

# Dustin R. Grooms PhD, ATC, CSCS

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## Contact Information

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Dustin Grooms, PhD, AT, CSCS  
Assistant Professor  
Division of Athletic Training  
School of Applied Health Sciences and Wellness  
College of Health Sciences and Professions  
Ohio University  
E156 Grover Center  
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## EDUCATION

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**Doctor of Philosophy**, Health and Rehabilitation Sciences, June 2015

**The Ohio State University**, Columbus, Ohio – GPA 3.86

Neuroscience concentration

Musculoskeletal biomechanics concentration

Dissertation: *Neuroplastic & Neuromuscular effects of Anterior Cruciate Ligament Injury*

**Master in Education**, Kinesiology, August 2009

**University of Virginia**, Charlottesville, Virginia – GPA 3.91

Thesis: *Transverse Abdominis Activation in Stabilization Classification Low Back Pain: Pressure Biofeedback and Real-Time Ultrasound Assessment*

**Bachelor of Science**, Athletic Training, May 2008

**Northern Kentucky University**, Highland Heights, Kentucky – GPA 3.8

Minor: Mathematics & Engineering

*Student Commencement Speaker*

Magna Cum Laude

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## SCHOLARSHIP

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## REFEREED PUBLICATIONS

1. Clifton DR, **Grooms DR**, Onate JA. Overhead Deep Squat Performance Predicts Functional Movement Screen™ Score. *Int J Sports Phys Ther.* 2015;10(5):622-7
2. **Grooms D**, Appelbaum G, Onate J. Neuroplasticity following anterior cruciate ligament injury: A framework for visual-motor training approaches in rehabilitation. *J Orthop Sports Phys Therap.* 2015;45(5):381-393.

3. **Grooms DR**, Page S, Onate, J. Brain activation for knee movement measured days before anterior cruciate ligament second injury: neuroimaging in musculoskeletal medicine. *J Athl Train*. 2015;50(10):1005-1010.
4. Ferguson S, **Grooms DR**, Onate J, Khan S, Marras W. Low Back Functional Health Status of Patient Handlers. *Journal of Occupational Rehabilitation*. 2015;25(2):296-302
5. **Grooms DR**, Grindstaff T, Croy T, Hart J, Saliba S. Clinimetric Analysis of Pressure Biofeedback and Transversus Abdominis Function in Individuals with Stabilization Classification Low Back Pain. *Journal of Orthopaedic and Sport Physical Therapy*. 2013;43(3):184-93
6. **Grooms DR**, Palmer T, Onate JA, Myer GD, Grindstaff T. Soccer-specific warm-up and lower extremity injury rates in collegiate male soccer players. *J Athl Train*. 2013;48(6):782-789.
7. Saliba S, Croy T, Guthrie R, **Grooms D**, Weltman A, Grindstaff T. Differences in Transverse Abdominis Activation with Stable and Unstable Bridging Exercises in Individuals with Low Back Pain. *North American Journal of Sports Physical Therapy*. 2010;5(2):63-71

### ARTICLES IN PRESS

1. **Grooms D**, Onate, J. Neuroscience Application to Noncontact Anterior Cruciate Ligament Injury Prevention. *Sports Health*.
2. Clifton DR, **Grooms DR**, Onate JA. Issues with Injury Prediction Research. *J Athl Train*

### ARTICLES IN PEER REVIEW

1. Schussler E, **Grooms D**, Onate J. The Effects of Model Type in Video Augmented Feedback for Youth Performing Sports Movements: A Brief Review. *Journal of Strength and Conditioning Research 2015 - resubmission*
2. **Grooms D**, Page S, Larsen D, Chaudhari A, White, S Onate J. Neuroplastic effects of Anterior Cruciate Ligament Reconstruction and Rehabilitation. *American Journal of Sports Medicine* Oct 2015
3. **Grooms D**, Page S, Larsen D, Chaudhari A, White, S Onate J. The Brain-Behavior Relationship in Anterior Cruciate Ligament Reconstructed Individuals. *Medicine & Science in Sport & Exercise* Oct 2015
4. **Grooms D**, Page S, Larsen D, Chaudhari A, White, S Onate J. Visual-Sensory-Motor control and integration after Anterior Cruciate Ligament Reconstruction. *British Journal of Sports medicine* Oct 2015

### INVITED EDITOR REVIEWED PUBLICATIONS

1. Grooms D, Onate J. Motor cortex structural connectivity after ACL reconstruction. Presented at the 7<sup>th</sup> ACL Research Retreat, Greensboro, NC, April 2015 – Featured in: *Lower Extremity Review: Conference coverage: 7<sup>th</sup> ACL research retreat May 2015*
2. Meister A, **Grooms D**, Starkel C, Onate J. Functional Tests to Predict Lower Extremity Injury Risk. *Lower Extremity Review*. March 2014

## ARTICLES IN PROGRESS

1. **Grooms D**, Page S, Larsen D, Chaudhari A, Onate J. Neuroplasticity following Anterior Cruciate Ligament Injury – A Systematic Review. *British Journal of Sports Medicine* (2015)
2. **Grooms D**, Chaudhari A, McNally M, Onate J. The Effects of Stroboscopic Vision on Landing Biomechanics. *Clinical Biomechanics* (2015)
3. **Grooms D**, Chaudhari A, McNally M, Young J, Onate J. Drop Vertical Jump Knee Kinematics Predict Basketball rebound Knee Kinematics. *Journal of Athletic Training* (2015)
4. Onate J, Starkel C, **Grooms D**, Miller M, Schussler E, Clifton D, Chaudhari A, Borchers J, Best T, Cortes N, Comstock D. Functional Pre-Participation Physical Baseline Metrics – A Nationwide Data Set. *American Journal of Sports Medicine* (2015)
5. Onate J, Strock M, Whitmer C, Pan J, **Grooms D**. Data Driven Outcomes: Bridging Musculoskeletal Medicine and Human Performance. DTIC Navy Socom white paper (2015)
6. **Grooms D**, Schussler E, Persch A, Onate J. The Direct Quantification of Motor Learning in Exercise and Sport. *Human Movement Science*

## Book Contributions

1. Driban J, Thomas, S. Evidence-Based Assessment and Prevention of ACL injuries. *Human Kinetics* (2015) - manuscript contribution

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## PRESENTATIONS

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### UPCOMING - Accepted

1. **Grooms D**, Lepley L, Onate J. (2016) Eccentric Exercise as a Mechanism to Address Neuroplasticity Associated with ACL Reconstruction: An Exploratory Study. *Great Lakes Athletic Trainers' Association Annual Meeting*; Chicago, IL. Platform Presentation
2. **Grooms D**, Lepley A, Needle A. (2016) Is it all in your head? Clinical Implication of Changes in Brain Function following Joint Injury. *American College of Sports Medicine 63<sup>rd</sup> Annual Meeting*; Boston, MA. Feature Presentation

3. **Grooms D**, Lepley A, Needle A. (2016) Clinical Implication of Neuroplasticity Musculoskeletal injury. *National Athletic Training Association 67<sup>th</sup> Annual Meeting*; Baltimore, MD. Feature Presentation
4. **Grooms D**. (2015) The role of Neuroimaging in Sports Medicine. *The Ashby Dialogues*; Univeristy of Northern Carolina Greensboro. **Keynote Address**
5. **Grooms D**. (2015) Neuroscience of Motor Learning. Scientific presentation to the Division of Occupational Therapy, School of Health and Rehabilitation Sciences, The Ohio State University. Columbus, OH. **Invited**
6. Dinan L, **Grooms D**, Thomas L, McNally M, Ithurburn M, Onate J, Schmitt L. (2016) Lower extremity biomechanics during a jump-landing task: A case report of an accidental injury in a research setting. *American Physical Therapy Combined Sections Meeting*.

