

Sandra Janine Shultz PhD, ATC

EDUCATION

University of Virginia

Doctor of Philosophy: Sports Medicine

Dissertation Title: Neuromuscular Response Characteristics in Males and Females Following Knee Perturbation

University of Arizona

Master of Science: Exercise and Sport Sciences (NATA Approved Graduate Athletic Training Program)

California State University, Fullerton

Bachelor of Science: Physical Education; Athletic Training Emphasis

CERTIFICATIONS & LICENSURE

Certified Athletic Trainer

National Athletic Trainers' Association - Certification # 08-462

1984 - Present

February 27, 1984

October 2001-03

North Carolina Board of Athletic Trainer Examiners – License #0914

October 03 - Present

Certified Strength and Conditioning Specialist

1989 - 2021

National Strength and Conditioning Association - Certification # 89329

PROFESSIONAL POSITIONS

ArthroLax Solutions, LLC

January 2021 - Present

Founder, Manager, and Clinical Science Lead

Supporting research and innovative solutions for the prevent knee ligament injuries in the physical active.

University of North Carolina at Greensboro, Department of Kinesiology

July 2025 – Present

Professor Emeritus

University of North Carolina at Greensboro, Department of Kinesiology

August 2002 – June 2025

Director, Center for Women's Health and Wellness, School of Health and Human Sciences (2020 - 2025)

The mission of the Center for Women's Health and Wellness is to advance the health and wellness of all women and girls through collaborative research, educational programs, and community engagement.

Professor (2011-Present); Associate Professor (2005-2011); Assistant Professor (2002-2005), Dept of Kinesiology

Co-Director, Applied Neuromechanics Research Laboratory (2002-Present)

Chair, Department of Kinesiology (April 2012-2017)

Director of Graduate Study, Department of Exercise and Sport Science (2005-2011)

Director, Entry Level Master of Science in Athletic Training (2002-2004)

Tenure track faculty appointment participating in research endeavors and academic programs in the Athletic Training and Applied Neuromechanics specializations. Responsibilities include graduate and undergraduate teaching in qualified areas; advising and mentoring graduate students on research projects and program of study, chairing and serving on master's theses and dissertation committees; assist in direction and supervision of the Applied Neuromechanics Research Laboratory; and pursuing external funding and collaboration with other faculty members to support both individual and laboratory research agendas. Filled a variety of administrative roles described under service.

University of North Carolina at Chapel Hill

September 2003 – 2011

Adjunct Assistant Professor

Served on master's thesis and doctoral dissertation committees in the Sports Medicine and Athletic Training specialization.

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| University of Virginia | June 1998 – 2003 |
| Adjunct Assistant Professor | July 2002 – August 2003 |
| Adjunct faculty appointment to complete ongoing academic advising and research endeavors in the Sports Medicine and Athletic Training Specialization. | |
| Research Assistant Professor | June 2000 – July 2002 |
| Interim Coordinator, Graduate Programs in Athletic Training and Sports Medicine | July 2001 – July 2002 |
| Director, Strength and Balance Laboratory, General Clinical Research Center | September 2001 – July 2002 |
| Faculty appointment participating in research endeavors and academic programs in Sports Medicine and Athletic Training Specializations: coordinator of NATA Accredited Graduate Program in Athletic Training (2001-02); classroom instruction at both graduate and undergraduate levels in qualified areas; advising and mentoring graduate students on research projects and program of study by chairing and serving on master's theses, doctoral program and dissertation committees; direction and supervision of the Sports Medicine and Athletic Training Research Laboratory; and pursuing external funding and collaboration with other faculty members to support both individual and sports medicine laboratory research agendas. | |
| Research Associate | June 1999 - June 2000 |
| Teaching graduate and undergraduate courses in the Sports Medicine and Athletic Training program areas, serving on doctoral dissertation and master's thesis committees, grant writing, daily operation, and maintenance of the Sports Medicine / Athletic Training Research Laboratory, and assisting with on going research projects. | |
| Graduate Research Assistant | June 1998 - May 1999 |
| Responsible for daily operation and maintenance of the Sports Medicine / Athletic Training Research Laboratory. Assist faculty members, doctoral and master's students with on going research projects. | |
| Blue Ridge School, Virginia | August 1996 - June 1998 |
| Head Athletic Trainer | |
| Responsible for care, prevention, treatment, and rehabilitation of athletic injuries for all athletic teams. Consulting with coaches on sport specific conditioning programs. Responsible for budget and ordering. | |
| University of California, Los Angeles | September 1991 - September 1996 |
| Associate Director of Athletic Training and Rehabilitative Services | |
| Head Athletic Trainer: Women's Intercollegiate Athletics | |
| Coordinated medical care for NCAA Division I women's intercollegiate athletic teams including pre-season screening, prevention, treatment, and rehabilitation. Primary Coverage of Women's Basketball, Volleyball, Softball and M & W Cross Country. Assisted with Football. Director, UCLA Student Athletic Training Internship Program. Other administrative responsibilities included staff scheduling, budget and ordering, coordination of NCAA regional and national tournaments and championship events. | |
| TRACC Sports Medicine, Inc. | July 1985 - September 1991 |
| Assistant Director | |
| Experience working with physical therapy patients, general population, recreational athletes, junior national athletes, elite and professional athletes. Responsible for consultation and development of rehabilitation, conditioning, and sport specific training programs for clients of all ages. Provided treatment to aid in injury rehabilitation to physical therapy clients. Provided athletic training services and coverage for sponsored and contracted athletic events. Administrative responsibilities included direction and scheduling of staff, specialty programs administration, facility promotions, equipment ordering and maintenance, development of staff policies and procedures. | |

