

JASON BAXTER BOYLE

College of Health Sciences
The University of Texas at El Paso

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EDUCATION

- Doctor of Philosophy, Kinesiology (*Motor Neuroscience*) May 2014
Title: *Optimizing the Control of High Index of Difficulty Movements:
An Investigation of Feedback Influence on Young and Elderly Motor Behavior*
Advisor: Dr. Charles H. Shea
Texas A&M University, College Station, TX
- Master of Science, Kinesiology (*Motor Neuroscience*) Dec 2010
Texas A&M University, College Station, TX
- Bachelor of Science, Kinesiology (*Motor Behavior*) Dec 2008
Minor, Psychology
Texas A&M University, College Station, TX

PROFESSIONAL EXPERIENCE

- Assistant Professor (Dual Appointment) Sep 2014 –
- Department of Kinesiology
- Doctor of Physical Therapy Program
- Lecturer Sep 2013 – Aug 2014
The University of Texas at El Paso, El Paso, TX
- Strategic Fellowship Research Assistant Aug 2012 – Aug 2013
Texas A&M University, College Station, TX
- Graduate Teaching/Research Assistant Jan 2009 – Aug 2012
Texas A&M University, College Station, TX

TEACHING EXPERIENCE

- KIN 2332 Motor Learning & Control
- KIN 3333 Motor Development
- KIN 4310 Selected Topics: Motor Neuroscience
- KIN 4313 Biomechanics
- KIN 5373 Motor Learning & Control (Masters of Kinesiology Program)
- DRSC 5390 Neuroscience for Health Sciences (Doctor of Physical Therapy Program)
- PT 6207 Motor Control & Motor Learning (Doctor of Physical Therapy Program)

PUBLICATIONS

Refereed Journal

1. **Boyle, J.B.**, Kennedy, D., Wang, C., & Shea, C.H. (2016). Optimizing high ID performance: The role of the tracking template. *Journal of Motor Learning and Development*, 4.1, 80-99.
2. **Boyle, J.B.**, Kennedy, D.M., & Shea, C.H. (2015). A novel approach to enhancing limb control in older adults. *Experimental Brain Research*, 233, 2061-2071.
3. Kennedy, D.M., **Boyle, J.B.**, Wang, C., & Shea, C.H. (2014). Bimanual force control: Cooperation and interference? *Psychological Research*, 80, 34-54.
4. Kennedy D.M., **Boyle, J.B.**, Rhee, J. & Shea, C.H. (2014) Rhythmical Bimanual Force Production: Homologous and Non-Homologous Muscles. *Experimental Brain Research*, 233, 181-195.
5. **Boyle, J.B.**, Kennedy, D., Wang, C., & Shea, C.H. (2014). The sine wave protocol: Decreasing movement time without increasing errors. *Journal of Motor Behavior*, 46, 233-241.
6. **Boyle, J.B.**, Panzer, S., Wang, C., Kennedy, D., & Shea, C.H. (2013). Optimizing the control of high ID single degree of freedom movements: Re-thinking the power of the visual display. *Experimental Brain Research*, 231, 479-493.
7. Wang, C., Kennedy, D., **Boyle, J.B.**, & Shea, C.H. (2013). A guide to performing difficult bimanual coordination tasks: Just follow the yellow brick road. *Experimental Brain Research*, 230: 31-40.
8. **Boyle, J.B.** & Shea, C.H. (2013). Micro-movements of varying difficulties: Wrist and arm movements. *Experimental Brain Research*, 229, 61-73.
9. Kennedy, D., **Boyle, J.B.**, & Shea, C.H. (2012). The role of auditory and visual models in the production of bimanual tapping patterns. *Experimental Brain Research*, 224, 507-518.
10. **Boyle, J.B.**, Kennedy, D., & Shea, C.H. (2012). Optimizing the control of high ID single degree of freedom movements: Re-thinking the obvious. *Experimental Brain Research*, 223, 377-387.
11. Panzer, S., **Boyle, J.B.**, & Shea, C.H (2012). Additional load decrease movement time in the wrist but not in arm movements at ID 6. *Experimental Brain Research*, 224, 243-253.
12. **Boyle, J.B.**, Panzer, S., Wright, D., & Shea, C.H. (2012). Extended practice of reciprocal wrist and arm movements of varying difficulties. *Acta Psychologica*, 140, 142-153.
13. **Boyle, J.B.**, Panzer, S., & Shea, C.H. (2012). Increasingly complex bimanual multi-frequency coordination patterns are equally easy to perform with on-line relative velocity feedback. *Experimental Brain Research*, 216, 515-525.
14. Shea, C.H., **Boyle, J.B.**, & Kovacs, A.J. (2012). Bimanual Fitts' tasks: Kelso, Southard, and Goodman, 1979 revisited, *Experimental Brain Research*, 216, 113-121.
15. **Boyle, J.B.**, & Shea, C.H. (2011). Wrist and arm movements of varying difficulties. *Acta Psychologica*, 137, 382-396.
16. Kovacs, A.J., **Boyle, J.B.**, Grutmatcher, N., & Shea, C.H. (2010). Coding of on-line and pre-planned movement sequences. *Acta Psychologica*, 133, 119-126.