### UPCOMING – Submitted

1. Onate J, Starkel C, Borchers J, Chaudhari A, Clifton D, Comstock D, Cortes N, **Grooms D**, Hertel J, McNally M, Miller M, Schussler E, Van Lunen B, Pan X, Best T. S Injury History Predicts Musculoskeletal Lower Extremity Injury Risk in Healthy High School Athletes: The FPPE Project. *Medicine and Science in Sports and Exercise*. 2016
2. **Grooms D.R**, Page S.J, Nichols-Larsen D.S, Chaudhari A.M.W, White S.E, Onate J.A. (2016) The Brain Behavior relationship after Anterior Cruciate Ligament Reconstruction. *American College of Sports Medicine 63<sup>rd</sup> Annual Meeting*; Boston, MA.
3. Simon J.E, **Grooms D.R**, Docherty, C.L. (2016) High Prevalence of Physician Diagnosed Osteoarthritis and Limited Knee Function After Knee Surgery in Former Collegiate Athletes *National Athletic Training Association 67<sup>th</sup> Annual Meeting*; Baltimore, MD.
4. Clifton D.R, Starkel C, Best T, Borchers J, Chaudhari A, Comstock D, Cortes N, **Grooms D**, Hertel J, McNally M, Miller M, Schussler E, Van Lunen B, Pan X, Onate J. Relationship between Single Leg Hop Asymmetry, Performance, and Injury Probability: A Moderation Analysis (The FPPE Project) *National Athletic Training Association 67<sup>th</sup> Annual Meeting*; Baltimore, MD.
5. **Grooms DR**, Chaudhari AM, Page SJ, White SE, McNally MP, Nichols-Larsen D, Onate JA.(2016) Visual Motor Control of Drop Landing following Anterior Cruciate Ligament Reconstruction *National Athletic Training Association 67<sup>th</sup> Annual Meeting*; Baltimore, MD.

### REFEREED PLATFORM

1. **Grooms D**, Page S, Onate J.(2015) Cerebral Control of Jump Landing in Anterior Cruciate Ligament Reconstructed Individuals. *National Athletic Training Association 66<sup>th</sup> Annual Meeting*; St. Louis, MI. Oral Free Communication Presentation. – **Doctoral dissertation award winner**
2. **Grooms D.R**, Page S.J, Nichols-Larsen D.S, Chaudhari A.M.W, Onate J.A. (2015) Motor Planning and Sensory Neuroplasticity after ACL Reconstruction. *American College of Sports Medicine 62<sup>st</sup> Annual Meeting*; San Diego, CA. Thematic Presentation

3. **Grooms D**, Onate J. (2015) Motor Cortex Structural Connectivity after ACL Reconstruction. *ACL Research Retreat*. Greensboro, NC. Oral presentation
4. **Grooms D**, Schussler E, Miller M, Onate J. (2014). Brain Neuroplastic Hip and Knee Control Changes in ACL Reconstructed Individuals. *National Athletic Training Association 65<sup>th</sup> Annual Meeting*; Indianapolis, IN. Thematic Presentation
5. **Grooms D**. (2014). Cerebral Control of Jump Landing in Anterior Cruciate Ligament Reconstructed Individuals. *Ohio State University Sports Medicine Research Day*. Columbus, OH. Platform presentation
6. **Grooms D**, Schussler E, Miller M, Onate J. (2014). Brain Activation Differences in ACL Reconstructed Individuals and Healthy Controls. *American College of Sports Medicine 61<sup>st</sup> Annual Meeting*; Orlando, FL. Thematic Presentation
7. **Grooms, D**, Schroeder M, Chaudhari A, Schmitt L, Borchers J, Onate J.(2012) Functional Performance Measures of NCAA Division I Football players by Position. *National Athletic Training Association 63<sup>rd</sup> Annual Meeting*; St. Louis, MI, Thematic Presentation
8. **Grooms, D**, Beisner A, Schmitt L, Borchers J, Schroeder M, Miller M, Onate J. (2012). Trunk control performance differences in injured NCAA Division I Lacrosse players *American College of Sports Medicine 59<sup>th</sup> Annual Meeting*; San Francisco, CA. Thematic Presentation
9. **Grooms, D**, Palmer T, Grindstaff, T. (2011). The Effects of a Comprehensive Soccer Specific Warm Up Program on Lower Extremity Injury Rates. *National Athletic Training Association 62<sup>nd</sup> Annual Meeting*; New Orleans, LA. Oral Free Communication Presentation
10. **Grooms D**, Grindstaff T, Croy T, Beazell J, Saliba S. (2010). Differences in transverse abdominis activation in individuals with stabilization class low back pain. *National Athletic Training Association 63<sup>rd</sup> Annual Meeting*; Philadelphia PA Oral Presentation

## REFEREED POSTER

1. **Grooms D.R**, Page S.J, Nichols-Larsen D.S, Chaudhari A.M.W, Onate J.A. (2015) Motor Cortex Activation and Landing Neuromuscular Control after Anterior Cruciate Ligament Reconstruction. *American Society of Biomechanics 39th Annual Meeting*; Columbus, OH. Poster Presentation
2. Colucci G, Miller M, Looman K, Seidel J, Clifton D, **Grooms D**, McNally M, Schussler E, Starkel C, Onate J. (2015) Comparison of Rectus Femoris Force Output and Activation in Seated vs. Prone Extension. *American Society of Biomechanics 39th Annual Meeting*; Columbus, OH. Poster Presentation
3. **Grooms D**, McNally M, Chaudhari A, Schussler E, Miller M, Young J, Starkel C, Kneisel K, Fonza C, Onate J. (2014). The Effects of Stroboscopic Vision on Drop Landing Kinematics. *7<sup>th</sup> World Congress of Biomechanics*; Boston, MA. Poster Presentation. **International**
4. Miller M, **Grooms D**, Schussler E, Starkel C, Meister A, Kneisel K, Onate J. (2014) Single Leg Anterior Reach Performance and Postural Control in NCAA Division I Collegiate Women's Soccer Athletes. *7<sup>th</sup> World Congress of Biomechanics*; Boston, MA. Poster Presentation. **International**