SCHOLARSHIP**Grants and Contracts Awarded*****NC Innovations******07/01/25 – 06/30/27*****“Development of the Clinical Knee Arthrometer”**

Role: Consultant (ArthroLax Solutions, LLC) PI: RJ Schmitz North Carolina A&T State University)

Aims: to take a multidisciplinary engineering approach to define (Aim 1), creatively design and build (Aim 2) and conduct extensive customer discovery on (Aim 3) a Phase I prototype that will inform and refine the design for future Phase 2 activities.***NIH-NIAMS - 2R01AR071985-06A1******07/01/24 – 06/30/29*****“Role of Hormones on Bundle-Specific ACL Function in the Growing Knee Joint” (PI-MB Fisher, NC State Univ)**

Role: Consultant (ArthroLax Solutions) PI: Fisher (NC State Biomedical Engineering)

Aims: To determine how the timing and level of sex hormones impact short- and long-term ACL bundle size and function. [Scored: 2nd percentile; To be Funded]***NIAMS – NRSA Post Doctoral Fellowship (1F32AR081708 - 01 PI: Birchmeier, Thomas B) 08/01/22 – 06/30/2025*****“The Effects of Vibration on Quadriceps Function and Landing Biomechanics in Individuals with Anterior Cruciate Ligament Reconstruction”**

Role: Collaborating Mentor

Aims: To develop Dr. Birchmeier’s skills in clinical trial management, neuromuscular functional assessment, and statistical analyses, this project will assess the effects of Vibration rehabilitation (WBV and LMV) versus Standard rehabilitation on quadriceps neuromuscular function, landing biomechanics, and the likelihood of meeting RTPA criteria***UNCG – HHS School of Health and Human Sciences Faculty Research Grant******04/01/22 – Present*****“Maturity Status at the Time of ACL Injury: A Multi-center Pilot Study”**

Role: Co-PI with RJ Schmitz (\$10,000)

Aims: To partner with orthopedic clinics to assess stage of pubertal development (Tanner Stage, estimated APHV, onset of menarche, skeletal age) at the time of ACL injury.***NC IDEA – Business Development Support (David Wyrick, PI)******11/01/22 – August 2023*****“Design and Development of Commercial Ready Instrumented Knee Arthrometer”**

Project Principal Investigator (\$10,000)

Aim: The purpose of the NC Idea Next Steps funding is to promote the furthering of commercial development of intellectual property in North Carolina. For this project, funding was received to partner with a business consultant and SBIR consultant to plan a funding pathway for continued commercial development of a prototype instrumented knee arthrometer.***North Carolina Biotechnology Center – Translational Research Grant******03/01/21 – 6/30/23*****“Optimization of a Precision Measurement Solution for a Tri-Axial Knee Arthrometer”**

Principal Investigator (\$106,000)

Aim: To develop and optimize a measurement system that will be integrated into a mechanical prototype knee arthrometer to obtain accurate and reproducible measures of knee joint laxity reflective of true bone (joint) motion***UNCG – HHS Office of Research-Related Training Initiative******10/20/22 – 10/21/22*****“CWHW Fall Scholarly Workshop with Community Engaged Scholar Sonyia Richardson”**

Role: Principal Investigator (\$2500)

NC IDEA – Next Steps Grant (David Wyrick, PI)***03/29/22 – 08/31/22*****“Design and Development of Commercial Ready Instrumented Knee Arthrometer”**

Project Principal Investigator (\$5,000)

Aim: The purpose of the NC Idea Next Steps funding is to promote the furthering of commercial development of intellectual property in North Carolina. For this project, funding was received to partner with Tiny Tank LLC and Spectacular LLC to plan a development pathway to advance a prototype instrumented knee arthrometer toward a more commercial ready prototype.***National Science Foundation National I-Corps™ Program******01/01/21 – 06/31/22*****SJ Shultz; Team Principal Investigator (Entrepreneurial Leads - BR Bacon, HR Holden; Technical Lead – SJ Shultz; Industry Mentor - Robert Koshinskie); \$50,000.**

Aim: To receive entrepreneurial training and conduct customer discovery research for an innovative knee support for the prevention of knee laxity.

