. Practice-induced improvements in movement control are associated with changes in multi-motor unit activity. New Orleans, LA. November 2012.
41. **Baweja HS**, Larkin KA & Christou EA. Training older adults with low-gain visual feedback facilitates motor learning. New Orleans, LA. November 2012.
42. Larkin KA, Christou EA, **Baweja HS**, Tillman MD, George SZ & Borsa PA. Phototherapy Delays the Onset of Skeletal Muscle Fatigue in a Dose-Response. UF Stanley Lecture Symposium, Gainesville, FL. May 2012.
43. Larkin KA, Borsa PA, **Baweja HS**, Tillman MD, George SZ & Christou EA. Phototherapy Delays the Onset of Skeletal Muscle Fatigue in a Dose-Response. 7th Annual Neuromuscular Plasticity Symposium, Gainesville, FL. March 2012.
44. Fox EJ, **Baweja HS**, Kim C, Vaillancourt DE, & Christou EA. Modulation of force within 0-1Hz: Age-associated differences and the effect of magnified visual feedback. 7th Annual Neuromuscular Plasticity Symposium, Gainesville, FL. March 2012.

45. **Baweja HS**, Larkin KA, Tanner EP, Moore MA, & Christou EA. Two-weeks of low-intensity training lowers ankle movement variability and error in older adults to the level of young adults. UF Stanley Lecture Symposium, Gainesville, FL. May 2012. *****Award for Best Presentation (Graduate)**
46. Larkin KA, Christou EA, **Baweja HS**, Moore MA, Tillman MD, George SZ & Borsa PA. Near-Infrared Light Therapy Delays the Onset of Skeletal Muscle Fatigue. American Society of Biomechanics, Gainesville, FL. August 2012
47. Fox EJ, **Baweja HS**, Kim C, Vaillancourt DE, & Christou EA. The effects of visual feedback and aging on force oscillations within 0-1 Hz. American Society of Biomechanics, Gainesville, FL. August 2012
48. **Baweja HS**, Larkin KA, Tanner EP, Moore MA, & Christou EA. Two-weeks of unloaded precision training improves motor performance in older adults to the level of young adults. American Society of Biomechanics, Gainesville, FL. August 2012
49. **Baweja HS**, Larkin KA, Tanner EP, Moore MA, & Christou EA. Two-weeks of low-intensity training lowers ankle movement variability and error in older adults to the level of young adults. 7th Annual Neuromuscular Plasticity Symposium, Gainesville, FL. March 2012.
50. Christou EA, **Baweja HS**, Chen YT, Fox EJ, Kim C, Kwon MH, Larkin KA, Onushko TL. Magnified visual feedback alters the neural activation of muscles and impairs motor control and learning in older adults. Vision Sciences Society, Naples, FL. August 2012.
51. Christou EA, **Baweja HS**, Kwon MH, Kennedy DM, Chen YT, & Kim C. Processing of visual information contributes significantly to the amplification of movement variability in older adults. 7th Annual International Conference on Kinesiology and Exercise Sciences, Athens, Greece, July 2011.
52. Christou EA, Kennedy DM, Chen Y, **Baweja HS**, & Vaillancourt DE. Age-associated differences in the time and amplitude of the force drift following removal of visual feedback. Society for Neuroscience, Washington DC. November 2011.
53. Kim C, **Baweja HS**, Neto OP, Kennedy DM, & Christou EA. Age-associated differences in the modulation of force from 0-1 Hz with different amounts of visual feedback. Society for Neuroscience, Washington DC. November 2011.
54. **Baweja HS**, Neto OP, Kennedy DM, Vaillancourt DE, & Christou EA. Greater amount of visual feedback increases force accuracy and control in young adults. Society for Neuroscience, Washington DC. November 2011.
55. Kwon MH, **Baweja HS**, & Christou EA. Age-associated differences in position variability are greater with ankle dorsiflexion than index finger abduction. 6th Annual Neuromuscular Plasticity Symposium, Gainesville, FL. March 2011.
56. **Baweja HS**, Kennedy DM, Kwon MH, Wright DL, Corcos DM, & Christou EA. Age-associated differences in movement control are influenced by processing of visual information. 6th Annual Neuromuscular Plasticity Symposium, Gainesville, FL. March 2011.
57. Kwon MH, **Baweja HS**, & Christou EA. Age-associated differences in position variability with the index finger and foot. American College of Sports Medicine, Denver, CO. June 2011.
58. Christou EA, **Baweja HS**, Kennedy DM, & Wright DL. Aging and learning of sinusoidal tasks. Society for Neuroscience, San Diego, CA. November 2010.
59. Kwon MH, **Baweja HS**, Glover SQ, & Christou EA. Motor output variability and error during positional tasks with the index finger and foot. Society for Neuroscience, San Diego, CA. November 2010.
60. **Baweja HS**, Kwon MH, Glover SQ, & Christou EA. Greater amount of visual feedback decreases error but not variability during movements and positional tasks with the finger and foot. Society for Neuroscience, San Diego, CA. November 2010.
61. Christou EA, **Baweja HS**, Kennedy DM, & Wright DL. Age-associated differences in learning novel fine motor tasks. Society for Neuroscience, Chicago, IL. October 2009.
62. Kennedy DM, **Baweja HS**, Vaillancourt DE, & Christou EA. Time onset and amplitude of force drift varies with force level during low-intensity constant isometric contractions. Society for Neuroscience, Chicago, IL. October 2009.
63. Neto OP, Marzullo ADM, **Baweja HS**, & Christou EA. Removal of visual feedback but not changes in