5. **Grooms D**, Schussler E, Miller M, Onate J. (2014). Brain Activation Differences in ACL Reconstructed Individuals and Healthy Controls. *The Ohio State University Trainee Research Day Presentation*; Columbus, OH: Poster Presentation
6. **Grooms D**, Angie B, Bowman J, Borchers J, Miller M, Schroeder M, Schussler E, Onate J. (2013). Lower Extremity Functional Contributions To Dynamic Postural Control. *National Athletic Training Association 64<sup>th</sup> Annual Meeting*; Las Vegas, NV, Poster Presentation
7. **Grooms D**, Ferguson S, Marras W, Beisner A, Onate J. (2013). Trunk Kinematic Control and Muscle Performance in NCAA Division I Lacrosse Players. *American College of Sports Medicine 60<sup>th</sup> Annual Meeting*; Indianapolis, IN. Poster Presentation
8. **Grooms, D**, Ferguson S, Marras W, Beisner A, Onate J. (2013). Trunk Kinematic Control and Muscle Performance in NCAA Division I Lacrosse Players. *The Ohio State University Trainee Research Day Presentation*; Columbus, OH: Poster Presentation
9. **Grooms D**. Chaudhari A, Bowman J, Beisner A, Miller M, Schmitt L, Borchers J, Onate J. (2012). Hop Performance of NCAA Division I Male Athletes: Considerations for Normalization and Injury. Paper presented at: *Midwest American College of Sports Medicine Annual Meeting*.
10. Miller M, Hertel J, Van Lunen B, Cortes N, Schussler E, **Grooms D**, Onate J. (2012) Three Methods of Normalizing Hip Strength Data of Male and Female Collegiate Soccer Players. Paper presented at: *Midwest American College of Sports Medicine Annual Meeting*.
11. **Grooms, D**, Beisner A, Schmitt L, Borchers J, Schroeder M, Miller M, Onate J. (2012). Trunk control performance differences in injured NCAA Division I Lacrosse players. *The Ohio State University Trainee Research Day Presentation*; Columbus, OH: Poster Presentation

## INVITED

1. **Grooms D**. (2015). Evidence Based Practice in Athletic Training. *Greater Columbus Athletic Trainers' Society*. Columbus, OH. **Invited**
2. Onate J & **Grooms D**. (2014) NSWG4 Combat Craft Crewmen Rapid Enhancement & Sustainment (CREST) Research Report. *Special Warfare Combat Crewman Human Performance*. Norfolk, VA.
3. **Grooms D**. (2014). Evidence Based Practice – Knee Evaluation and Treatment. *Heidelberg University, College of Health Sciences*. Tiffin, OH.
4. **Grooms D**. (2014). Evidence Based Practice in Athletic Training. *Ohio Athletic Trainers' Association State Symposium*. Columbus, OH. **Keynote address**
5. Onate J & **Grooms D**. (2014) NSWG4 Combat Craft Crewmen Rapid Enhancement & Sustainment (CREST) Project Update. *SOCOM Human Performance Program Meeting*; San Diego, CA. Symposium.
6. **Grooms D**. (2013). Brain-Behavior Model for Lower Extremity Motor Control – Anterior Cruciate Ligament Injury. Scientific presentation to the Division of Psychology and Neuroscience, School of Arts and Sciences, The Ohio State University. Columbus, OH.

7. **Grooms, D.** (2013). Neural Control of Human Movement. Scientific presentation to the Division of Occupational Therapy, School of Health and Rehabilitation Sciences, The Ohio State University. Columbus, OH.
8. **Grooms, D.** (2013). Musculoskeletal Neuroscience. Scientific presentation to the Division of Athletic Training, School of Health and Rehabilitation Sciences, The Ohio State University. Columbus, OH.
9. **Grooms, D.** (2013). The Role of The Brain in ACL Injury. Scientific presentation to the School of Health and Rehabilitation Sciences Grand Rounds. The Ohio State University. Columbus, OH.
10. **Grooms, D.** (2013). Foundations of rehabilitation using electrical stimulation. Scientific presentation to the Division of Occupational Therapy, School of Health and Rehabilitation Sciences, The Ohio State University. Columbus, OH.
11. **Grooms, D.** (2012). Clinically Applied Spine Biomechanics. Scientific presentation to the Division of Athletic Training, School of Health and Rehabilitation Sciences, The Ohio State University. Columbus, OH.
12. **Grooms, D.** (2012). Lower Extremity Biomechanics and Neuromuscular Control. Scientific presentation to the Division of Athletic Training, School of Health and Rehabilitation Sciences, The Ohio State University. Columbus, OH.
13. **Grooms, D.** (2011). Evidence Based Clinical Predictors in Athletic Training Evaluation. Scientific presentation to the Division of Athletic Training, School of Health and Rehabilitation Sciences, The Ohio State University. Columbus, OH.
14. **Grooms, D.** (2013). The Role of the Brain in Musculoskeletal Injury Prevention and Rehabilitation. *Atrium Medical Center Sports Medicine Symposium*; Middletown, OH.
15. **Grooms, D.** (2012) Role of the Brain in Musculoskeletal Injury: How can We Really Change Movement. *Good Samaritan Hospital Sports Medicine's Winter Symposium*; Dayton, OH.
16. **Grooms, D.** (2011). Evidence Based Sports Medicine. Scientific presentation to the Human Performance & Sport Sciences Division, College of Arts & Science, Ohio Northern University. Ada, OH.
17. **Grooms, D.** (2010). Clinical Predictor Rules and Treatment Based Classification for Low Back Pain. Scientific presentation to the Athletic Training Program, College of Education and Human Services, Northern Kentucky University. Highland Heights, KY.
18. **Grooms, D.** (2009). Evidence based spinal evaluation: Clinical Predictor Rules and Treatment Based Classification. Scientific presentation to the department of Athletic Training, Division of Health Sciences, College of Mount Saint Joseph. Delhi, OH.
19. **Grooms, D.** (2009 & 2010). Evidence Based Sports Medicine. Scientific presentation to the Athletic Training Program, College of Education and Human Services, Northern Kentucky University. Highland Heights, KY.