UNCG – HHS Office of Research-Related Training Initiative

10/14/21 – 10/15/21

“CWHW Fall Scholarly Workshop: Tips and Strategies for Successful Clinical Trials”
Role: Principal Investigator (\$1,678)

North Carolina Biotechnology Center - Biotechnology Innovation Grant

08/01/18 – 03/31/21

“Early Prototype Development and Optimization of a Clinical Knee Arthrometer”
Principal Investigator (\$100,000)

Aim: to build a Phase I prototype of an automated, clinical knee joint arthrometer to accurately and consistently measure knee laxity in 3 planes of motion in less than five minutes with minimal training

UNCG Safrit Award

2020-2021

“A Measurement Solution for Assessing Anterior-Posterior Tibial Motion during Arthrometer Testing”
Co-Principal Investigator with RJ Schmitz, University of North Carolina at Greensboro. \$8,000

National Science Foundation Regional I-Corps™ Program

Fall 2020

SJ Shultz; Team Principal Investigator (Entrepreneurial Leads - BR Bacon, HR Holden, K Fox; Technical Leads – SJ Shultz, RJ Schmitz, D LaJeunesse; Industry Mentor - Robert Koshinskie); \$3,000-\$5,000.

Aim: To conduct customer discovery research for an innovative knee support for the prevention of knee laxity.

I-Corps™ Program - UNCG + NCAT were awarded a 5-year, \$500,000 NSF grant to become established as an I-Corps Site (October 2017-2022). The NSF Innovation Corps (I-Corps™) helps prepare scientists and engineers to extend their focus beyond the university laboratory and accelerates the transition of basic-research towards commercialization. The Program features a 5-week Short-Course that trains research teams on Lean Launchpad methodology.

North Carolina Biotechnology Center

02/14/19 – 05/16/19

Biotechnology Meeting Grant for “ACL Research Retreat VIII: March 14-16, 2019”

SJ Shultz; Co-Investigator (RJ Schmitz Principal Investigator) (\$7,682)

Aim: A national meeting to promote information sharing and personal interaction among clinicians and scholars to advance the understanding and application of biotechnology to ACL injury and prevention. A secondary aim was to focus national and international attention on the North Carolina scientific communities.

UNCG Giant Steps Seed Grant

2018-2019

“Tr-Axial Knee Laxity Measurement Solutions”

Principal Investigator (\$25,000)

Aim: To leverage 20 years of laboratory experience in the measurement of tri-planar knee laxity to develop a cost-effective and clinically assessible device to measure knee laxity in 3 planes of motion. The objective of this proposal is to solve two mechanical measurement solutions in preparation for prototype development.

UNCG Giant Steps Seed Grant

2018-2019

“Health Girls Initiative”

Co- Investigator (\$25,000) (Calkins S and Wideman L, Co-PIs)

Aim: To plan and submit an inter-disciplinary longitudinal study of health risks in adolescent girls in Guilford County. The project engages a well-funded team of investigators from 7 different disciplines on campus to address biological, psychological, and social processes in a single cohort.

UNCG Strategic Plan Seed Grant

January 2017 – December 2018

“LEAP Forward: Common Goals and Common Measures”

Co-Principal Investigator with Emily Janke (\$25,000)

Aim: to work with community agencies to advance a common agenda with common goals and common measures so that the community, including UNCG faculty, staff, and students, can more closely align their programs, policies, research, and educational activities to have the greatest collective impact on health outcomes associated with lifetime eating and physical activity practices in our community

UNCG Regular Faculty Grant

January 2017 – June 2018

“The Effect of Exercise and Ligament Quality on Knee Laxity Variability Across the Menstrual Cycle”

Co-Principal Investigator with RJ Schmitz and L Wideman, \$8,500.

Aim: To examine the magnitude of knee laxity changes in response to exercise and determine if they are correlated with knee laxity changes across the menstrual cycle and the quality of the ligament as determined by MRI.

National Science Foundation Regional I-Corps™ Program**Fall 2017**

SJ Shultz; Team Principal Investigator (Entrepreneurial Leads; Elvis Foli and James Coppock – Industry Sponsor/Advisor; Robert Koshinskie); \$3,000-\$5,000.

Aim: To move forward commercialization of a knee laxity device.

I-Corps™ Program - UNCG + NCAT were awarded a 5-year, \$500,000 NSF grant to become established as an I-Corps Site (October 2017-2022). The NSF Innovation Corps (I-Corps™) helps prepare scientists and engineers to extend their focus beyond the university laboratory and accelerates the transition of basic-research towards commercialization. The Program features a 5-week Short-Course that trains research teams on Lean Launchpad methodology. Teams consist of a student Entrepreneur Lead (EL), faculty Primary Investigator (PI) and Industry Sponsor. Each teams receives “mini grants” up to \$10,000 to fund their customer discovery process, prototyping, and other seed expenses the team.

Department of Kinesiology Faculty Summer Pilot Grants**May 2015 – December 2016**

“Associations between Relaxin and Knee Laxity Profiles in Eumenorrheic Women”

Principal Investigator (L. Wideman, Co-Principal Investigator), \$5,000

UNCG HHS Research Excellence Grant**July 2015-Dec 2016**

“Associations between Relaxin and Knee Laxity Profiles in Eumenorrheic Women”

S.J. Shultz; Co-Principal Investigator with Laurie Wideman

Aim: To examine the extent to which relaxin levels are associated with ABS_{LAX} and CYC_{LAX} in physically active eumenorrheic women, after controlling for sex hormone levels; and to better characterize through serial measures the individual variability in serum relaxin profiles in active, eumenorrheic females.