Under Review

1. **Boyle, J.B.**, Yang, F. & Gamez, A.S. (submitted). Pre-flight adjustments: The role of Fitts law in a two footed forward leap. *Human Movement Science*
2. Wang, C., Dai, B., **Boyle, J.B.** & Shea, C. (submitted). Are bimanual coordination and limb control strategies influenced by movement difficulty? *Psychological Research*
3. Wang, C., **Boyle, J.B.**, & Shea, C.H. (submitted) Do accuracy requirements change bimanual and unimanual control strategies? *Journal of Motor Behavior*
4. Naaktgeboren, K., Dorgo, S., & **Boyle, J.B.** (submitted) Growth Plate Injuries in Children in Sport: a Review of Sever's Disease. *Strength and Conditioning Journal*

National & International Presentations (abstracts)

1. Gamez, A., Wang, C., Manning, R. & **Boyle, J.B.** (2017). A novel approach to enhancing upper extremity coordination in children with autism spectrum disorder. *Journal of Sport & Exercise Psychology*, 39
2. **Boyle, J.B.**, Wang, C., Gamez, A., & Ables, A. (2016). Single and dual leg Fitts task: Is two better than one? *Journal of Sport & Exercise Psychology*, 38
3. **Boyle, J.B.**, Sullivant, F., & Yang, F. (2016). The effect of task difficulty on center of mass loading in a two footed forward leap. *Journal of Sport & Exercise Psychology*, 38
4. **Boyle, J.B.**, Kennedy, D.M., Wang, C., & Shea, C.H. (2015). Optimizing high ID performance: The role of the tracking template. *Journal of Sport & Exercise Psychology*, 37
5. Kennedy D.M., Wang C, **Boyle J.B.**, & Shea C.H. (2014). The effects of homologous and non-homologous muscle activation on neural crosstalk. *Journal of Sport & Exercise Psychology*, 36
6. **Boyle, J.B.**, Kennedy, D.M., Wang, C., & Shea, C.H. (2014). Age-related kinematic changes following sine wave tracking. *Journal of Sport & Exercise Psychology*, 36
7. Wang, C., Kennedy, D.M., **Boyle, J.B.**, & Shea, C.H. (2014). Bimanual and unimanual movement sequences: The role of element difficulty. *Journal of Sport & Exercise Psychology*, 36
8. Kennedy, D.M., Wang, C., **Boyle, J.B.**, & Shea, C.H. Rhythmical bimanual force production: Homologous and non-homologous muscles. Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2013
9. **Boyle, J.B.**, Kennedy, D., Wang, C., & Shea, C.H. (2013). The role of amplitude in high ID movement optimization. *Journal of Sport & Exercise Psychology*, 35 (Supplement): S22
10. Kennedy, D., **Boyle, J.B.**, Wang, C., & Shea, C.H. (2013). Bimanual Force Control: Cooperation and Interference? *Journal of Sport & Exercise Psychology*, 35 (Supplement): S33
11. **Boyle, J.B.**, Kennedy, D., Wang, C., & Shea, C.H. (2013). Optimizing the control of high ID wrist and arm movements *Journal of Sport & Exercise Psychology*, 35 (Supplement): S21
12. **Boyle, J.B.**, & Shea, C.H. Normal and micro-movements of varying difficulties: Wrist and arm movements. Program No. 591.14. 2012 Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012