- breathing influence muscle activity during constant isometric contractions. Society for Neuroscience, Chicago, IL. October 2009.
64. **Baweja HS**, Kennedy DM, Vu JL, Vaillancourt DE, & Christou EA. Greater amount of visual feedback alters muscle activity and reduces force variability during constant isometric contractions. Society for Neuroscience, Chicago, IL. October 2009.
 65. **Baweja HS**, Kennedy DM, Wright DL, & Christou EA. Age-associated differences in learning novel fine motor tasks. Texas Brain and Spine Institute, College Station, TX. 2009.
 66. Christou EA, Rodriguez TM, & **Baweja HS**. Voluntary coactivation impairs motor output variability during goal-directed but not during constant isometric contractions. Mechanisms of Plasticity and Disease in Motoneurons, Seattle, WA. June 2008.
 67. **Baweja HS**, Patel BK, Martinkewiz JD, Smith MA, Vu J, Srinivasan D, & Christou EA. Influence of visual feedback on motor output and muscle activity during constant isometric contractions. Mechanisms of Plasticity and Disease in Motoneurons, Seattle, WA. June 2008.
 68. Fulks ER, **Baweja HS**, Patel BK, Martinkewiz JD, Srinivasan D, & Christou EA. Breathing amplitude influences force variability but not muscle activity during constant isometric contractions. Society for Neuroscience, Washington DC. November 2008.
 69. **Baweja HS**, Patel BK, Martinkewiz JD, Smith MA, Srinivasan D, & Christou EA. Removal of visual feedback alters muscle activity and reduces force variability during constant isometric contractions. Society for Neuroscience, Washington DC. November 2008.

G. Invited Presentations

1. **Baweja HS**. [Mind your lane! Effects of cognitive distractors on driving. SDSU Clinical And Cognitive Science Seminar Series. San Diego, April 2018.](#)
2. **Baweja HS**. [Lets talk about secs: Implications of cognitive distraction on young drivers. USC Brain Repair and Neuroplasticity Retreat, May 27-29th, Lake Arrowhead, CA. 2017](#)
3. **Baweja HS**. [Investigating the effects of cannabis use on driving in virtual environments. UCSD Center for Medicinal Cannabis Research. February 23rd. San Diego, CA. 2017](#)
4. **Baweja HS**. [Mechanistic interventions targeting neuroplasticity: Exploring uncharted territories through virtual reality. USC Brain Repair and Neuroplasticity Retreat, May 27-29th, Lake Arrowhead, CA. 2016](#)
5. **Baweja HS**. [Physical Health and Body Mechanics in Parkinson's disease. Parkinson's Association, November 25th, 2015. Poway CA.](#)
6. **Baweja HS**. [Fitness in Parkinson's disease. San Diego County Parkinson's Association, San Diego, CA. 2015](#)
7. **Baweja HS**. [Mechanistic Interventions. Institute for Neural Computation, University of California at San Diego, San Diego, CA. 2014](#)
8. **Baweja HS**. [Scientific Rehab Solutions. Zahn Innovation Center, San Diego State University, San Diego, CA. 2014](#)
9. **Baweja HS**. [Reflexes! Kaiser University, Tampa, FL. 2013.](#)
10. **Baweja HS**. [Visual information processing in aging and learning of novel motor tasks. USF Health College of Medicine – School of Physical Therapy and Rehabilitation Sciences, Tampa, FL. 2013.](#)
11. **Baweja HS** & Sainburg RL. [Nature of learning a trajectory skill task. Action Club. Department of Kinesiology, Pennsylvania State University, State College, PA. 2013.](#)
12. **Baweja HS** & Christou EA. [Breathing amplitude influences force variability during constant isometric contractions. Texas A&M University, College Station, TX. 2009](#)

H. Scholarly Awards and Honors

1. *SDSU Grants and Research Enterprise Writing (GREW) Fellowship. (2017)* Selected Fellows receive \$3,000 in compensation, and an opportunity to travel to Washington DC and discuss their research agenda with agency program officers facilitated by SDSU Research Foundation's Washington

- representatives.
2. *Stanley Lecture Graduate Poster Winner (2012)*. The College of Health & Human Performance at University of Florida presents the D. K. Stanley lecture annually. It was established in 1986 as a memorial to Dennis Keith “Dutch” Stanley, in recognition of his many contributions to the professions of physical education, health education and recreation. An Alumni Endowment at this award in the honor of Prof. D.K. Stanley and holds a competitive scientific presentation and poster session. The award recognizes excellence of a research study in the area of health and human performance, and was awarded for the first aim of my doctoral thesis.
 3. *Outstanding International Student Academic Achievement (2012)*. The College of Health & Human Performance at University of Florida presents its international doctoral students for outstanding academic achievements to recognize their peer-reviewed scientific publications, abstracts and maintaining a 4.0 GPA, simultaneously.
 4. *Outstanding International Student Academic Achievement (2011)*. The College of Health & Human Performance at University of Florida presents its international doctoral students for outstanding academic achievements to recognize their peer-reviewed scientific publications, abstracts and maintaining a 4.0 GPA, simultaneously.
 5. *Outstanding Academic Achievement/Gold Medal (2005)*. The College of Physiotherapy at S.P. University, India, presents the top-scorer from the graduating batch for extraordinary academic achievements to recognize their performance throughout their undergraduate degree. It is equivalent to a summa cum laude in the US, but is awarded only to the ‘university topper’.
 6. *College of Physical Therapy Outstanding Graduate/Class Valedictorian (2005)*. The College of Physiotherapy at S.P. University, India, recognizes and honors a student from the graduating batch for outstanding extracurricular and academic achievements throughout their undergraduate career.
 7. *Academic Gold Medal – IVth year BPT (2004)*. The S.P. University, India, presents the top-scorer from the every batch for extraordinary academic achievements to recognize their academic performance across the state university system every year.
 8. *Academic Gold Medal – IIIrd year BPT (2003)*. The S.P. University, India, presents the top-scorer from the every batch for extraordinary academic achievements to recognize their academic performance across the state university system every year.
 9. *Academic Gold Medal – IInd year BPT (2002)*. The S.P. University, India, presents the top-scorer from the every batch for extraordinary academic achievements to recognize their academic performance across the state university system every year.