## CLINICAL SYMPOSIA

1. **Grooms D.** (2015) Neuroplastic and Neuromuscular Effects of Knee Anterior Cruciate Ligament Injury. Scientific presentation to the School of Health and Rehabilitation Sciences. Dissertation Defense. The Ohio State University. Columbus, OH.
2. Palmer T & **Grooms D.** (2014) Training from the Inside Out: Establishing Proximal Stability for Distal Mobility. *National Athletic Training Association 65<sup>th</sup> Annual Meeting*; Indianapolis, IN, Learning Lab Leader
3. Palmer T, **Grooms D.** (2013). The Psychometric Properties of Spinal “Core” Stability Assessment Tools. *National Athletic Training Association 64<sup>th</sup> Annual Meeting*; Las Vegas, NV, Learning Lab Assistant
4. **Grooms, D.** (2012). Improving Effectiveness in Injury Evaluation with Clinical Predictor Rules. *National Athletic Training Association 63<sup>rd</sup> Annual Meeting*; St. Louis, MI, Learning Lab.
5. Palmer T, **Grooms, D.** (2012). Train the Chain: Rehabilitation Methods for Addressing Biomechanics in the Kinetic Chain. *National Athletic Training Association 63<sup>rd</sup> Annual Meeting*; St. Louis, MO, Learning Lab Assistant.
6. **Grooms D,** Grindstaff T, Croy T, Beazell J, Saliba S. (2009). Differences in transverse abdominis activation in individuals with stabilization class low back pain. Kinesiology Department, Curry School of Education, University of Virginia, Charlottesville, VA. Master's Thesis Defense.
7. **Grooms D,** Grindstaff T. (2009). Insidious C-spine disc herniation in a collegiate wrestler. Case study presentation to the Sport Medical Staff, University of Virginia, Charlottesville, VA.
8. **Grooms D,** Grindstaff T, Guthrie B, Norte G, Hertel J. (2008). Does Poor Core Stability Increase Risk of Lower Extremity Injury in an Active Population? A Systematic Review presented to the Kinesiology Department, Curry School of Education, University of Virginia, Charlottesville, VA.
9. **Grooms D,** McCann R, Hale A, Kemme M, Morgan T. (2008). The effects of a Short-Term Balance-Training Program on the Functional Mobility of Senior Citizens. Undergraduate research thesis presented to department of Kinesiology and Health, Northern Kentucky University. Highland Heights, KY.
10. **Grooms D,** Cosgray N, Palmer T. (2008). Lateral Release Complication in a National Football League Professional Athlete. Case study presented to department of Kinesiology and Health, Northern Kentucky University. Highland Heights, KY
11. **Grooms D,** McCann R. (2007). Rehabilitation of a Second Degree Hamstring Strain in a Collegiate Basketball player. Case study presented to department of Kinesiology and Health, Northern Kentucky University. Highland Heights, KY. 2007

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## GRANTS AND FUNDING

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**FUNDED**



**Source:** The Ohio State University Presidential Fellowship

**Award:** \$25,500

**Title:** Neuroplasticity of Knee Injury

**Primary Investigator:** Grooms DR

**Period:** 1/2014-8/2015

**Description:** The Presidential Fellowship is the most prestigious award given by the Ohio State Graduate School to recognize the outstanding scholarly accomplishments and potential of graduate students by providing financial support for the final phase of their dissertation.

**Source:** National Athletic Training Association Research & Education Foundation

**Award:** \$2,300

**Title:** Visual Interference Effects on Lower Extremity Neuromuscular Control

**Primary Investigator:** Grooms DR

**Co-investigators:** Onate JA, Chaudhari A

**Period:** 7/2013-8/2015

**Description:** Doctoral student grant, to quantify the effects of stroboscopic vision on drop landing and run to cut biomechanics

**Source:** National Strength and Conditioning Association

**Award:** \$9,000

**Title:** Visual Interference Neuromuscular Training Effects on Movement Performance

**Primary Investigator:** Grooms DR

**Co-investigators:** Onate JA, Chaudhari A

**Period:** 2/2013-8/2015

**Description:** Doctoral student grant, to quantify the effects of a single session neuromuscular training with stroboscopic vision on drop landing and run to cut biomechanics

**Source:** NIKE – SPARQ performance

**Award:** Proprietary technology

**Title:** Motor Cortex Control for Lower Extremity Movement Patterns

**Primary Investigator:** Grooms DR

**Co-investigators:** Onate JA, Herb Y

**Period:** 2012-2014

**Description:** Evaluation of the effects of stroboscopic glasses on lower extremity movement patterns

**Source:** The Ohio State College of Medicine

**Award:** \$22,450

**Title:** Cortical Resources for Lower Extremity Movement

**Primary Investigator:** Onate, JA

**Role:** Primary author, project leader

**Co-investigators:** Chaudhari A, Page S, Larsen D

**Period:** 2/2013-8/2015

**Description:** Pilot funding award, to develop a preliminary brain-behavior model for knee motor control utilizing fMRI brain neuroimaging, 3D biomechanics and ACL injury as a pathology model

**Source:** National Institutes of Health NIAMS R01-AR062578-01A1

**Award:** \$1,764,939

**Title:** Functional Evaluation to Predict Lower Extremity Musculoskeletal Injury

**Primary Investigator:** Onate, JA

**Role:** Project manager

**Co-investigators:** Best T, Borchers J, Chaudhari A, Comstock D, Cortes N, Hertel J, Hewett T, Pan J, Van Lunen B

**Period:** 9/2013-8/2017

**Description:** Nationwide project to evaluate efficacy of the pre-participation physical exam and if a short functional battery can better predict injury risk at the high school level.

**Source:** United States Special Operations Command - MEDTECH-R495371-10

**Award:** \$805,000

**Title:** Naval Special Warfare Combatant Crewmen Peak Health and Performance Sustainment Model

**Primary Investigator:** Onate, JA

**Role:** Project manager

**Co-investigators:** Marsh C, Kaeding C, Piper M

**Period:** 10/2011-8/2015

**Description:** Develop systematic approach to medical and human performance tracking and sustainment for improved operational readiness and operator efficiency and longevity

**Source:** Wallace Research Foundation

**Award:** \$89,934

**Title:** A Developmental Study: Personalizing Exercise Prescription in the Primary Care Setting

**Primary Investigator:** Onate JA

**Role:** Research Assistant

**Co-investigator:** Devor S

**Period:** 12/2011-2/2013

**Description:** Exploratory analysis and literature review to develop personalized methods of exercise prescription and sustainment in primary care

**Source:** The Ohio State University Center for Personalized Medicine

**Award:** \$100,000

**Title:** Low back Functional Kinematics and Reported Outcomes in Nurses

**Primary Investigator:** Onate JA & Marras W

**Role:** Research Assistant

**Co-investigators:** Ferguson S

**Period:** 8/2011- 8/2012

**Description:** Subjective and objective assessment of lumbar spine health in a cohort of nurses with a history of low back pain, preliminary development of personalized treatment/prevention model

**Source:** Red Cord Rehabilitation System Industry Grant

**Title:** Research into sling-based exercise

**Primary Investigator:** Ingersoll C

**Role:** Research assistant

**Period:** 2007- 2009

**Description:** Evaluation of sling based therapy on muscle activation

## REVIEW

**Source:** University of Carolina Safrit Award

**Title:** Neuroimaging of lower extremity force and position control

**Primary Investigator:** Grooms DR & Schmitz R

**Role:** Co-PI, secondary author

**Period:** 1/11/16

**Description:** Internal award to fund construction of a MRI safe apparatus for force and position control assessment of the lower extremity in collaboration with Dr. Randy Schmitz at the University of Carolina Greensboro.