University of North Carolina at Greensboro \$5,000

NIH - National Institute of Arthritis and Musculoskeletal and Skin Diseases (R01 AR050421)**2007-2013**

“A Case-Control Study of ACL Injury Risk Factors” (Consultant)

S.J. Shultz; Consultant

University of Vermont (B.D. Beynnon, Principal Investigator), 1,480,000

UNCG Regular Faculty Grant**Jan 2012– June 2013**

“The effect of long-term strengthening on frontal plane knee laxity in older adults with osteoarthritis”

S.J. Shultz; Principal Investigator

Aim: To compare the effects of high-intensity strength training, low-intensity strength training, and attention control on frontal plane knee joint laxity.

UNCG Summer Excellence Research Award**Summer 2012**

“The effect of long-term strengthening on frontal plane knee laxity in older adults with osteoarthritis”

S.J. Shultz; Principal Investigator

Aim: Using the project stated, develop experience in clinical trials research through collaborations with Dr. Steve Messier and Dr. Paul Devita. The goal is to build expertise and pilot data towards a future clinical trial research grant submission.

UNCG School of HHP Office of Research**Summer 2011****Summer Scholarship Award**

S.J. Shultz; Principal Investigator

Aim: To develop a manuscript on the relationships between serum sex hormones, serum collagen markers and anterior knee joint laxity.

NFL Charities Grant**2010-2011**

“The Effects of Exercise Induced Increases in Knee Laxity on Knee Joint Biomechanics”

S.J. Shultz; Principal Investigator (10% Effort); University of North Carolina at Greensboro; \$125,000

Aim: To characterize the effects of exercise induced increases in knee laxity on weight bearing knee biomechanics via serial measures before, during and following a prolonged, intermittent exercise protocol that simulates a soccer match.

Samara Innovations, Inc**2010-2011**

“Performance and Biomechanical Testing of a Specialized Compression Short”

S.J. Shultz; Principal Investigator; \$55,750 (Fee or Service Contract)

Aim: To compare a specialized compression short to a standard compression short on functional performance (sprint speed, jump height and distance, balance) and 3-D joint biomechanics during a drop jump and single leg squat.

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| NIH – National Institute of Arthritis and Musculoskeletal and Skin Diseases (3R01AR053172-03S1) | 2009-2010 |
| Administrative Supplement “Sex Hormone Mediated Knee Laxity and Knee Stability” | |
| <u>S.J. Shultz; Principal Investigator (10% Effort); \$105,000</u> | |
| Aim: To identify through advance statistical methods individual laxity profiles and individual landing and lower extremity perturbation profiles (joint motions and forces) and determine the laxity profile(s) that are most predictive of at-risk knee biomechanical profiles. | |
| NIH – National Institute of Arthritis and Musculoskeletal and Skin Diseases (R01-AR053172) | 2006-2010 |
| “Sex Hormone Mediated Knee Laxity and Knee Stability” | |
| <u>S.J. Shultz; Principal Investigator (50% Effort)</u> | |
| University of North Carolina at Greensboro \$1,037,210 | |
| UNCG Safrit Award | 2008 - 2009 |
| “Changes in Serum Collagen Marker Levels Across the Menstrual Cycle” | |
| Co-Principal Investigator with L. Wideman, University of North Carolina at Greensboro. \$3,000 | |
| NIH – National Institute of Arthritis and Musculoskeletal and Skin Diseases (3R01AR053172 - 01A1W1) | 2007 |
| “Sex Hormone Mediated Knee Laxity and Knee Stability”; Minority Supplement to Promote Diversity in Health-Related Research (Michael Leonard-Garner, Undergraduate Student) | |
| <u>S.J. Shultz; Principal Investigator (50% Effort)</u> | |
| University of North Carolina at Greensboro \$15,337 | |
| UNCG Regular Faculty Grant | 2007 - 2008 |
| “Changes in Serum Collagen Marker Levels Across the Menstrual Cycle” | |
| Co-Principal Investigator with L. Wideman, University of North Carolina at Greensboro. \$5,000 | |
| Faculty Grant | 2005-2006 |
| <u>“Pilot Data for a Prospective Study of ACL Injury Risk Factors During Skeletal Maturation”</u> | |
| <u>S.J. Shultz; Co-Principal Investigator with RJ Schmitz</u> , University of North Carolina at Greensboro. \$10,000 | |
| NATA Ethnic Diversity Advisory Council | 2005-2006 |
| “Summer Research Assistantships for Ethnically Diverse Undergraduate Students” | |
| Co-Principal Investigator with AD Nguyen; University of North Carolina at Greensboro. \$7,000.00 | |
| National Federation of State High School Athletics Associations | 2004-2005 |
| “Health and Safety Issues in High School Athletics” | |
| <u>Project Coordinator</u> , University of North Carolina at Greensboro | |
| Phase III continuation of previously funded project to develop the 3 rd edition of the National Federation of State High School Association's Sports Medicine Handbook. \$9,994.00 | |
| Warner / Fermaturo and KCOM Board of Trustees | 2003-2005 |
| “Gender Differences in Neuromuscular Response Characteristics Between Prepubescent Boys and Girls Following a Knee Perturbation”. <u>SJ Shultz; Consultant</u> | |
| Principal Investigator: Tamara C. Valovich, Arizona School of Health Sciences. \$3,985. | |
| Faculty Grant | 2003-2005 |
| “Kinematic Analysis of Functional Knee Stability Following a Lower Extremity Perturbation” | |
| <u>S.J. Shultz; Co-Principal Investigator with RJ Schmitz</u> , University of North Carolina at Greensboro. \$11,550 | |
| New Faculty Grant | 2002- 2003 |
| “Effect of Knee Joint Displacement and Load on Neuromuscular Reflex Behavior: A Reliability and Validity Study” | |
| <u>Principal Investigator</u> , University of North Carolina at Greensboro. \$5,000 | |
| National Institutes of Health - General Clinical Research Center Grant # MO1 RR 00847-28 | 2001 - 2002 |
| The major goal of this project is to make available to medical scientists the resources that are necessary for the conduct of clinical research. | |
| <u>S.J. Shultz; Director, Strength & Balance Laboratory (15% Effort)</u> , University of Virginia | |
| (Principal Investigator: Robert M. Carey). \$3,850,701 (Direct) | |
| NIH – National Institute of Arthritis and Musculoskeletal and Skin Diseases (R03-AR47178) | 2000 - 2004 |
| “Gender, Sex Specific Hormones and Anterior Cruciate Ligament Compliance” | |