I. Funded Research Grants

1. Principal Investigator Source: <i>SDSU University Grants Program</i>	1/16-6/17
Title: Identifying Neural Mechanisms to Augment Cognitive and Sensorimotor Function in Parkinson’s Disease	\$9,990
2. Principal Investigator Source: <i>SDSU University Grants Program</i>	1/15-6/17
Title: Identifying neural mechanisms underlying force variability in children	\$9,980
3. Principal Investigator Source: <i>President’s Leadership Fund</i>	1/15-12/17
Title: Novel Interventions in re-training balance and fall prevention in older adults.	\$11,320

4. Post-doctoral research fellow (Salary)	9/10-9/15
Source: Eunice Kennedy Shriver National Institute of Child Health and Human Development	
PI: Robert L. Sainburg	
Title: Predicting ipsilesional motor deficits in stroke with the dynamic dominance model.	\$1,041,055
5. Graduate Research Assistant (Stipend + Tuition)	9/08-9/13
Source: National Institutes of Aging	
PI: Evangelos A. Christou	
Title: Aging and learning of fine motor tasks	\$1,022,800

J. Funded Training Grants

1. Principal Investigator and Mentor	09/16 – 12/16
Source: College of Health and Human Services IRA Program	
Conference travel for 5th Concussion Consortium to Berlin Germany	\$3,372
2. Principal Investigator and Mentor	09/16 – 12/16
Source: College of Health and Human Services IRA Program	
Conference travel for Society for Neuroscience Annual Meeting	\$1,100
3. Principal Investigator and Mentor	06/16 - 09/16
Source: SDSU Summer Undergraduate Research Program	
Title: Postural control and driving skills in aging and Parkinson's disease	\$3,000
4. Principal Investigator and Mentor	1/16-11/16
Source: SDSU Division of Undergraduate Studies	
Title: Identifying neural mechanisms underlying movement control deficits in humans with neurological disorders	\$975
5. Principal Investigator and Mentor	06/15-09/15
Source: SDSU Summer Undergraduate Research Program	
Title: Normative pre-concussion baseline database for balance and postural sway measure in school and college-aged athletes	\$2,609
6. Principal Investigator and Mentor	10/14-10/15
Source: SDSU Division of Undergraduate Studies	
Title: Identifying neural mechanisms underlying grip force control in children.	\$1,370

K. Funded Travel grants and graduate scholarships 2008-2012: Over 5500\$ in competitive funding

Institute	Funding Sources
Texas A&M University	- Department of Health and Kinesiology
	- Sydney & JL Huffines Institute
	- Faculty for Neuroscience
	- Office of Graduate Studies
	- Office of Vice President of Research

University of Florida

- Howard Hughes Medical Institute
- Department of Applied Physiology and Kinesiology
- College of Health and Human Performance

L. Other Grant Activity

1. **Principal Investigator: HS Baweja**

Alliance Foundation – Impact Award

Amount: \$1,00,000/3 years (in review)

Title: How high is high to drive: Paving the way for equitable markers of driving ability in cannabis users

2. **Co-PI: HS Baweja (PI – Shirin Hooshmand)**

Strawberry Foundation

Amount: \$146,000/2 years

Title: Impact of strawberries on cognitive and motor function and vascular and cardiometabolic risk markers in older healthy adults

3. **Principal Investigator: HS Baweja**

NIH Director's Office – New Innovator Award 2018

Amount: 5 Years/\$1,500,000 (Not Funded)

Title: Augmenting neurosurgery and neuromodulatory programming for deep brain stimulation.

4. **Co-Investigator: HS Baweja**

Principal-Investigator: Paul E Gilbert PhD

National Institutes of Aging

Amount: 5 Years/\$1,500,000 (Not funded)

Title: Cognitive Processing Deficits in Older Adults at Risk for Alzheimer's disease.

5. **Principal Investigator and Mentor: HS Baweja**

Co-Investigator: Mathes M Burke (Graduate student)

SDSU Center for Clinical and Cognitive Neuroscience

Amount: 2 Years/\$5,000

Title: Cortico-muscular mechanisms for freezing of gait in Parkinson's disease using virtual reality.

6. **Principal Investigator: HS Baweja**

Co-PI: Paul E Gilbert PhD

SDSU Center for Clinical and Cognitive Neuroscience – Collaborative Pilot Grant

Amount: 1 Year/\$10,000 (Not funded)

Title: Neuromechanics of driving in older adults with cognitive impairment

7. **Principal Investigator: HS Baweja**

Parkinson's Disease Foundation – Stanley Fahn Junior Faculty Award

Amount: 3 Years/\$300,000 (Not funded)

Title: Corticomuscular measures to detect and identify freezing of gait in Parkinson's disease.