### SUBMITTED

**Source:** Brain Research Education Foundation

**Title:** Eccentric exercise as a therapeutic target for neuroplasticity after injury

**Primary Investigators:** Lindsey, LK & **Grooms, DR**

**Role:** Co-PI

**Period:** 11/4/2015

**Description:** Foundation award of \$80,000 for brain related research with a goal of establishing new investigators potential for future funding initiatives.

**Source:** Delsys

**Title:** The Brain Behind the Signal: Brain-Muscle Activation Coupling

**Primary Investigator:** **Grooms, DR**

**Co-Investigators:** Simon J, Yom J

**Role:** PI, primary author

**Period:** 9/29/2015

**Description:** Industry award of approximately \$20,000 EMG equipment for novel research.

**Source:** National Institutes of Health NIAMS R01

**Title:** Brain-Behavior in Anterior Cruciate Ligament Injury

**Primary Investigator:** Onate, JA

**Co-Investigators:** **Grooms, D**, Page S, Larsen D, Chaudhari A, White S, Appelbaum G

**Role:** Primary author, project leader

**Period:** October 5<sup>th</sup> 2014 – reviewed not funded

**Description:** Quantification of the biomechanical and neurological changes induced by ACL reconstruction via 3D biomechanics and brain neuroimaging

**Source:** Neuromuscular Plasticity Scholar Program

**Title:** Motor planning and Sensory Neuroplasticity after Musculoskeletal injury

**Primary Investigator:** Grooms, DR

**Role:** PI, primary author

**Period:** 12/11/2014

**Description:** NIH T32 training program fellowship

**Source:** National Athletic Training Association Research and Education Foundation

**Award:** \$2,000

**Title:** Assessment Methods for Trunk Control: Endurance, Strength, Power and Movement

**Primary Investigator:** Grooms, DR

**Role:** PI

**Co-investigators:** Onate, JA

**Period:** 2/2012

**Description:** Doctoral student grant, to quantify the relationship between trunk performance metrics and lower extremity movement control

**Source:** Great Lakes Athletic Trainer's Association

**Award:** \$1,500

**Title:** Visual Interference Training Effects on Lower Extremity Movement Patterns

**Primary Investigator:** Grooms, DR

**Role:** PI

**Co-investigators:** Onate, JA

**Period:** 9/2012

**Description:** Doctoral student grant, to quantify the effects of stroboscopic vision on lower extremity movement control

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PEER REVIEWED PUBLISHED ABSTRACTS

not listed elsewhere

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1. Onate J & **Grooms D.** (2015) NSWG4 Combat Craft Crewmen Rapid Enhancement & Sustainment (CREST). *Special Warfare Combat Crewman Human Performance*. Norfolk, VA. DTIC white paper
2. Schussler E, **Grooms D**, Clifton D, Miller M, Starkel C, Onate J. Comparison of iLESS Scores by Gender in Healthy High School Age Athletes: The FPPE Project. *Journal of Athletic Training*. 2015. 50(6S):S-1-S-312.
3. Clifton DR, **Grooms D**, McNally M, Miller M, Schussler E, Starkel C, Onate J. (2015) Deep Squat Score Predicts Functional Movement Screen Asymmetries. *Journal of Athletic Training*. 2015. 50(6S):S-1-S-312
4. Masty M, Clifton DR, **Grooms D**, McNally M, Miller M, Schussler E, Starkel C, Onate J. (2015) Relationship Between Functional Movement Screen Score and Single Leg Anterior Reach Performance. *Journal of Athletic Training*. 2015. 50(6S):S-1-S-312
5. Thompson X, Clifton DR, **Grooms D**, McNally M, Miller M, Schussler E, Starkel C, Onate J. (2015) Relationship Between Weight-Bearing Ankle Dorsiflexion and Deep Squat Performance. *Journal of Athletic Training*. 2015. 50(6S):S-1-S-312
6. Starkel C, **Grooms D**, Best T, Borchers J, Chaudhari A, Clifton D, Comstock D, Cortes N, Hertel J, Hewett T, Miller M, Schussler E, Van Lunen B, Pan X, Onate J. Single Leg Hop Limb Asymmetry and Lower Extremity Injury Risk in Healthy High School Athletes: The FPPE Project. *Medicine and Science in Sports and Exercise*. 2015;47(5S)
7. Schussler E, **Grooms D**, Miller M, Clifton D, Starkel C, Best T, Borchers J, Chaudhari A, Comstock D, Cortes N, Hertel J, Hewett T, Pan X, Van Lunen B, Onate J. (2015). Comparison of 2-Dimensional Measurement of Knee Frontal Plane Projection Angle in ACL Injured Athletes. *Medicine and Science in Sports and Exercise*. 2015;47(5S)
8. Clifton DR, **Grooms D**, Schussler E, Miller MM, McNally M, Starkel C, Onate J. (2015) Deep Squat Score Predicts Functional Movement Screen Performance. *Medicine and Science in Sports and Exercise*. 2015;47(5S)
9. Miller MM, **Grooms D**, Schussler E, Clifton D, Starkel C, Ellis T, Onate J. (2015) Single Leg Anterior Reach Performance and Dynamic Postural Control in Patients with Femoroacetabular Impingement. *Medicine and Science in Sports and Exercise*. 2015;47(5S)

10. Schussler E, **Grooms D**, McNally M, Onate J. Utilizing 2-Dimensional Frontal Plane Hip to Ankle Distance to Determine Knee Flexion Angle During Drop Vertical Jump Testing. *Journal of Orthopaedic & Sports Physical Therapy*. 2015
11. Young J, Chaudhari A, **Grooms D**, McNally M, Schussler E, Miller M, Meister A, Onate J. Drop Vertical Jump Knee Valgus Kinematics Predicts Basketball Rebound Knee Valgus Kinematics. *Journal of Athletic Training*. 2014;49(3S):S-1-S-290.
12. Starkel C, **Grooms D**, Miller M, Schussler E, Onate J. Functional Performance Differences Between Gender and Grade-Level in High School Athletes: The Functional Pre-Participation Physical Evaluation (FPPE) Project. *Journal of Athletic Training*. 2014;49(3S):S-1-S-290.
13. Schussler E, Miller M, **Grooms D**, Starkel C, Cerne J, Onate J. A Comparison of 2-Dimensional Measurements of Knee Abduction in a Clinical Setting. *Journal of Athletic Training*. 2014;49(3S):S-1-S-290.
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15. Meister A, **Grooms D**, Miller M, Schussler E, Young J, Onate J. Ankle Dorsiflexion Implications For Measuring Postural Control. *Journal of Athletic Training*. 2014;49(3S):S-1-S-290.
16. Schussler E, Chaudhari A, Cortes N, Best T, Borchers J, **Grooms D**, Miller M, Starkel C, Cerne J, Onate J. iLESS Visual Estimation is a Valid Measure of Knee Valgus During Drop Vertical Jump. *Medicine & Science in Sports & Exercise*. 2014;46(5S):406-414.
17. Onate J, Chaudhari A, Borchers J, Hewett T, Pan J, Comstock D, Cortes N, Lunen B, Hertel J, **Grooms D**, Miller M, Schussler E, Starkel C, Best T. Comparison of High School vs. Collegiate Athletes Single Leg Balance and Single Leg Hop Characteristics: The Functional Pre-Participation Physical Evaluation (FPPE) Project. *Medicine & Science in Sports & Exercise*. 2014;46(5S):198-210.
18. Miller M, **Grooms D**, Schussler E, Onate J. Isometric Hip Strength of the Involved versus Uninvolved Limb in Patients with Femoroacetabular Impingement. *Medicine & Science in Sports & Exercise*. 2014;46(5S):823-826.
19. Talarico M, **Grooms D**, Miller M, Gubanich P, Onate, James. Postural Control Variation in the Single Leg Anterior Reach. *Medicine and Science in Sport and Exercise*. 2013;45(5S):286-291.
20. Schussler E, **Grooms D**, Miller M, Bowman J, Schroeder M, Borchers J, Beisner A, Onate, J. Association Between Unilateral Lower Extremity Dynamic Postural Control Asymmetry and Unilateral Lower Extremity Power Asymmetry. *Medicine and Science in Sport and Exercise*. 2013;45(5S):583-586.
21. Miller M, **Grooms D**, Schussler E, Bowman J, Beisner, A, Borchers J, Onate J. Single Leg Glute Bridge: A Clinical Test for Gluteal Muscle Endurance. *Medicine and Science in Sport and Exercise*. 2013;45(5S):429-432.