13. Shea, C.H., & **Boyle, J.B.** Optimizing the control of High ID reciprocal aiming. 2012 Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012
14. Kennedy, D., **Boyle, J.B.**, & Shea, C.H. (2012). Utilizing auditory and visual cues in a multi frequency tapping experiment. *Journal of Sport & Exercise Psychology*, 34 (Supplement): S64
15. **Boyle, J.B.**, Kennedy, D., & Shea, C.H. (2012). Harmonic reciprocal motion at an ID of 6: Rethinking the obvious. *Journal of Sport & Exercise Psychology*, 34 (Supplement): S64
16. **Boyle, J.B.**, & Shea, C.H. (2011). Control of wrist and arm movements of varying difficulties. *Journal of Sport & Exercise Psychology*, 33 (Supplement): S56
17. **Boyle, J.B.**, & Shea, C.H. (2011). Arm and wrist control: Extended practice Fitts task. *Journal of Sport & Exercise Psychology*, 33 (Supplement): S56
18. Shea, C.H., & **Boyle, J.B.** (2011). Bimanual coordination: Evaluating feedback displays. *Journal of Sport & Exercise Psychology*, 33 (Supplement): S11

Local & Regional Presentations

1. Gamez, A.S. & **Boyle, J.B.** (2016). The effect of task difficulty on center of mass loading in a two footed forward leap. UTEP College of Health Sciences, Healthy Exchange Forum.
2. UTEP Doctoral Physical Therapy Program (Guest Lecture, Neuro modalities II). Presentation Title: Cellular to Behavioral Plasticity. (2015)
3. Kennedy, D.M., Wang, C., **Boyle, J.B.**, & Shea, C.H. (2014). Rhythmical bimanual force production: Homologous and non-homologous muscles. Texas A&M Student Research Week.
4. **Boyle, J.B.** (2014). Kinematic changes following sine wave tracking: A novel approach to enhancing elderly limb control. UTEP College of Health Sciences, Healthy Exchange Forum.
5. Meeuwssen, H. J., Yang, F., & **Boyle, J.B.** (2014). The challenges of adopting Team Based Learning in the first semester as a faculty member. Paper presented at the International Sun Conference on Teaching and Learning. The University of Texas at El Paso, El Paso, TX. March 7.
6. Kennedy, D.M., Wang, C., **Boyle, J.B.**, & Shea, C.H. (2014). Rhythmical bimanual force production: Homologous and non-homologous muscles. Texas A&M Society for Neuroscience.
7. **Boyle, J.B.** (2014) Victoria University College of Health & Biomedicine, Melbourne Australia (Teleconference) Presentation Title: Kinematic changes following sine wave tracking: A novel approach to enhancing elderly limb control.
8. Kennedy, D.M., **Boyle, J.B.**, Wang, C., & Shea, C.H. (2013). Bimanual force control: Cooperation & interference. Texas A&M Student Research Week.
9. Kennedy, D.M., **Boyle, J.B.**, & Shea, C.H. (2012). Rhythmical bimanual force production: 1:2 and 2:3 coordination patterns. Texas Brain & Spine Institute 6th Annual Neuroscience Symposium.
10. Kennedy, D.M., **Boyle, J.B.**, & Shea, C.H. (2012). Polyrhythmic Bimanual force production. Texas A&M Institute for Neuroscience Annual Poster Session
11. Shea, C.H., **Boyle, J.B.**, & Kovacs, A. (2012). Bimanual Fitts' tasks: Kelso, Southard, and Goodman, 1979 revisited. Verbal presentation: Texas A&M Student Research Week.

12. Kennedy, D., **Boyle, J.B.**, & Shea, C.H. (2012). Utilizing auditory and visual cues in a multi frequency tapping experiment. Poster presentation: Texas A&M Student Research Week.