8. **Co-Investigator: HS Baweja**

National Institutes of Health/National Institutes of Aging R01

PI: Paul E Gilbert

Amount: 5 Years/\$1,250,000 (not funded)

Title: Mnemonic Processing Deficits in Older Adults at Risk for Alzheimer's disease

9. Principal Investigator: HS Baweja

Michael J Fox Foundation

Amount: 3 Years/\$ 750,000 (not funded)

Title: Kinematic optimization of DBS in Parkinson's disease.

10. Co-applicant: HS Baweja

SDSU Office of the Vice President

PI: Roger W. Simmons

Amount: 1 Year/\$50,000 (not funded)

Title: Enriching Student and Faculty Scholarship in Health Promotion and Rehabilitation

M. Participation in Professional Associations

1. American Physical Therapy Association	Member	2015-present
2. Society for Neuroscience	Member	2008-present
3. American Congress of Rehabilitation Medicine	Member	2010-present
4. American Society of Biomechanics	Member	2012-present
5. Indian Association of Physiotherapists	Student Member	2003-2007
6. International Federation of Orthopaedic Manipulative Physical Therapists	Student Member	2004-2006

N. Advanced Professional Meeting Attendance

Society for Neuroscience

Washington DC, USA	2008
Chicago, IL, USA	2009
San Diego, CA, USA	2010
Washington DC, USA	2011
New Orleans, LA, USA	2012
Chicago, IL, USA	2015
San Diego, CA, USA	2016

Brain Repair and Neuroplasticity Retreat

Lake Arrowhead, CA, USA	2016
Lake Arrowhead, CA, USA	2017

Motoneuron meeting: Mechanisms of plasticity and disease in Motoneurons.

Seattle, WA, USA	2008
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Indian Association of Physiotherapy

Jaipur, RJ, India	2004
Hyderabad, AP, India	2005

Federation of Orthopaedic Manipulative Physical Therapists

Dehradun, UP, India	2005
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American Society for Biomechanics

Gainesville, FL, USA	2012
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O. Advanced Continuing Medical Education, Workshops and Seminars

Synaptic Actin Dysregulation: A Convergent Mechanism of Mental Disorders? Scott H. Soderling (2.5 CEU) Neuroscience 2016	2016
Neuroscience of Music: Novel Discoveries and Their Implications in the Understanding of Music and the Brain Elizabeth Stegemöller (2.5 CEU) Neuroscience 2016	2016
Dendritic Spines Shaping Memory and Behaviors Haruo Kasai (0.25 CEU) Neuroscience 2016	2016
Translational Neuroepigenetic Insights of Addiction Vulnerability Yasmin L. Hurd (1.25 CEU) Neuroscience 2016	2016
Session 189: Circuits for Movement Silvia Arber (1.25 CEU) Neuroscience 2016	2016
Physical Activity Impacting Neuroplasticity in Aging and Disease Giselle Petzinger (1.75 CEU) Neuroscience 2016	2016
PRESIDENTIAL SPECIAL LECTURE Limitations on Visual Development: Neurons and Behavior Lynne Kiorpes (1.25 CEU) Neuroscience 2016	2016
Fronto-Subthalamic Circuits for Control of Action and Cognition Adam R. Aron (2.5 CEU) Neuroscience 2016	2016
Advances in Noninvasive Brain Stimulation Along the Space-Time Continuum C. Alex Goddard (2.5 CEU) Neuroscience 2016	2016
Session 473: Spike Timing Codes for Motor Control Samuel J. Sober (2.5 CEU) Neuroscience 2016	2016
Current Perspectives in Autism Spectrum Disorder: From Genes to Therapy M. Chiara Manzini (2.5 CEU) Neuroscience 2016	2016
PRESIDENTIAL SPECIAL LECTURE Neurobiology of the Adolescent and Young Adult Brain Reveals Unique Strengths and Vulnerabilities: Debunking Myths	

Frances E. Jensen (1.25 CEU) Neuroscience 2016	2016
CLINICAL ROUNDTABLE #3: Critical Topics in Pain Mechanisms and Therapeutics (2.5 CEU) Neuroscience 2016	2016
Capturing Immune Responses to Understand and Treat Neurodegenerative Disease Eliezer Masliah (1.25 CEU) Neuroscience 2016	2016
The Neural Basis of Adaptive Motor Control in the Cerebellum Reza Shadmehr (1.75 CEU) Neuroscience 2016	2016
How Does the Brain Implement Adaptive Decision Making to Eat? Valerie Compa (2.5 CEU) Neuroscience 2015 Chicago, IL	2015
Themes and Variations in Circuits and Behavior Cori Bargman (1.25 CEU) Neuroscience 2015 Chicago, IL	2015
Cellular and Circuit Mechanisms of Multisensory Integration and Plasticity Hey-Kyoung Lee (2.5 CEU) Neuroscience 2015 Chicago, IL	2015
Hidden Variables of Behavior: Neuronal Parameters Underlying Brain States Mark Schnitzer (2.5 CEU) Neuroscience 2015 Chicago, IL	2015
The Molecular Logic of Neural Circuits: Implications for Autism and Schizophrenia Thomas Christian Südhof (1.25 CEU) Neuroscience 2015 Chicago, IL	2015
Early Reports from the BRAIN Initiative Frontline: Advancing Technologies to Accelerate Our Understanding of Brain Function Eve Marder (2.5 CEU) Neuroscience 2015 Chicago, IL	2015
New Perspectives for the Rescue of Cognitive Disability in Down syndrome Renata Bartesaghi (2.5 CEU) Neuroscience 2015 Chicago, IL	2015