22. Bowman J, **Grooms D**, Beisner A, , Schmitt L, Borchers J, Schroeder M, Miller M, Gaul S, Onate J. Relationship Between the Single Leg Anterior Reach and Single Leg Hop for Distance in NCAA Division I Male Athletes. *Journal of Strength and Conditioning Research*. 2013; 27(4):S46.
23. Onate J, Miller M, Schroeder M, Hertel J, Van Lunen B, Cortes N, **Grooms D**. Lower Extremity Strength Ratios and ACL Injury in NCAA Division I Soccer Players. *Journal of Athletic Training*. 2012;47(5):e9.
24. Miller M, Van Lunen B, Cortes N, Schroeder M, **Grooms D**, Onate J, Hip Strength Ratios and Lower Extremity Injury in NCAA Division I Soccer Players. *Journal of Athletic Training*. 2012;47(1):11S-209S
25. Miller M, Hertel J, Van Lunen B, Cortes N, Schroeder M, **Grooms D**, Onate J, Strength Ratios of Hip Musculature in Male and Female Collegiate Soccer Players. *Medicine and Science in Sport and Exercise*. 2012; 44(5S)
26. Hess C, **Grooms D**, Oldfield E, Louis R, Saliba E, MacKnight J, Grindstaff T, Dilaawar M, Fronto-temporal Headache in a Collegiate Wrestler Performing Resistance Training. *Medicine Science in Sports and Exercise*. 2010; 42(5)

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## PROFESSIONAL EXPERIENCE

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**Assistant Professor** Aug 2015 - Current  
**Ohio University** Athens, Ohio  
**Athletic Training**  
**School of Applied Health Sciences and Wellness**

**RESEARCH ASSISTANT** Aug 2011 – Aug 2015  
**The Ohio State University** Columbus, Ohio  
**Movement Optimization & Variability for Exercise Sustainment Laboratory (MOVES)**

- Biomechanical evaluations to predict musculoskeletal injury and concussion in youth, high school, collegiate, professional and military personnel.
- Manage 3D biomechanics laboratory services including
  - Noraxon EMG systems
  - Bertec Force platforms
  - Vicon 3D motion analysis system
  - Matlab and Visual 3D for data processing
- Clinical functional performance screening
- Mentorship of masters and undergraduate students
- Neuroscience collaboration with Center for Cognitive and Behavioral Brain Imaging
- Manage functional magnetic resonance imaging(fMRI) data collection and processing
  - Novel lower extremity fMRI data collection techniques
  - Data processing in Linux (FSL), Matlab (SPM) and Python

**ASSISTANT ATHLETIC TRAINER** July 2009 - June 2011  
**College of Mount Saint Joseph** Cincinnati, Ohio

- Conducted evaluations, designed rehabilitation programs, administered modalities and manual therapies in a sports medicine environment for 22 intercollegiate athletic teams and 600 student athletes

- Highly involved with strength and conditioning transition from rehabilitative care
  - Primary sport assignments: Wrestling, Soccer, Track & Field, Tennis and Dance
- Approved clinical instructor and direct supervision of undergraduate students
- Responsible for coordinating the sports medicine team from physician to coaches
- Worked closely with coaching staff, administration, and team physicians
- Experience with prevention and treatment of injuries, neuromuscular training, return to play evaluations, and first aid/emergency care

**CAMP ATHLETIC TRAINER**

**The Ohio State University**

2011- Present Columbus, Ohio

**Cincinnati Elite Lacrosse**

2010-2011 Cincinnati, Ohio

**University of Virginia**

2008-2009 Charlottesville, Virginia

- On-site athletic training coverage and supervision of student assistants
- Coordination of medical services and injury triage

**GRADUATE ASSISTANT ATHLETIC TRAINER**

July 2008 - July 2009

**University of Virginia; Sports Medicine**

Charlottesville, Virginia

- Conducted evaluations, designed rehabilitation programs, and administered modalities and manual therapies in a sports medicine environment.
- Musculoskeletal ultrasound imaging
- NCAA injury surveillance system, electronic medical record & concussion-neurocognitive software management
  - Primary assignment: Wrestling, Secondary: Football, Track & Field and Rowing
- Responsible for coordinating appointments with physicians and medical personnel
- Worked closely with coaching staff, administration, and team physicians.

**ATHLETIC TRAINING INTERN**

April 2007 – February 2008

**Cincinnati Bengals (National Football League)**

Cincinnati, Ohio

**ATHLETIC TRAINING INTERN**

Spring 2008

**National Football League Combine**

Indianapolis, Indiana

**PERSONAL TRAINER**

January 2006- May 2008

**Northern Kentucky University Campus Recreation**

Highland heights, Kentucky

- Personalized exercise programming for a variety of fitness levels and health conditions

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TEACHING

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**Ohio University, School of Applied Health Sciences and Wellness; Division of Athletic Training**

Fall 2015	AT 2101 100 Lower Extremity Evaluation Lab
Fall 2015	AT 2101 101 Lower Extremity Evaluation Lab
Fall 2015	AT 2201 100 Therapeutic Modalities Lab
Fall 2015	AT 2201 101 Therapeutic Modalities Lab
Fall 2015	AT 5190 101 Instructional Experience
Fall 2015	AT 6940 106 Athletic Training Research Project