Community Outreach

1. **Boyle, J.B.** Controlling the Wrist and Arm. The Eagle: Fitness and Sports Science Blog (June 2015). <http://www.theeagle.com>
2. **Boyle, J.B.** Improving Goal-Directed Limb Movement: Don't Overthink This! Sydney and JL Huffines Institute for Sports Medicine and Human Performance Weekly Public Sports Medicine Topic. (June 2013). <http://huffinesinstitute.org/resources/articles>
3. **Boyle, J.B.** Control of wrist and arm movements of varying difficulties. Sydney and JL Huffines Institute for Sports Medicine and Human Performance Weekly Public Sports Medicine Topic. (March 2012). <http://huffinesinstitute.org/resources/articles>

GRANTS

External: Submitted

- NSF-PAC, PD-09-7252 (2017) \$200,000
National Science Foundation- Division of Behavioral and Cognitive Sciences
Perception, Action & Cognition
PI: Jason B Boyle
Co-PI: Deanna Kennedy (Texas A&M University)
Project Title: The critical index of difficulty in augmented virtual environments
- NIH-NIBIB, R03, PA-16-162 (2016) \$151,000
National Institutes of Health- National Institute of Biomedical
Imaging and Bioengineering
PI: Jason B Boyle
CO-I: Chaoyi Wang (First hospital of Jilin University, China)
*Project Title: Critical ID Shifts: The Role of Visual and Physical Manipulations
in Upper Extremity Motor Control*
- NIH-NIGMS, R25, PAR-13-333 (2016)
National Institutes of Health- National Institute of General Medical Sciences
PI: Delfina Dominguez (UTEP representative)
CO-I: Jason B Boyle
Project Title: Bridges to the Baccalaureate

External: Not Funded

- Texas Physical Therapy Association (2015) \$5,000
PI: Jason B Boyle
Co-I: Rhonda Manning, Ana Cisneros
*Project Title: An investigation of upper limb control adaptability in high functioning
Autism spectrum disorder patients*

Internal: Funded

- The University of Texas at El Paso- University Research Initiative Program (2015) \$5,000
Project Title: Kinematic components of limb movement in visually augmented environments
- TAMU College of Education and Human Development Strategic Fellowship (2013) \$20,000
- TAMU College of Education and Human Development Strategic Fellowship (2012) \$20,000
- Huffines Institute of Human Performance and Sports Medicine- Research (2012) \$1,500
Project Title: Optimizing Goal Directed Movement at Varying Levels of Feedback Manipulation
- Huffines Institute of Human Performance and Sports Medicine- Travel Grant (2012) \$800
- TAMU College of Education and Human Development Research Grant (2012) \$950
Project Title: Arm and Wrist Kinematics under Visual and Physical Gain Manipulations
- TAMU College of Education and Human Development- Travel Grant (2012) \$500
- Huffines Institute of Human Performance and Sports Medicine Travel Grant (2011) \$750

Student: Funded

- Allien and Paul C. Davidson University of Texas Scholarship Award (2016)
Student: Alejandra Gamez
Faculty Advisor: **Jason B Boyle**
- Organization for Autism Research-Graduate Research Grant Program (2016)
PI: Alejandra Gamez
Faculty Advisor: **Jason B Boyle**
Project Title: A Novel Approach to Enhancing Upper Extremity Coordination in Children with Autism Spectrum Disorder

REVIEW WORK

Journal

- Journal of Motor Behavior
- Perceptual and Motor Skills
- Journal of Sports Sciences
- Frontiers in Psychology

Textbook

- Introduction to Statistics in Kinesiology. Mood, D.P., & Morrow, J.R.
2014

AWARDS

TAMU College of Education and Human Development Distinguished Honor Graduate	2014
TAMU College of Education and Human Development Strategic Fellowship	2013
TAMU College of Education and Human Development Strategic Fellowship	2012

SERVICE

University

- UTEP Faculty Senate 2015 –
- UTEP Graduate Student Research Expo (Faculty Judge) 2015 –

College of Health Sciences

- Interdisciplinary PhD Program Executive Council 2015 –
- Web Development & Technology Committee 2013 –

Department of Kinesiology

- Assistant/Associate Professor of Kinesiology search (Committee member) 2016
- Dodson Funds Allocation (Committee member) 2015
- Assistant/Associate Professor of Pedagogy search (Committee member) 2014, 2015
- Miner Madness 3V3 Shootout (Co-Director, Basketball Tournament) 2014, 2015
- Miner Dash 5K (account manager, route organizer) 2014, 2016

MENTORSHIP

Chair- Interdisciplinary Health Sciences PhD Program

- Fabricio Saucedo *current*
Dissertation Title: Whole body vibration and its impact on post-stroke gait