Brainy and Handy: What Robotics and Prosthetics Can Learn from Touch Receptors in the Hand Esther Gardner (2.5 CEU) Neuroscience 2015 Chicago, IL	2015
Cortical Control of Arm Movements: A Dynamical Systems Perspective Krishna V. Shenoy (1.25 CEU) Neuroscience 2015 Chicago, IL	2015
Time in Cortical Circuits Gerald Finnerty (2.5 CEU) Neuroscience 2015 Chicago, IL	2015
Grid Cells and Cortical Maps for Space May-Britt Moser (1.25 CEU) Neuroscience 2015 Chicago, IL	2015
Adolescent Alcohol Exposure: Long-Term Neurobiological and Behavioral Consequences Sundar Regunathan (2.5 CEU) Neuroscience 2015 Chicago, IL	2015
A Causal Analysis of the Attentional Network Robert Desimone (1.25 CEU) Neuroscience 2015 Chicago, IL	2015
Corticospinal Motor Neurons in Health and Disease Hande Ozdinler (2.5 CEU) Neuroscience 2015 Chicago, IL	2015
NIH Grant Writing Workshop Instructor: Dr. Guadalupe ‘Suchi’ Ayala College of Health and Human Services San Diego State University San Diego, CA	2015
Thrust manipulation of extremity and spinal joints (7 CEU) North American Institute of Orthopedic Manual Therapy San Diego State University San Diego, CA	2015
Medical Errors Prevention Florida Department of Health Tallahassee, FL	2013

Consultation, Screen and Delegation St. Augustine University St. Augustine, FL	2013
The Mirror Neuron System in Monkeys and Humans Dr. Giacomo Rizzolatti Washington DC, USA	2008
CME on Sports Medicine and Physiotherapy Nizam's Institute of Medical Sciences Hyderabad, India	2006
CME on Cancer Rehabilitation and Manual Therapy Indo-American Cancer Research Institute Hyderabad, INDIA	2005
CME on Electrophysics – An update on principles and application K.M.Patel Institute of Physiotherapy Karamsad Medical College Karamsad, INDIA	2005
Upper and lower quarter MULLIGAN'S Concept course SSG Hospital Baroda, INDIA	2005
Advanced PRP and Taping Mulligan's Concept Course SSG Hospital Baroda, INDIA	2005
CME on Physiotherapy in Cardiopulmonary Conditions K.M.Patel Institute of Physiotherapy Karamsad Medical College Karamsad, INDIA	2004
CME on Cervical Spine Dysfunction SSG Hospital Baroda, INDIA	2003
CME on Arthroscopy (Psychomotor Lab) B J Medical College Ahmedabad, INDIA	2002

P. HONORS AND AWARDS

San Diego State University, San Diego, CA

President's Award - Health & Human Services College Council	2017
CHHS Most Influential Graduate Faculty Award	2017
SDSU Provost's Outstanding Academic Advising - Faculty Nominee	2017

NIH Early Career Reviewer: Center for Scientific Review	2016
SDSU Person of the game – Faculty Focus (Men’s Basketball)	2016
President’s Award - Health & Human Services College Council	2016
SDSU Provost’s Outstanding Academic Advising - Faculty Nominee	2016

University of Florida, Gainesville, FL

Outstanding International Student Academic Achievement	2012
HHMI-UF Science for Life Undergraduate Mentoring Award	2012
Stanley Lecture Graduate Poster Winner	2012
Outstanding International Student Academic Achievement	2011

Sardar Patel University, Gujarat, India

University Gold Medalist (<i>summa cum laude</i>), Batch of 2005	2005
Outstanding Academic Achievement, Batch of 2005	2005
Overall Outstanding Graduate, Batch of 2005	2005
University Gold Medalist BPT 4 th year	2004
University Gold Medalist BPT 3 rd year	2003
University Gold Medalist BPT 2 nd year	2002

TEACHING EFFECTIVENESS

A. Student Doctoral/Masters/Undergraduate Thesis/Senior Design Projects

In Progress (Chairperson):

- Alexander Kress, Marvin J Rabanal, Megan Romero, Benjamin Vasko.** *Normative database of postural sway and balance in 30-60 year old adults. (Doctor of Physical Therapy Program, San Diego State University).* **Spring 2018**
- Emily Carper, Natalie Dib, Candace Edwards, Jessica Fellow, Alex Harrington, Arianna Middleman, Andrew Stewart.** *Effect of workday length on motor performance.* **Spring 2019**
- Hedaya Rizeq.** *Neuromechanics of driving in the young distracted driver. (Masters of Science in Applied Movement Sciences, San Diego State University).* **Spring 2018**

In Progress (Committee member):

- Reena Patil.** *Estimation of muscle activity using ECoG signals in Macaque Monkeys. (M.S. Electrical and Computer Engineering, San Diego State University).* **Fall 2017**

Completed (Chairperson):