**The Ohio State University, School of Health and Rehabilitation Sciences; Division of Athletic Training**

- 2011-2014            Athletic Training 550\3600 Biomechanics  
Teaching Assistant
- 2014                    Athletic Training 3700 Therapeutic Exercise & Rehabilitation  
Course Instructor
- 2012                    Athletic Training 431 Lower Extremity Evaluation & Rehabilitation  
Teaching Assistant

**College of Mount Saint Joseph, School of Health Sciences; Department of Athletic Training**

- 2009-2011            Athletic Training 320 Strength and Conditioning in Athletic training  
Course Instructor
- 2009-2011            Athletic Training 180 Principles and Practice of Athletic Training  
Course Instructor
- 2009-2011            Physical Education 196 Advanced Strength Training  
Course Instructor

**University of Virginia, Curry School of Education; Department of Kinesiology**

- 2008-2009            Athletic Training In-service  
Guest Lecturer & Teaching Assistant

**Northern Kentucky University, College of Arts and Sciences; Department of Mathematics**

- 2005                    MAT 415 Algebra for College Students  
Teaching Assistant

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STUDENT ADVISING

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**Research Mentor**

**University of Carolina Greensboro**

Jed A. Diekfuss (2015-2017) – Neuroimaging of feedback specific lower extremity motor control;  
Dissertation committee member

**Ohio University**

**Primary Mentor**

Wendy Gutierrez (2015-2016) – Muscle activation during perturbation core stability training

Natalie Reynold (2015-2016) – Immediate effects of perturbation core stability training



Katelyn Stahl (2015-2016) – Immediate effects of thoracic manipulation on kyphosis

Sarah Miko (2015-2016) – Effect of sport specific dual task on postural control

Kelly Leonard (2015-2016) – Dyad jump landing training motor learning implications

Kyle Hosier (2015-2016) – Immediate effects of stroboscopic training on neuromuscular control

Nikki Jackson (2015-2016) – Neurocognitive deficits in chronic ankle instability

Amber Schnittjer (2015-2016) – Drop landing biomechanics with cognitive dual tasking

Elizabeth Saunders (2015-2016) – Brain activation of closed chain knee extension

#### Secondary mentor

Todd Sabol (2015-2016) – Functional pre-participation physical changes over an athletic season

Paige (2015-2016) – Weight discrimination ability in chronic ankle instability

Nathan (2015-2016) – Reliability of neurocognitive testing

#### **The Ohio State University**

Shawn Flanagan (2014-2017) – Electroencephalography, Transcranial Magnetic Stimulation & Neuroimaging of Lower Extremity Motor Control; Dissertation committee member

Heather Tanksley (2015-2016) – Transcranial direct current stimulation on stroke recovery and motor outcomes

Gabrielle Colucci (2014-2015) – Comparison of Rectus Femoris Force Output and Activation in Seated vs. Prone Knee Extension

Cameron Armstrong (2014-2015) – Trunk Stabilization and Baseball Performance

David Stark (2014-2015) – Head Accelerometer Validation

Chris Balance (2014-2015) – History of Military Human Performance

Olivia DiCarlantonio (2014-2015) – Soldier Specific Outcome Assessment Survey

Xavier Thompson (2014-2015) - Relationship Between Weight-Bearing Ankle Dorsiflexion and Deep Squat Performance

Margaret Masty (2014-2015) - Relationship Between Functional Movement Screen Score And Single Leg Anterior Reach Performance

Jared Seidel (2014-2015) – Effects of Vision on Single Leg Jump Performance after ACLR

Wesley Yao (2014-2015) – Variability in Basketball Shooting Performance

Armelle DeRiso (2014-2015) – Effects of Gender and Vision on Single Leg Jump Performance

Malvika Malik (2014) – Contralateral Biomechanical Alterations after Knee Injury

Noah Davis (2014) – Does Core Fitness Effect Vertical Jump Height and Wrist Velocity in College Level Female Volleyball Players

Anirudh Tarimala (2013-2014) – Pelvic Stability for Upper Extremity Plyometric Performance

Abby Stapf (2013-2014) – Contralateral Neuroplastic effects of ACL Reconstruction

Alex Schumacher (2012-2014) – Trunk, Hip and Knee Contributions to Peak Ball Velocity during a Soccer Kick

John Cerne (2012-2014) – Rater Experience and iLESS reliability

Jay Young (2011-2014) – The Relationship between Trunk Control and Throwing Performance

Maria Talarico (2011-2013) - Postural Control Variation in the Single Leg Anterior Reach

### **College of Mount Saint Joseph**

Kate Odenbeck & Garrett Hounshell (2011) – Acute Hamstring Strains: Alternative Rehabilitation

Megan McCullough (2010) - Prevention Programs for Noncontact ACL Injuries

Teresa Santoro (2010) – Kinesiotaping for Acute Ankle Sprain Management

Justin Geyer, Michael Romes & Kristin George (2009) –Foam Rolling for Myofascial Release

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## PROFESSIONAL ASSOCIATIONS

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National Athletic Trainers' Association

- Certified Member - 1009588
- Great Lakes Athletic Trainers' Association – member
- Ohio Athletic Trainers' Association – member

National Strength and Conditioning Association

- Certified Member – 000042681

American College of Sports Medicine

- Member – 691602

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## CERTIFICATIONS AND LICENSES

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### **Certified Athletic Trainer**

National Athletic Trainers' Association Board of Certification, 2007

Certification #: 070802038

Ohio license #: AT.003267

Virginia license #: 0126001344

**Certified Strength and Conditioning Specialist**

National Strength and Conditioning Association, 2008  
Certification #: 090410015

**American Red Cross**

Certified instructor: CPR/AED/First aid and professional rescuer and healthcare provider

**National Provider Identifier (NPI)**

Number: 1295976066

**American Council on Exercise Certified Person Trainer**

Certification#: T118661, 2006

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SERVICE

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2015	Abstract reviewer: Great Lakes Athletic Training Association annual meeting
2015	Data Safety and Monitoring Board: Back Exercise to Neutralize Disability Pilot Study - member
2015	Ohio University: Teaching & Learning Committee - member
2015	Invited International Grant Reviewer: Unity Through Knowledge Fund – Croatian Ministry of Science, Education and Sports (www.mzos.hr)
2015	Volunteer Staff, American Society of Biomechanics Annual meeting
2014	Moderator, National Athletic Trainers' Association Annual Meeting <ul style="list-style-type: none"><li>▪ Movement Screening &amp; Sports Injury – Free Comm</li><li>▪ Neurocognitive Aspects of Injury Prevention &amp; Rehabilitation - Feature</li></ul>
2014 – Present	Editorial board: The Journal of Sports Medicine and Allied Health Science – Official Journal of the Ohio Athletic Trainers' Association
2012 – Present	Reviewer, Journal of Orthopaedic & Sports Physical therapy
2013 – Present	Reviewer, Journal of Athletic Training
2013 – Present	Reviewer, Clinical Journal of Sports Medicine
2013 – Present	Reviewer, Physician and Sports medicine
2013 – Present	Reviewer, Biomedical Research International
2014 – Present	Reviewer, Journal of Sports Sciences
2014 – Present	Reviewer, Journal of Sports Science & Medicine
2015 – Present	Reviewer, Physiotherapy Theory and Practice
2014	Outreach Education: biomechanics-clinician integrated education Heidelberg athletic training program October 2014
2013-2014	Key training and research personal for interdisciplinary translational science initiative to bring healthcare and nutritional counseling to inner

