

# Yong Woo An

Assistant Professor in Athletic Training Program

Department of Kinesiology and Dance, New Mexico State University, MSC 3FAC PO Box 30001, Las Cruces, NM, 88003

Phone (Mobile): (302) 332-7083, (Office): (575) 646-5415. Email: [anyong@nmsu.edu](mailto:anyong@nmsu.edu)

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## EDUCATION

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- 2016 Doctor of Philosophy, University of Delaware, Newark, DE,  
Major Area of Study: Biomechanics and Movement Science (BIOMS)
- 2011 Master of Science, University of Florida, Gainesville, FL,  
Major Area of Study: Health and Human performance,  
Specialization in Athletic Training
- 2009 \*A.T.C. Athletic Training Certification,  
National Athletic Trainer's Association
- 2009 Bachelor of Science, Michigan State University, East Lansing, MI,  
Major Area of Study: Department of Kinesiology  
Specialization in Athletic Training

## PROFESSIONAL EXPERIENCE

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- 2011-2016            \*Certified Athletic Trainer, Working on several High School regional tournaments in Delaware: Basketball, Lacrosse, and Track & Fields.
- 2009-2011            \*Certified Athletic Trainer, UF Korean Baseball Team, Gainesville, FL
- 2009-2011            \*Certified Athletic Trainer, UF Korean Soccer team, Gainesville, FL
- 2010-2011            \*Certified Athletic Trainer, \*\*Preceptor, P.K. Yonge Developmental Research School, University of Florida, Gainesville, FL
- 2009-2010            \*Certified Athletic Trainer, Hawthorne High School, University of Florida, Gainesville, FL

*\*Certified Athletic Trainers are licensed allied health professionals whose primary patient population includes athletes and those engaged in physical activity. The clinical responsibilities focus on injury evaluation, treatment, prevention, and rehabilitation. as well as mentoring undergraduate athletic training students.*

*\*\* A preceptor is a clinical instructor to serve in clinical education and mentor athletic training students.*

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### PROFESSIONAL MEMBERSHIPS

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2009-Present	National Athletic Trainer's Association, Member No. 1024784; Certification No. 2000002199
2012-2016	Certified Athletic Trainer, State of Delaware Eastern Athletic Trainers' Association Delaware Athletic Trainers' Association
2005-2012	American Red Cross Adult/Infant CPR, AED Certification
2012-Present	American Heart Association/Healthcare Provider (CPR/AED)

### TEACHING EXPERIENCE

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#### **Assistant Professor, in Athletic Training Program, Department of Kinesiology & Dance, New Mexico State University, NM (2016 – Present)**

2016 – Present	Instructor, SP M 410, Orthopedic Examination of the Upper Extremity; This class is intended to provide the student with the necessary background information to conduct a thorough initial clinical evaluation of upper extremity injuries commonly sustained by the physically active population.
2016 – Present	Instructor, SP M 373, Clinical Practicum IV; This class is intended to assist students in achieving clinical proficiency skills in a variety of Athletic Training settings.

#### **Teaching Assistant, Department of Kinesiology & Applied Physiology, University of Delaware, DE (Spring 2012 – Present)**

2012 – 2016	Laboratory Instructor, KAAP 426, Biomechanics I; This class is designed to introduce students to the application of <b><i>mechanical principles in the study of the human musculoskeletal system.</i></b> <ul style="list-style-type: none"><li>• Analysis of joint forces, the mechanical properties of bone, muscle, and connective tissues.</li><li>• Emphasis is on joint and tissue forces for the purpose of understanding injury mechanisms.</li></ul>
2014 – 2016 (Winter)	Laboratory Instructor, KAAP 425, Biomechanics of Human Motion; This course is designed to introduce <b><i>the fundamental mechanical principles governing the human body in motion and at rest.</i></b> <ul style="list-style-type: none"><li>• Application of statics and dynamics in the quantitative analysis of sport and exercise.</li></ul>

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Spring 2012            Instructor, KAAP 220, Anatomy & Physiology; This course is designed to introduce ***structure and function of the human body***, specifically examining the functional interrelationships and dynamic implications for tissues, organs and systems.

