

CURRICULUM VITAE

April 2021

Jo Shattuck
MA Sports Science
PhD Psychology, Neuroscience and Behavior

An educated athlete, coach and scientist

Education

2014-2019 PhD University of Nebraska, (UNL) Lincoln NE, Psychology
2008-2011 MA Sport Science, The United States Sports Academy, Daphne, AL
1988-1995 BA General Studies Louisiana Tech University, (emphasis Social Science)
1986-1988 Harrisburg Area Community College, Harrisburg, PA (high school admission)

Select Publications in Peer-reviewed Journals:

- **Shattuck, J.** (2015). Review of “Neuroethics in Practice” by Ann Chatterjee and Martha J Farah. *Developmental Neuropsychology*, 40, 445-446. DOI: 10.1080/87565641.2015.1109647
- Kluger BM, Palmer C, **Shattuck J.**, Triggs W. (2012). Motor evoked potential depression following repetitive central motor initiation. *Experimental Brain Research*, 216(4): 585-90. DOI: 10.1007/s00221-011-2962-y
- **Shattuck, J.**, Johnson, M., “Neural Substrates of Motor Learning” (University of Nebraska, Dissertation, May 2019)

Poster Presentations:

- **Shattuck, J.**, Johnson, M. *Exploring Movement Variability and EEG Correlates During Motor Learning*, for the American Society for Biomechanics (ASB), Rochester, MN Finalist for Doctoral Student Presentation Competition, August 2018
- **Shattuck, J.**, & Mittek, M. (2017, August). Exploring Haptic Feedback on Kinesthetic Awareness, for the American Society for Biomechanics (ASB), Boulder, CO.
- **Shattuck, J.** (2017, May). Augmented Feedback in Motor Learning, American College of Sports Medicine (ACSM), Annual Conference in Denver, CO.
- **Shattuck, J.**, & Johnson, M. (2017, April) Neural Substrates of Motor Learning, Annual Motivation Symposium, Lincoln, NE
- **Shattuck, J.** (2016, June). Evidence of motor control strategies in Dynamical Systems Theory: A case study in Collegiate Softball Pitchers, The Human Movement Variability Conference, Omaha, NE.
- **Shattuck, J.** (2011, April). Biofeedback in Sport. Annual meeting of the Association of Applied Psychophysiology and Biofeedback Conference, New Orleans, LA.

Research Experience

- **January 2016 to May 2018: University of Nebraska (UNL) in the Nebraska Athletic Performance Laboratory (NAPL).**
 - Assisted in functional movement screens of athletes and motion capture data collection. Lead a gait and arm swing motion capture pilot projects. Lead guided visualization with heart-rate variability (HRV) feedback, neurofeedback, EMG relaxation and other performance enhancing activities.
- **August 2014 to May 2018: UNL Center for Brain, Biology and Behavior**
 - Neuropsychological testing/ scoring and balance assessments with BESS
 - High density EEG array in 1) a TBI study examining cognitive performance, and 2) with simultaneous eye tracking in face processing study for children with mild traumatic brain injury.)
- **May 2017 to July 5 2017: University of Colorado, Denver**
 - Summer position: Investigating multi-nodal transdirect current simulation (TDCS) as an intervention for cervical dystonia, while using transcranial magnetic stimulation (TMS) to measure facilitation both pre and post treatment.
 - Assisted in creating protocol and writing regulatory documents.
 - Conducted TMS/EMG pilot data collection and analysis
- **August 2010 to August 2014: University of Colorado, Denver -**
Investigated central mechanisms of fatigue with TMS, EMG and MEG.
 - Used repetitive TMS as an intervention and magnetoencephalography (MEG) to improve cognitive dysfunction in Parkinson's patients.
 - Conducted intensive neuropsychological assessments of both patients and their caregivers for a study of palliative care in Parkinson's disease.
 - Manager of the MEG laboratory and the TMS laboratory.
 - Lead technician in clinical concurrent EEG/MEG scans (for UC Denver Hospital and Children's Hospital).

Grants:

- "A novel wearable, motion capture and corrective feedback system to induce proper technique during in-clinic physical therapy in Parkinson disease", Awarded 9/2019 by UCD SOM Internal Movement Disorders Center, ~\$8K 1 year. (This grant was ultimately declined in order to maintain IP for my company PantherTec.)
- "Expanding Care to Impactable TeleNeurology for Movement Disorders Patients Including Parkinson and Huntington Disease , Awarded CO Supplemental Payment Grant/UPL (upper payment limit) Feb 2021, 3 Yr ~ \$1M

Research Interests: Human Performance, Pedagogy of Motor skill acquisition, Automaticity, Electromyography, Electroencephalography, Wearable Sensing, Haptic Feedback, Biomechanics, Neuromodulation

Academic Teaching Experience

As an instructor and co-instructor, I was directly involved in every aspect of the courses below including curriculum design, post class self- assessments, administrative duties. Additional responsibilities included creating group activities and class assignments, grading written papers, counseling one-on-one for writing assignments and holding regular office hours. As a teaching assistant, I taught 4 recitations per week with 20-30 students per class, and guest lectured for the primary instructor in a regular lecture hall (350+ students).