	city community programs - School of Health and Rehabilitation Sciences funded
2011	Writer and collaborator for Sports Medicine Research: In the Lab & in the Field – an online clinical research dissemination service <a href="http://www.sportsmedres.org/search/label/Dustin%20Grooms">http://www.sportsmedres.org/search/label/Dustin%20Grooms</a>
2012-2013	Outreach Youth Concussion Prevention Program
2011	Construction worker injury prevention program: Provided consultation for Turner Construction team building the Ohio State University Wexner Medical center to design a daily warm up for injury prevention and fitness. <a href="http://www.dispatch.com/content/stories/local/2011/10/03/workers-work-out-before-shifts.html">http://www.dispatch.com/content/stories/local/2011/10/03/workers-work-out-before-shifts.html</a>
2010-2011	Kids Day: Annual community event encouraging higher education opportunities for Cincinnati youths
2006-2008	Northern Kentucky Athletic Training Club, Treasurer
2006-2008	Student Athletic Advisory Council, Athletic Training Representative

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## HONORS AND AWARDS

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**Doctoral Presentation Award**, *National Athletic Training Association, 2015*

**Presidential Fellowship**, *The Ohio State University, 2014*

**Research Award**, *American College of Sports Medicine, 2014*

**Outstanding Graduate Student Award**, *The Ohio State University, 2014*

**Distinguished Research Mentor Nomination**, *The Ohio State University, 2014*

**Doctoral Scholarship**, *National Athletic Training Association, 2012*

**Travel Scholarship**, *American College of Sports Medicine, 2012*

**Outstanding Athletic Trainer 11<sup>th</sup> man award**, *University of Virginia, 2009*

**Virginia McCue sports medicine society**, *University of Virginia, 2009*

**Commencement Speaker**, *Northern Kentucky University, 2008*

**Graduate with honors Magna Cum Laude**, *Northern Kentucky University, 2008*

**Student Spotlight Selection**, *National Athletic Training Association, 2008*

**Honorable Order of Kentucky Colonels**, *Commonwealth of Kentucky, 2007*

**Alpha Chi National Honorary Society, 2007**

**Career Achievement Award, Northern Kentucky University, 2007**

**Athletic Training Achievement Award, Northern Kentucky University, 2006**

**Golden Key International Scholar, 2005**

**Northern Kentucky Distinguished Scholar, 2003**

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## CONTINUING EDUCATION

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**Ohio Athletic Trainers' Association Annual Student Meeting**

Athens, OH; January 2016

**Ohio Musculoskeletal and Neuroscience Institute**

Bimonthly interdisciplinary invited lectures; 2015-

**Greater Columbus Athletic Trainers' local meeting**

Columbus, OH; October 2015

**American Society of Biomechanics Annual Scientific Meeting**

Columbus, OH; August 2015

**National Athletic Trainers' Association Annual Meeting and Clinical Symposia**

St. Louis, MI; June 2015

**American College of Sports Medicine Annual Meeting**

San Diego, CA; May 2015

**Anterior Cruciate Ligament Research Retreat**

Greensboro, NC March 2015

**Writing from the Reader's Perspective Workshop – Dr. Gopen**

Columbus, OH, August 2014

**World Congress of Biomechanics**

Boston, MA; July 2014

**National Athletic Trainers' Association Annual Meeting and Clinical Symposia**

Indianapolis, IN; June 2014

**American College of Sports Medicine Annual Meeting**

Orlando, FL; May 2014

**The Ohio State University Sports Medicine Research Day**

Columbus, OH; May 2014

**Ohio Athletic Trainers' Association Annual Meeting and Symposia**

Columbus, OH; May 2014

**11<sup>th</sup> Annual ACL Workshop**  
Columbus, OH; October 2013

**National Athletic Trainers' Association Annual Meeting and Clinical Symposia**  
Las Vegas, Nevada; June 2013

**American College of Sports Medicine Annual Meeting**  
Indianapolis, IN; May 2013

**The Ohio State University Sports Medicine Research Day**  
Columbus, OH; May 2013

**The Ohio State University Sports Medicine Grand Rounds: Patellofemoral Instability**  
Columbus, Ohio; May 2013

**The Ohio State University Sports Medicine Grand Rounds: One Health One Medicine**  
Columbus, Ohio; February 2013

**The Ohio State University Sports Medicine Grand Rounds: 2012 Olympic Medical Coverage**  
Columbus, Ohio; November 2012

**10<sup>th</sup> Annual ACL Workshop**  
Columbus, OH; October 2013

**National Strength and Conditioning Association National Conference and Exhibition**  
Providence, Rhode Island; July 2012

**National Athletic Trainers' Association Annual Meeting and Clinical Symposia**  
St. Louis, Missouri; June 2012

**American College of Sports Medicine Annual Meeting**  
San Francisco, CA; May 2012

**2<sup>rd</sup> Annual Hip Symposium**  
Columbus, OH; April 2012

**The Ohio State University Sports Medicine Grand Rounds: Intra-Articular Graft Selection**  
Columbus, Ohio; October 2011

**The Ohio State University Sports Medicine Grand Rounds: Rotator Cuff Tears**  
Columbus, Ohio; September 2011

**National Athletic Trainers' Association Annual Meeting and Clinical Symposia**  
New Orleans, Louisiana; June 2011

**Ohio Athletic Trainers' Association Annual Meeting and Symposia**  
Columbus, OH; May 2011

**College of Mount Saint Joseph Athletic Training Continuing Education, Kinesiotaping**  
Delhi, OH; March 2011

**National Athletic Trainers' Association Annual Meeting and Clinical Symposia**  
Philadelphia, Pennsylvania; June 2010

**Minicourse: Manual and Manipulative therapy**  
Philadelphia, Pennsylvania; June 2010

**Ohio Athletic Trainers' Association Annual Meeting and Symposia**  
Columbus, OH; May 2010

**Northeast Ohio Strength Clinic**  
Berea, OH; March 2010

**National Athletic Trainers' Association Annual Meeting and Clinical Symposia**  
San Antonio, Texas; June 2009

**The Art & Science of Sports Medicine Annual Conference**  
Charlottesville, Virginia; June 2009

**National Athletic Trainers' Association Annual Meeting and Clinical Symposia**  
St. Louis, Missouri; June 2008

**The Art & Science of Sports Medicine Annual Conference**  
Charlottesville, Virginia; June 2008

**Southeast Athletic Trainers' Association Clinical Symposium & Meeting**  
Franklin, TN; March 2007