- Jessie Altman – Systematic review of motor control deficits in Autism Spectrum Disorders. (Doctor of Physical Therapy Program, San Diego State University).** **Spring 2017**
- Kelsey Fitzgerald – Systematic review of motor control deficits in Fetal Alcohol Syndrome. (Doctor of**

Physical Therapy Program, San Diego State University). **Spring 2017**

3. **Anthony Lima.** *Systematic review of motor control deficits in ADHD.* (Doctor of Physical Therapy Program, San Diego State University). **Spring 2017**
4. **Nicholas Woods – Systematic review of motor control deficits in DCD.** (Doctor of Physical Therapy Program, San Diego State University). **Spring 2017**
5. **Christina Van Ert.** *Systematic review of motor control deficits in Childhood obesity.* (Doctor of Physical Therapy Program, San Diego State University). **Spring 2017**
6. **Jereme Schumacher.** *Systematic review of motor control deficits in Childhood obesity.* (Doctor of Physical Therapy Program, San Diego State University). **Spring 2017**
7. **Christoph Barbod, Daniel Anderson, Emily Lane, Kyle Seamen, Taylor Wagner.** *Modular Upper-limb Rehabilitation Virtual Reality Module.* Bachelors of Science, Mechanical Engineering, San Diego State University. **Spring 2015.**

Completed (Committee member):

1. **Shelby Colwell, Wendy Dorr, Melissa Goff, Brianne Hatherill, Rowena Tam, Shelby Wilcocks.** *Effects of overground bionic ambulation training on walking function and health in people with incomplete spinal cord injury: A case series.* Doctor of Physical Therapy Program, San Diego State University). **Spring 2017**
2. **Kelsey Crooks, Alejandro Cerna, Ryan Gere, Nicholas Kniefel, Chelsea Santos.** Balance Tracking Systems (BTrackS): A reliability study of center of pressure metrics for single leg balance. Chair: Dr. Daniel Goble. **Spring 2015.**
3. **Melanie Barnes, Daniel Burt, Jessie Ortiz, Marcella Scholl.** Estimating Huntington's disease onset using a low-cost balance assessment. Doctor of Physical Therapy, San Diego State University. Chair: Dr. Daniel Goble. **Spring 2015.**
4. **Brittany C Hollenbeck, Madison T Goildin, Arnold E Lazaga, Quang N Tran.** Normative data for the Balance Tracking System (BTrackS): Future implications for brain injury evaluations. Doctor of Physical Therapy, San Diego State University. Chair: Dr. Daniel Goble. **Spring 2015.**
5. **Paula M Whiting, Leslie A Thompson, Ricky A Bhatia, Devon J Ehrlichman.** Injuries in Interscholastic cross-country: Predicting injuries using selected lower extremity functional and static anatomic measures. Doctor of Physical Therapy, San Diego State University. Chair: Dr. Mitch Rauh. **Spring 2015.**
6. **Jeremy Zetterberg.** *Design and Development of a 2DOF upper extremity haptic device for neurorehabilitation.* MS Mechanical Engineering, San Diego State University 2015. **Summer 2015.**

Independent Studies Supervised

Undergraduate

1. **Dante Picardi.** (Spring 2015) Assessment of force plate derived sway information. 3 Units
 2. **Selena Mae Soria.** (Spring 2015) Normative database for pre-concussion baseline for postural sway in
- Office of Faculty Advancement – Revised 6/2016

- children and athletes. 3 Units
3. **Christina Frenchik.** (Spring 2015) Identifying neural mechanisms underlying grip force in children. 3 Units
 4. **Kristel Ruelos.** (Fall 2016) Changes in motor output variability across the lifespan. 1 Unit
 5. **Ivy Nyugen.** (Fall 2016) Neuromechanics of driving in the older driver with cognitive impairment. 1 Unit
 6. **Selena Mae Soria.** (Fall 2016) Balance deficits following concussions in Division-1 athletes. 3 Units

Graduate

1. **Mathes m Burke III.** (Fall 2016) Freezing of gait in a virtual reality setting. 3 units
2. **Hedaya Rizeq.** (Fall 2016) Neuromechanics of driving in older adults. 3 units
3. **Courtney Moltzen.** (Fall 2016) Aging and learning of novel motor tasks. 3units
4. **Mason C Hearn.** (Spring 2017).) Freezing of gait in a virtual reality setting. 3 units

Doctoral

1. **Mason C Hearn.** (Fall 2017) Freezing of gait in a virtual reality setting. 3 units

B. Teaching Conferences and Presentations

Presentations –

1. **Hauze S & Baweja HS.** [Virtual Immersive Teaching and Learning \(VITaL\): VR, AR, MR, and 360° Video at San Diego State University and Beyond.](#) UB Tech, Las Vegas, June 4-6, 2018
2. **Fraze JP & Baweja HS.** [Virtual Immersive Teaching and Learning \(VITaL\): We’re only limited by our imagination.](#) 32nd Directors of Education Technology – California Higher Education Conference, Costa Mesa, CA. Nov 28-Dec 1, 2017.
3. **Baweja HS.** Using immersive technology in- and outside classrooms. CTL Lunch and Learn series on New Frontiers in Higher Education. September 12, 2017. San Diego State University, San Diego, CA
4. **Baweja HS.** Human performance testing in virtual environments. SDSU-ITS XR Showcase. June 19th 2017. San Diego State University, San Diego, CA

Higher education talks –

Directors of Education Technology – California Higher Education Costa Mesa, CA	2017
SDSU Center for Teaching and Learning Lunch and Learn - September	2017
SDSU Instructional Technology Services XR Showcase	2017