Chair- Masters Committee

- Paulina Sanchez-Barrios *Spring 2016*
Project Title: Influence of gestational age and/or birth weight on Autism Spectrum Disorders
- Alejandra Gamez *current*
Thesis Title: A Novel Approach to Enhancing Upper Extremity Coordination in Children with Autism Spectrum Disorder
- Timothy Groover *current*
Thesis Title: Single and dual leg Fitts task: Is two better than one?
- Julie Howard *current*
Project Title: The use of mobile phone applications when athletic trainers or healthcare professionals are not present

Chair- Undergraduate Honors Thesis

- Jorge Sanchez Tarango *current*

Member- Masters Committee

- Patrick Cereceres *Fall 2016*
Thesis Title: Treadmill-based perturbation training for Preventing falls among young adults

- Jeremy Perales Spring 2016
*Thesis Title: Comparison of the Effectiveness of Treadmill
 VS. Overground Sprint Training*
- Stacey Bridges Fall 2015
Project Title: Leadership in sports: From theory to application. A guide for coaches
- Kristal Vigil
Project Title: Effects of physical activity on the decrease of fetal macrosomia
- Jennifer Waltz
*Project Title: Causal attributions among competitive sport athletes:
 Thoughts, affective responses, and methods for improving performance*
- Jenna Swengros Spring 2015
*Project Title: Implications of diverse research findings in the design of
 internet-based physical activity programs*
- Kaitlin Naaktgeboren Fall 2014
*Project Title: Growth plate Injuries in adolescent children in sports:
 A review of Sever's disease*

Graduate Independent Studies / Research

- Dorothy Stewart Spring 2017
- Mohssen Sajjadi (*Electrical & Computer Engineering*) Fall 2016
- Alejandra Gamez Fall 2015
- Julie Howard
- Sergio Guerrero (*Electrical & Computer Engineering*)
- Gary Badley (*Electrical & Computer Engineering*) Spring 2015
- Micah Baisden
- Simon Bejarano
- Frank Sullivant
- Lorin Jepps

Undergraduate Independent Studies / Research

- Lauren Chacon (Building Scholars program) Spring 2017
- Selene Lopez (COURI program)
- Joshua Villalobos
- Jasmin Jenkins Fall 2016
- Lauren Ortega
- Javier Ornelas (*Electrical & Computer Engineering*) Spring 2016
- Noemi Falcon (*Electrical & Computer Engineering*) Fall 2015
- Kevin Rincon
- Alicia Ables
- Tomiwa Akinbayo Spring 2015
- Oscar Gamez

GEARS Golf Lab Internship

- Lauren Chacon Fall 2016

PROFESSIONAL ORGANIZATIONS

- North American Society for Psychology of Sport and Physical Activity (NASPSPA) 2011 –
 - Motor Control Poster Session Moderator (6/16/2016)
- Sigma Xi -The Scientific Research Society 2012 – 2013
- Society for Neuroscience (SFN) 2012 – 2014
- Human Factors and Ergonomics Society (HFES) 2012 – 2013

PROFESSIONAL WORKSHOPS ATTENDED

- Academic Technologies Center for Instructional Design: Blackboard: Building 2016
Group discussions
- CETaL: Cultivating and maintaining civility in the classroom
- CETaL: Beyond a talking head: Making brief videos that engage students
- Academic Technologies Center for Instructional Design: Blackboard collaborate ultra
- CETaL: Recognizing assets of our students: A QEP inspired conversation
- CETaL: Applying principles of visual communication
- CETaL: Think-Pair-Share: Tools to improve interaction and learning In lectures
- ORSP: Excellence in compliance for research and policy 2015
- National Research Mentoring Network: The importance of culturally responsive mentoring
- CETaL: Excellence in Mentoring
- CETaL: Sun Conference
- CETaL: Excellence in Mentoring 2014

PROFESSIONAL REFERENCES

Dr. Charles H. Shea

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Department of Health & Kinesiology
Texas A&M University – Mail stop 4243
College Station, TX 77843
Phone: (979) 845-5002
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Dr. David Wright

Professor
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Dr. Deanna Kennedy

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Dr. Feng Yang

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fyang@utep.edu

Dr. Sudip Bajpeyi

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