- Skeletal system
- Muscular system
- Circulatory system
- Respiratory system
- Nervous system

### **Teaching Assistant, Department of Behavioral Health & Nutrition, University of Delaware, DE (Fall 2011)**

Fall 2011            Instructor, BHAN 120, Physical Education (Exercise and Conditioning); This course provides an introduction of

- ***Cardiovascular, muscular, and flexibility activities*** designed to improve overall fitness and well-being.
- ***Exercise theory and principles*** to better understand how to maintain a healthy level of general fitness, minimize injury risk and maximize enjoyment and fitness.

Fall 2011            Instructor, BHAN 120, Physical Education (Self Defense); This course provides

- Introduction of ***basic martial art techniques*** for self-defense abilities.
- An alternative activity for the maintenance of health as it pertains to the improvement of joint range of motion, muscular strength, endurance and stamina.

### **Teaching Assistant, Department of Kinesiology & Applied Physiology, University of Florida, FL (Spring 2011)**

Spring 2011            Laboratory Instructor, ATR 6124, Clinical Anatomy for Athletic Training; This course is designed for comprehensive understanding of basic structures related to ***injury mechanisms and advanced athletic training care of mechanisms***

- The musculoskeletal system,
- nervous system, and
- cardiovascular system of the human body.

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## RESEARCH EXPERIENCE

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**Doctoral Research: Biomechanics and Movement Science (BIOMS) program, Neuromechanics laboratory, University of Delaware, 2011-2016 (Research Adviser: Dr. Buz C. Swanik)**

### *Dissertation Projects*

- Joint mechanical laxity and cortical activity on Knee Instability following Knee Injury
- Role of Fear in Neuromuscular Control following Knee Injury
- Effects of executive-function training on emotion regulation and knee instability following an ACL injury'.

### *Other Projects*

- Interaction Effects of the Startle Response and Hormonal Changes on Knee Stiffness.
- The Relationship between Personality, Knee Braces, and Stiffness Regulation after Anterior Cruciate Ligament Reconstruction.
- Knee Stiffness Regulation Changes When Started at Different Times.
- The Relationship between Personality & Functional Ability following ACL Injury.
- Pupil Reaction to Emotional Stimuli Between Male and Female Athletes

**Graduate (M.S.) Research: Health and Human Performance, University of Florida, 2010-2011 (Research Adviser: Dr. Brady Tripp and Dr. Keith Naugle)**

- Cardiovascular Outcomes of Active Gaming: Applying the Wii to Athletic Training Rooms.
- 3D golf motion analysis to determine the kinematic sequences of the body during a golf swing.
- Chronic ankle instability to determine the intersession reliability of Biodex Stability System and Start Excursion Balance Test outcomes.

## EXPERTISE OF INSTRUMENTATION

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- Testing muscle strength and joint stiffness using **electromyography (EMG)** and a custom made Stiffness and Proprioception Assessment Device (SPAD)
- Testing brain cortical activation using **electroencephalography (EEG)**
- Testing joint laxity using the **KT-2000 knee arthrometer device**
- Testing neurophysiological response using a custom-built **electrocardiograph (ECG)** circuit.
- Extensive knowledge of **LabVIEW** related to programming for various applications

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## PUBLICATION/ABSTRACTS

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### Manuscripts (submitted/in progress)

**An YW**, Lehmann T, Baumeister J, Swanik CB: Brain Activity during Knee Joint Loading following ACL rupture. (Manuscript in preparation)

**An YW**, DeAngelis A, Swanik CB: Knee Stiffness Regulation Changes When Started at Different Times. (Manuscript in preparation)

McGuire KE, **An YW**, Swanik CB: The Relationship between Personality, Knee Braces, and Stiffness Regulation after Anterior Cruciate Ligament Reconstruction. (Manuscript in preparation)