Teaching Grants –

Baweja HS. We are only limited by our imagination. Common Experience Award - \$2750 (SDSU Division of Academic Engagement and Student Achievement). 2017-18 (Awarded)

Baweja HS. CSU Statewide - Virtual Immersive Teaching and Learning CIG. CSU Chancellor’s office. \$9000 (Under Review)

C. Teaching and Mentoring Awards

1. ***Senate Instructional Technology Services Faculty Fellow (2017-18)***. *San Diego State University*. The Senate ITS Office offers a \$10,000 fellowship to select faculty members to help enhance and help develop curriculum across disciplines using emerging technologies.
2. ***Outstanding Graduate Faculty (2017)***. *San Diego State University*. The College of Health and Human Services honors the most influential faculty member in the graduate career of the outstanding graduate student at the annual convocation.
3. ***President's Award - Health and Human Services College Council (2017)***. *San Diego State University*. The Health and Human Services College Council annually honors professors in the College of Health and Human Services for excellence in the qualities of academic achievement, community service, and professional growth or development. The president's award is the highest honor awarded by the council.
4. ***President's Award - Health and Human Services College Council (2016)***. *San Diego State University*. The Health and Human Services College Council annually honors professors in the College of Health and Human Services for excellence in the qualities of academic achievement, community service, and professional growth or development. The president's award is the highest honor awarded by the council.
5. ***Howard Hughes Medical Institute-University of Florida: Science for Life - Outstanding Undergraduate Mentor (2012)***. The HHMI-UF: Science for Life program annually honors doctoral candidates who have demonstrated extraordinary service during their doctoral studies, while mentoring undergraduate students in research leading to peer-reviewed publications with these undergrads.

E. Curriculum Development and Teaching Innovations

1. **SDSU Instructional Technology Services Faculty Fellow** – I am one of 6 ITS Faculty fellows, starting AY 2017-18. My specific role as the ITS fellow is twofold – 1) to spearhead and enhance the curriculum development around eXperiential Reality (XR) technologies across SDSU (XR is an umbrella term for virtual, augmented and mixed reality solutions). And, 2) Enhance the overall visibility of ITS XR services and Virtual and Immersive Teaching and Learning (VITaL) learning space among the instructional faculty and staff at SDSU.
2. **Curriculum Development, SDSU DPT Department**. I Co-chair the SDSU DPT Curriculum Committee with Prof. Katrina Maluf, PT PhD (AY 2014-date). The DPT Curriculum Committee is the primary coordinating body for all issues involving the DPT curriculum. Responsibilities include assisting faculty in becoming knowledgeable about the overall curriculum and how each course contributes to the overall curricular design; responding to university regulations, student and graduate feedback, and accreditation standards; implementing course changes through the Faculty Senate at the university level; and conducting regular meetings with the faculty related to the curriculum; and coordinating the annual DPT Faculty Meeting)
3. **Curriculum Development, SDSU College of Health and Human Service**. I have served as the Chair of the SDSU College of Health and Human Services Curriculum Committee (AY 2015-2017, Member - AY 2017-2019). The committee oversees changes proposed by various Schools and Departments in the College of Health and Human Services to ensure they agree with policy and accreditation guidelines.
4. **DPT 760 Neurosciences Course Development, SDSU DPT Program**
 - Structured and developed the Neurosciences course (DPT 760) to facilitate a continuum into advanced

clinical DPT courses in the future semesters and prepare students to answer clinical questions using current evidence.

- Developed 1 new syllabus, created 12 (11 weekly quizzes and 1 final exam) new exams using the FSBPT National Physical Therapy Licensing Examination format.
 - Since, the time I took over the course one cohort has passed (Spring 2017) and taken the National Physical Therapy licensing boards. This year the score for the neurology sections was **above the national average by 7 points** for the first time in the history of our program. While, DPT 760 is one of the 3 courses in the neuromuscular series, it is the foundations course for the content.
5. **Doctoral Research Projects, SDSU DPT Program.** I am currently mentoring 11 DPT second and third year students on their doctoral projects in my lab. I am also working collaboratively with our DPT faculty at San Diego State to re-structure the process and products for the Physical Therapy Doctoral Research Projects. *4 of these students presented the Combined Sections Meeting of the American Physical Therapy Association meeting at San Antonio, TX in Feb 2017.*
6. **ENS 798 Special Study, ENS Graduate Program (Applied Movement Sciences).** I have mentored graduate students on 798s in my lab for 3 units each. These students have worked developing the research ideas for their graduate theses. The initial products of these studies have been pilot data presentations at the Annual Student Research Symposium at SDSU, where the students have been very successful, won accolades and gone on to represent SDSU at the annual California State University – Student Research Symposium (2015-16, 2016-17). Eventual end products include presentations at the Society for Neuroscience Annual Meetings/Combined sections meetings of the American Physical Therapy Association. Furthermore, these are then written up and submitted for peer-reviewed publications and future intramural and extramural grants. One of these master’s students, Mr. Mason Hearn, was awarded the National Kinesiology Association Master’s Scholar for SDSU and graduated as the 2017 Outstanding Graduate student for the School of Exercise and Nutritional Sciences. In turn, he recognized me as his most influential professor in graduate school.
7. **ENS 499 Special Study, ENS Undergraduate Program (Kinesiology, Pre-PT & Athletic training).** I regularly mentor undergraduate students for supervised special study. The students gain extensive research experience working in my research lab. The initial products of these studies are pilot data presentations at the Annual Student Research Symposium at SDSU. Eventual end products include presentations at the Society for Neuroscience Annual Meetings/Combined sections meetings of the American Physical Therapy Association. Furthermore, these data are then written up and submitted for peer-reviewed publications. *Over the last 2 years, 4 of the 8 student SRS presentations mentored by me received honors and awards including the SDSU President’s Award, SDSU Provost’s Award and the San Diego District Compact Scholar Award.*
8. **Mechanical Engineering 490 (sections A: fall 14 and B: spring 15).** I mentored a group of 5 senior mechanical engineering students for their senior design project to develop an *assistive technology* device. The end product of this project is a research grade upper limb rehabilitation ‘air-hockey’ table for pediatric applications, which is currently being used in my lab. *This project is sponsored by the NSF training grant to the SDSU Engineering Research Center on Sensorimotor Neural Engineering.*
9. **Mentoring Master’s Thesis in Mechanical Engineering (Fall 14, Spring 15, & Summer 15).** I mentored a Master’s of Mechanical Engineering thesis. While, I wasn’t the chair to the committee due to logistical reasons, I was the primary content, design and research advisor to the project. I mentored a master’s student in my lab to not only design the hardware but also program the software for research functionality. *The end product is a 2 joint robotic device built for research currently being used in my lab.*