S.J. Shultz; Co-Principal Investigator and Project Coordinator (25% Effort)

University of Virginia (Years 1&2), University of North Carolina at Greensboro (Year 3; no cost extension Year 4)
(Principal Investigator; David H. Perrin). \$222,000

National Federation of State High School Associations**2000 - 2002**

Phase II continuation of previously funded project to develop a National Federation of State High School Association's Sports Medicine Handbook.

S.J. Shultz; Principal Investigator (5% Effort), University of Virginia. \$12,548.39

Summer Grant Writing Award**Summer 2001**

Internal award to prepare a research grant proposal to investigate the effects of knee joint displacement and load on neuromuscular reflex behavior (Incorporated into R01 Proposal).

S.J. Shultz; Principal Investigator, University of Virginia. \$5,000.00

Summer Grant Writing Award**Summer 2000**

Internal award to prepare a research grant proposal to compare neuromuscular response strategies, kinematics and ground contact forces in males and females during functional perturbations and landing maneuvers. (Incorporated into R01 Proposal)

S.J. Shultz; Principal Investigator, University of Virginia. \$5,000.00

National Athletic Trainers' Association Research and Education Foundation**2000 – 2003**

“Effect of Lower Extremity Limb Alignment on Neuromuscular Activation Patterns”

S.J. Shultz; Co-Principal Investigator with David H. Perrin; University of Virginia. \$35, 207.00

National Federation of State High School Associations**1999 – 2000**

Collection and Analysis of Information on Current Sports Medicine Issues for Development of a National Association Sports Medicine Handbook.

S.J. Shultz; Principal Investigator, University of Virginia. \$12,940.00

National Athletic Trainers' Association Research and Education Foundation**1997 - 1999**

“Neuromuscular Response Characteristics in Males and Females Following Knee Perturbation.”

S.J. Shultz; Co-Principal Investigator with David H. Perrin PhD, ATC; University of Virginia. \$18,811.00

Far West Athletic Trainers' Association**1997 - 1998**

“Reliability and Validity of a Functional Perturbation Device to Assess Neuromuscular Response Characteristics.” S.J. Shultz; Principal Investigator, University of Virginia. \$750.00

Student Grants Awarded as Faculty Advisor***National Athletic Trainers' Association Research and Education Foundation*****2016– 2017**

Doctoral Research Grant: “The influence of hip structure and gluteal activation on dynamic knee valgus”
Jennifer Hogg, Principal Investigator; University of North Carolina at Greensboro, \$2,500

American Society for Biomechanics**2015-2016**

Doctoral Research Grant: “Relationship between Hamstring Musculo-articular Stiffness and Anterior Cruciate Ligament Loading during Functional Unilateral and Bilateral Landing Tasks”
Justin Waxman, Principal Investigator; University of North Carolina at Greensboro, \$2,000

National Athletic Trainers' Association Research and Education Foundation**2013– 2014**

Doctoral Research Grant: “Comparison of Neuromuscular Control Strategies between Female Dancers and Athletes”
Michele Pye, Principal Investigator; University of North Carolina at Greensboro, \$2,500

National Athletic Trainers' Association Research and Education Foundation**2012 – 2013**

Doctoral Research Grant: “Associations between Physical Characteristics and Landing Biomechanics in Adolescent Females”
Amanda Tritsch, Principal Investigator; University of North Carolina at Greensboro, \$2,500

University of North Carolina Greensboro Summer Research Assistantship**2011**

“Postural Balance Differences Between Dancers and Athletes”
Summer Research Assistantship Awarded to Michele Pye; \$2,000.