- Fall 2017, Graduate Teaching Assistant (UNL), Research Methods Laboratory (Psych 350) teaching 2 sections per week
- Summer 2017, Co-Instructor (UNL), Perception and Action (Psych 463)
- Fall 2016 & Spring 2017, Graduate Teaching Assistant (UNL), Introduction to Psychology (Psych 181) Taught 4 recitations per week
- Summer 2016, Co-Instructor (UNL), Perception and Action (Psych 463)
- Fall 2015 & Spring 2016, Instructor (UNL), Behavioral Neuroscience (Psych 465/Biol 419) Created the online curriculum in the fall. Taught in the Spring
- Mentored 4 undergraduates beginning in the fall of 2015 through present on Honors, projects, independent projects and laboratory volunteer work.
- Spring 2011, Denver University (DU), Teaching Assistant, Sports Psychophysiology

Professional Development: Workshops/Certifications/Skills

- Judge for 35th Annual UCD SOM Student Research Forum 2021
- Judge for Undergraduate Research Fair at the UNL Motivation Symposium, April 2018
- Sports Movement Skills Conference, St Paul, MN, April 2018
- UNL Teacher Development Program 2017 (see Teaching Portfolio for a full description)
- Human Performance Summit, Nebraska Athletic Performance Laboratory and University of Nebraska, Lincoln, NE, Dec 2016, and Dec 2017
- Postural Restoration Institute PRI Interdisciplinary Integration Course, April 2017 • “Write Winning Grants” Grant writing workshop: by Dr. John D. Robertson, UNL, 2015
- “ERP Training Workshop”: Directed by Dr. Dennis Molfese. UNL, October 17-18, 2012.
- Movements Disorders Society-Unified Parkinson’s Disease Rating Scale-Certified 2013
- Stens Bio/Neuro feedback with NeXus Systems, 5-day seminar (specialized biofeedback instrumentation - HRV, Capnometry, EEG, EMG, PPG, GSR), San Francisco, CA 2010
- Emergency Medical Technician, UC Pueblo, CO (Certified in 2003)
- MATLAB, SPSS, Signal/Spike, MEG, EEG, EMG, TMS

Patents

2/2021 US Patent # 10909878 : Method and System for Providing Kinesthetic Awareness. It is a miniature motion capture and correction system that provides instructional feedback in real time based on the kinematics of the wearer.

Professional Sports Experience

- Women's Professional Racquetball Organization (WPRO). Competed full-time on the tour from 1999 to 2010 in 12-17 yearly national and international tournaments.
- Maintained a top-ten world ranking women's professional racquetball for ten years (2001 to 2011). Peaked with a world rank of #6.
- Racquetball Academy, Owner. Created a racquetball instruction company offering clinics, personal coaching, camps and other instructional products- including MuDCAT© (Multi Discipline Circuit Aptitude Training), since November 2001.
- American Professional Racquetball Organization (AMPRO) –Taught 3-day seminars on the pedagogy of racquetball, certified other coaches per 'strict criteria
- USA Racquetball, at United States Olympic Training Center (USOTC), Colorado Springs, CO (2002 to 2012); Coached annual High-Performance Racquetball Camps.
- Professional Racquetball Director/Coach. Directed the racquetball program, leagues, tournaments, and other events at The Denver Athletic Club, Denver, CO (2003 to 2010).

Selected Professional Sport Performance Presentations

- 2019 USA Racquetball, Sport Psychophysiology, Denver, CO July
- 2009 -Mexican Olympic Training Facility, Guadalajara, *Mental Skills Training*
- 2004 United States Olympic Training Center (USOTC), Colorado Springs, CO, *Importance of Pre-competition Routines*, with the United States Racquetball Association.
- 2002 Albuquerque, NM - Pan American Racquetball Committee (PARC), International Coaches conference, funded by PASO (Pan American Sports Organization). Presented coaching topics to foreign national team coaches.

Professional Societies/Service and Select Appearances in Professional Sports

- American College of Sports Medicine (ACSM) since 2016
- Society for Neuroscience (SFN)- Women in Neuroscience (since 2015)
- Ad Hoc Reviewer: Applied Psychophysiology and Biofeedback- 2016; Journal of Sport - 2013, Journal of Bones and Muscle – 2017)
- "Racquet for the Cure" Committee (1999 to 2009), benefitting the Susan G. Komen Foundation. One of several tournament directors/and committee members
- Select Appearances: Jan 2009 The Foose School, Harrisburg, PA, Feb 2009; National Girls in Sport Day, The Pine School, Stuart, FL, Sept 2008; Charter School for Behaviorally Challenged, MN; Other appearances in 20 states, 5 countries.

Previous Business Experience

- Founder: PANTHERTec -Principles of Athletics and Neuroscience Toward Human ExpeRtise.
- Founded the PIT CREW – A mobile auto oil changing service, Ruston LA 1995-1999
- Founded RACQUEBALL ACADEMY – racquetball instruction, Denver CO - 2001 to 2015
- Self-employed landlord with several residential rental properties (Waveland, MS; Denver, CO; Aurora, CO; Lincoln, NE) since 1992