SERVICE

Service for the Department

- | | | |
|--|----------|----------------|
| 1. SDSU DPT <i>Program</i> Curriculum Committee | Co-chair | 2014 - present |
| 2. SDSU <i>School</i> of Exercise & Nutritional Sciences Faculty Search Committee (Area of Excellence) | Member | 2015 - 2016 |

Service for the College

- | | | |
|--|----------------|-------------|
| 1. SDSU <i>College</i> of Health and Human Services Curriculum Committee | Chair | 2015 – 2019 |
| 2. SDSU College of Health and Human Services Space Committee | Member | 2017 |
| 3. SDSU College of Health and Human Services – Student Success Fee Committee | Faculty Member | 2017 |

Service for the University

- | | | |
|--|-----------------|----------------|
| 1. SDSU Instructional Technology Services | Faculty Fellow | 2017 |
| 2. SDSU – Institutional Endorsement Letter Committee | Member | 2015 - 2018 |
| 3. SDSU - <i>University Senate</i> Instructional & Information Technology Services Committee | Member | |
| 4. SDSU - <i>University</i> Student Research Symposium | Jury | 2015 - present |
| 5. SDSU Matlab Users Advisory Group | | 2015 - present |
| 6. Penn State Graduate Research Symposium | Jury | 2013 |
| 7. Penn State Undergraduate Research Symposium | Jury | 2013 |
| 8. PSU Annual Dance maraTHON – For the Kids | Massage Therapy | 2013 |

Service for the Profession

1. Reviewer/Editorial Board for Professional International Journals & Organizations

- | | |
|--|--------|
| a. Sports Medicine | 2017 - |
| b. Medical Education Online | 2017 - |
| c. Journal of Sports Rehabilitation | 2017 - |
| d. Journal of Neurology and Neurorehabilitation Research | 2017 - |
| e. IEEE World Haptics Conference (WHC) | 2017 - |
| f. IEEE International Conference on Rehabilitation | |

Robotics (ICORR)	2017 -
g. Journal of Motor Learning and Development	2016 - present
h. Human Movement Science	2017 -
i. Journal of the International Neuropsychological Society	2016 - present
j. Medicine and Science in Sports and Exercise	2016 - present
k. Frontiers in Physiology	2014 - present
l. Research Quarterly in Exercise and Sports	2012 - present
m. Journal of Neuroscience Methods	2010 - present
n. Journal of Motor Behavior	2010 - present
o. Archives of Physical Medicine and Rehabilitation	2009 - present

2. Grant Reviewer:

a. National Institutes of Health – Center for Scientific Review	2017
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Service for the Community

1. In-service on Fall-risk assessment in a skilled nursing setting	Invited talk	05/03/2017
2. UCSD Health Multiple Sclerosis Expo, Fall-risk assessment and balance testing.	Invited guest	03/18/2017
3. SDSU Associated Students Day Care Center	Board Member	2014-2015
4. Presentations/Talks/Speeches/Media		
a. San Diego Parkinson’s Association 5k	Invited talk	04/18/2015
b. Parkinsonian Radio Show Twilight Talk Radio	Invited Radio Interview	06/16/2015
c. High Tech High, INSPIRE week, San Diego, CA	Invited talk	06/12/2015
d. High Tech High, INSPIRE week, San Diego, CA	Invited Talk	06/2016

Other outstanding achievements

1. Press and media coverage –

a. San Diego Union Tribune - Focus	Press report	07/02/2017
b. Southwest Magazine	Advertisement	March 2017
c. San Diego Magazine	Advertisement	Feb 2017
d. SDSU - CHHS Pulse	Special Coverage	Fall 2016
e. Life lines magazine	Special Coverage	July 2017
f. 360 Magazine	Student Success feature	Summer 2017
g. SDSU Daily Aztec coverage on publication	Press report	04/02/2016
h. India Today coverage on publication	Press report	04/03/2016
i. Press Coverage for Concussion Publication	Press report	04/2016
j. SDSU News center coverage for Society for Neuroscience presentations	Press report	11/2016