University of North Carolina Greensboro Summer Research Assistantship**2011**

“Timing of Energy Absorption Strategies During a Drop Jump”

Summer Research Assistantship Awarded to Amanda Tritsch; \$2,000.

University of North Carolina Greensboro Undergraduate Research Assistant

2010– 2011

“Genetic Associations with Knee Joint Laxity” (Co-Faculty Advisor with Vincent Henrich)
Interdisciplinary Undergraduate Research Assistant: Richard Bell, \$3,000

National Athletic Trainers’ Association Research and Education Foundation

2010 – 2011

Doctoral Research Grant: “The Effect of Relative Lean Body Mass and Strength on Hip, Knee, and Ankle Energy Absorption During Landing”

Melissa Montgomery, Principal Investigator; University of North Carolina at Greensboro, \$2,500

University of North Carolina Greensboro Summer Research Assistantship

2010

“Effect of strength and body composition on changes in biomechanics during a soccer match simulation”
Summer Research Assistantship Awarded to Amanda Tritsch; \$2,000.

University of North Carolina Greensboro Undergraduate Research Assistant

2009– 2010

“The Independent and Interactive Effects of Estrogen, Tension and Heat on Gene Expression in Collagen Fibroblasts” (Co-Faculty Advisor with Vincent Henrich)
Interdisciplinary Undergraduate Research Assistant: Richard Bell, \$3,000

University of North Carolina Greensboro Undergraduate Research Assistant

2008– 2009

“The effect of Lean Muscle Mass and Strength to Body Weight Measures on Quadriceps Activation Amplitudes During a Drop Jump Landing”
Undergraduate Research Assistant: Megan Christiansen, \$2,000

National Athletic Trainers’ Association Research and Education Foundation

2006 – 2007

Doctoral Research Grant: “Relationships Between Lower Extremity Posture and Lower Extremity Kinematics with Posterior Lateral Hip Activation During a Single Leg Squat”
AD Nguyen, Principal Investigator; University of North Carolina at Greensboro, \$2,500

University of North Carolina Greensboro Undergraduate Research Assistant

2006 – 2007

“The Effect of Dance Training and General Joint Laxity”
Undergraduate Research Assistant: Erin Laurie, \$2,000

University of North Carolina Greensboro Undergraduate Research Assistant

2006 – 2007

“The Relationship Between Lower Extremity Alignment and Dynamic Knee Valgus During Drop Jump Landings”
Undergraduate Research Assistant: Katherine LeMyre, \$2,000

National Athletic Trainers’ Association Research and Education Foundation

2005 – 2006

Doctoral Research Grant: “The effect of tibialis anterior fatigue on the tibial internal rotation and eversion during heel-toe landing”
Y Shimokochi, Principal Investigator; University of North Carolina at Greensboro, \$2,500

National Athletic Trainers’ Association Research and Education Foundation

2005 – 2006

Doctoral Research Grant: “Comparison of Muscle Activation and Knee Joint Stiffness in Female Dancers and Basketball Players During Drop Jumps Landings”
JP Ambegoankar, Principal Investigator; University of North Carolina at Greensboro, \$2,500

University of North Carolina Greensboro Undergraduate Research Assistant

2005 – 2006

“The Prevalence of General Joint Laxity in a Division I Athletic Population”
Undergraduate Research Assistant: Erin Laurie, \$1,500

Grants Submitted / Pending

NC Innovation

Submitted December 2024

“Development of a Knee Arthrometer Prototype”

Role: Co-Principal Investigator with Randy J Schmitz

Aims: We will partner with an industry partner to produce an iterative Phase 1 design for user feedback testing. Specific deliverables include creation of product requirement and design specifications; design solutions to meet defined requirements; Phase 1 mechanical, electrical, and firmware development; and Phase 1 verification through demonstration, testing and user evaluation.

Lever for Change – Action for Women’s Health Call

Submitted December 2024

“Active Girls Healthy Girls”

SJ Shultz, JP Maher, JM Dollar (Co-PIs) – Invited Call - \$1-5M awarded if selected

Aims: To expand AGHG by piloting after-school programs in four Title I schools, creating sustainable access to physical activity and support networks for approximately 300 girls. Findings from this pilot will inform a scalable model to implement AGHG across all 120 Guilford County schools (~15,000 girls) and beyond, transforming the health trajectories of girls and fostering a brighter, healthier future for generations to come.

Guilford County Community Business Organization

Submitted February 2025

“Active Girls Healthy Girls”

SJ Shultz, JP Maher (Co-PIs) - \$48,789 Requested

Aims: To add AGHG programming during 2 teacher workdays, National Girls and Women in Sport Day, and a weeklong summer camp to equips girls with the knowledge, confidence, and motivation to lead healthy, active lives through evidence-based sport, fitness and learning activities rooted in behavior change theory.