Hinsey ML, **An YW**, Swanik CB: Comparison of Reactive Knee Stiffening Strategies Between Sexes. (Manuscript in preparation)

Dimos SR, Swanik CB, Kaminski T, Newcomer Appaneal R, **An YW**, Andrisani DM. The Relationship between Personality & Functional Ability following ACL Injury. (Manuscript in preparation)

### Abstract / Presentations

**An YW**, DiTrani A, Struminger A, Baumeister J, Swanik CB. Asymmetric Cortical Activity Between Limbs During Joint Loading. *American College of Sport Medicine Annual Meeting*. Boston, MA June 2016 (Thematic Poster)

**An YW**, DiTrani A, Struminger A, Lehmann T, Baumeister J, Swanik CB. Neuromechanical Links Between Cortical Activity and Knee Stiffness During Joint Loading. *National Athletic Trainers' Association Annual Meeting*. Baltimore, MD June 2016 (Poster)

McGuire Kelly, **An YW**, Swanik CB. The Relationship between Personality, Knee Braces, and Stiffness Regulation after Anterior Cruciate Ligament Reconstruction. *National Athletic Trainers' Association Annual Meeting*. St. Louis, MO June 2015 (Oral Presentation)

**An YW**, Swanik CB, Walls BL, Kaminski TW, Knight CA. Knee Stiffness Regulation Changes When Started at Different Times. *National Athletic Trainers' Association Annual Meeting*. Indianapolis, IN June 2014 (Poster)

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Dimos SR, Swanik CB, Kaminski T, Newcomer Appaneal R, **An YW**, Andrisani DM. The Relationship between Personality & Functional Ability following ACL Injury. *National Athletic Trainers' Association Annual Meeting*. Indianapolis, IN June 2014 (Poster)

**An YW**, Oates DC, Needle AR, Kaminski TW, Swanik CB. Force Sense Does Not Differ Between Power and Endurance Trained Collegiate Athletes. *National Athletic Trainers' Association Annual Meeting*. Las Vegas, NV June 2013 (Poster)

**An YW**, Hedderson W, Naugle KM, Wikstrom EA, Naugle KE. Cardiovascular Outcomes of Active Gaming: Applying the Wii to Athletic Training Rooms. *J Athl Train* 2011; 46(3): S-44. (Oral)

Naugle KE, Naugle KM, Hedderson, WE, **An YW**, Wikstrom EA. Affective and cardiovascular outcomes of active gaming in low to moderately active young adults. NASPSA Annual Conference Burlington VT. June 9 2011, In *J Sport Exer Psych*. 2011 33(S): 173 (Poster)

## GRADUATE AND UNDERGRADUATE ADVISEES

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### Mater's Thesis

Patrick Fava, Pupil Reaction to Emotional Stimuli Between Male and Female Athletes. University of Delaware (2016 Anticipated)

Tim Lehmann, "Cortical responses to mechanical loading at the knee joint – An exploratory EEG approach." University of Paderborn. Supervised Mr. Lehmann with *study's conception & design, data collection, and statistical analysis & interpretation of the data*. (2015) **Paderborn Sport Science Award for Outstanding Master Thesis (2016)**

McGuire, Kelly E, "The Relationship between Personality, Knee Braces, and Stiffness Regulation after Anterior Cruciate Ligament Reconstruction", University of Delaware. Supervised Ms. McGuire with *study's conception & design, data collection, statistical analysis & interpretation of the data, drafting of the article, and critical revisions of thesis document*. (2014)

Segulin, Stephanie R., "The relationship between personality and functional ability following anterior cruciate ligament injury", University of Delaware. *Supervised Ms. Segulin with study's conception & design and critical revisions of thesis document*. (2012)



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Feb, 6<sup>th</sup>, 2016

Medical Aspects of Sports, University of Delaware, Newark, DE  
*Creative Solutions in Taping Methods to Prevent Injury*