NIH-NIAMS

Submitted October 2023

“ACL STORMS: Study of injury Timing and Outcomes Relative to Maturity Status”

Role: Principal Investigator

Aims: To determine the maturity status at the time of ACL injury in young athletes (Aim 1) and determine the extent to which maturity indicators at the time of injury influence and predict short term (2-year) health outcomes (Aims 2 & 3).

NIH-NIMHD – P50 Mechanism

Submitted August 2023

“UNCG Center for Excellence for Investigator Development and Community Engagement

Role: Other significant contributor (Esther Leerkes, PI)

Aim: To increase the capacity of early career faculty, particularly those from underrepresented and health disparity groups, to engage in rigorous and innovative research to reduce disparities in cardiovascular health outcomes.

NIH-NIAMS- 1R01AR082947-01

Resubmitted July 2023

“The Impact of Body Composition, Estrogen Exposure and Chronic Inflammation on ACL Risk Development in Perimenarche Females”

Role: Principal Investigator

Aims: To examine the interplay between fat mass contributions to BMI, E2 exposure and chronic inflammation, and longitudinal changes in thigh muscle volume, ACL volume and anterior knee laxity in girls across a key period in pubertal development. [Score: 28th percentile; Council review pending].

NIH-NIAMS F32 Ruth L. Kirschstein National Research Service Award (NRSA)

Re-submitted July 2023

Individual Postdoctoral Fellowship Applicant: Ms. Elizabeth Bjornsen, University of North Carolina, Chapel Hill

Role: Collaborating Mentor (2023-2025)

Aims: *To characterize gait biomechanics, and determine the association between gait biomechanics, tibiofemoral joint contact forces and patient-reported outcomes (PROs), in pediatric patients with a primary anterior cruciate ligament reconstruction in reference to uninjured pediatric and adult ACLR controls. The proposed F31 is intended to establish the fellow applicant’s research line aimed at understanding the biomechanical changes that influence poor long-term outcomes following pediatric ACL injury, with the long-term goal of identifying therapeutic targets to optimize life-long joint health.*

Patents

Multi-Axial Joint Laxity Testing Apparatus and Method

Awarded April 29, 2025

US Patent No. US 12,285,273B2

Multi-Axial Joint Laxity Testing Apparatus and Method

Patent Filed November 2019

Patent Pending (International Application #PCT/US19/59648)

Refereed Journal Articles in Preparation or Review

- Thompson JD, Howe D, Griffith EH, Conley AJ, Shultz SJ, Schnabel LV, Spang JT, Fisher MB. Serum Estrogen to Progesterone Ratio Associates with Anterior Cruciate Ligament Size and Bundle-Specific T2* Relational Times in the Porcine Model. *Journal of Orthopaedic Research*. (11/2025, In Review)
- Shultz SJ, Wideman L, Czerwinski S, Chou A, Lee M. Changes in Fat Mass Index and Fat Free Mass Index Relative to Years from Menarche in 8- to 18-year-old females. The FELS longitudinal Study. (In Preparation)
- Fegley JA, Boeyer M, Shultz SJ. Maturity Offset at the Time of ACL Injury; A Retrospective Chart Review. *American Journal of Sports Medicine*. (In Preparation)

4. Shultz SJ, Fegley JA, Boeyer M, Kiapour A. Sex specific changes in ACL Cross Sectional Area and Notch Geometry by Years from 90% Adult Height. *Journal of Orthopaedic Research*. (In Preparation)
5. Shultz SJ, Boeyer M, Casey E, Fabricant P, Ganley T, Ma R, Varkey D. Menarche Status at the Time of ACL Injury. A Pilot Study. *Sports Health: A Multi-disciplinary Approach*. (In Preparation)
6. Shultz SJ, Fegley JA, Boeyer M, Casey E, Fabricant P, Ganley T, Ma R, Varkey D. Maturity Status at the Time of ACL Injury. A Prospective Pilot Study. *Orthopaedic Journal of Sports Medicine*. (In Preparation)
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8. Goldenstein SM, Montgomery MM, Schmitz RJ, Wideman L, Shultz SJ. Comparison of Regional Fat Mass and Lean Mass Indices in Males and Females Stratified by BMI. *Medicine and Science in Sport and Exercise (In Review, October 2023)*

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Consensus Statements and Guidelines (Peer-Reviewed)

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2. Shultz SJ, Schmitz RJ, Cameron KL, Ford KR, Grooms D, Lepley LK, Myer G, Pietrosimone B. ACL Research Retreat VIII Summary Statement: An Update on Injury Risk Identification and Prevention Across the ACL Injury Continuum. *Journal of Athletic Training* 2019;54(9):970–984.
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Invited Papers

1. Shultz SJ. Anterior Cruciate Ligament Injury in the Female Athlete: A Multifactorial Problem That Remains Poorly Understood. *Journal of Athletic Training.* 2008;43(5):455
2. Beynnon BD, Shultz SJ. Keynote Address II: Anatomic Alignment, Menstrual Cycle Phase, and the Risk of Anterior Cruciate Ligament Injury. *Journal of Athletic Training.* 2008;43(5):541–542
3. Perrin DH, Shultz SJ. Physical Rehabilitation and the Challenge of Anterior Cruciate Ligament Injury in the Physically Active Female. *Quest* 2005; 57:154-161

Refereed Published Abstracts

1. Shultz SJ, Foli EM, Schmitz RJ. Validation of a Prototype Knee Arthrometer to Gold Standard Arthrometry and Radiographs. *Orthopaedic Research Society 2026. Orthopaedic Transactions.* (In Review)
2. Bjornsen E, Chaaban C, Blackburn T, Franz J, Padua D, Tayne S, Vos P, Shultz SJ, Pietrosimone B. Patient-Reported Outcomes Differ by Maturation Stage in Pediatric Patients After Anterior Cruciate Ligament Reconstruction. American College of Sports Medicine. Medicine and Science in Sport and Exercise (In Review)
3. Bjornsen E, Blackburn JT, Franz JR, Padua D, Tayne S, Vos P, Shultz SJ, Pietrosimone B. The effect of maturation on bilateral gait biomechanical outcomes in pediatric patients following anterior cruciate ligament reconstruction. *Osteoarthritis Research Society International.* (In review)
4. Easson M, Thompson J, Shultz S, Schnabel LV, Spang JT, Fisher MB. Associations Between Sex Hormone Levels, Puberty Onset and ACL Morphology in the Growing Porcine Knee Joint. *Orthopaedic Research Society 2026. Orthopaedic Transactions.* (In Review)
5. Windon C, Edison AN, Dennis JD, Blackburn JT, Shultz SJ, Birchmeier TB. Reactive Strength Index Predicts Self-Reported Knee Function after Anterior Cruciate Ligament Reconstruction. To be presented at South East American College of Sports Medicine, 2026 (Accepted).
6. Easson M, Thompson JD, Shultz SJ, Schnabel LV, Spang J, Fisher M. Associations between sex hormone levels, puberty onset and ACL morphology in the growing porcine knee joint. *Annals of Biomedical Engineering.* (In Press). To be presented at Biomedical Engineering Society, October 2025.
7. Bjornsen E, Blackburn JT, Franz J, Horton WZ, Padua DA, Shultz SJ, Tayne S, Pietrosimone B. Tibiofemoral Joint Contact Force Profiles of Sexually-Immature Pediatric Patients Following Anterior Cruciate Ligament Reconstruction. *Med Sci Sports Exerc.* 2025; 57(10S):197-198. DOI: 10.1249/01.mss.0001156204.59539.d3
8. Birchmeier TB, Shultz SJ, Schwartz T, Nilius AE, Dennis JD, Blackburn JT. Reactive Strength Index Differs Between Those Who Are and Are Not Able to Complete a Single-Leg Landing 6 Months After ACL Reconstruction. *Journal of Athletic Training* (Accepted 02/03/25). To be Presented at NATA, June 2025
9. Bechke EE, Goldenstein SJ, Shultz SJ, Wideman L. The Relationship Between Salivary and Serum Estrogen and Progesterone. Presented at SEACM March 2024
10. Bacon BR, Shultz SJ, Monroe DC, McDowell CS, Nesbitt PR, McKenzie SM, Schmitz RJ. Differences in Cortical Activation During Anterior Tibial Translation between Females with High and Low Laxity. *Orthopaedic Transactions. Presented at ORS 2024*
11. Wideman L, Dollar JM, Zaplatosch ME, Shultz SJ, Keane SP, Shriner LH, Shanahan L. Influence of Early vs Late Puberty and Menarche on Body Composition in Female Emerging Adults. *Medicine and Science in Sport and Exercise.* 2023; 55(9S):482. DOI: 10.1249/01.mss.0000984320.83607.53
12. Fegley JA, Boeyer M, Shultz SJ. Skeletal Age at the Time of Pediatric ACL Injury: A Retrospective Chart Review.

Journal of Athletic Training. 2023; 58(6S):123

13. Bacon BR, Shultz SJ, Monroe DC, Schmitz RJ. Relationship of Force and Displacement-Derived Brain Activity to Knee Laxity During Joint Loading. SEACM (Submitted 10/15/24)
14. Schmitz SJ, Bacon BR, Park-Braswell KY, Shultz SJ. Relationship of ACL Volume to Clinical Knee Arthrometer and Imaging Derived Laxity Measures. *Journal of Athletic Training.* 2023; 58(6S):219
15. Henderson SA, Monroe DC, Park-Braswell K, Raisbeck L, Shultz SJ, Schmitz RJ. Attentionally focused Neuromuscular Training and Brain Structure-Function Coupling. North American Society for Psychology of Sport and Physical Activity Annual Meeting; *Journal of Sport and Exercise Psychology (In Review)*
16. Shultz SJ, Montgomery MM, Schmitz JR, Wideman L. The Influence of Gynoid Fat Mass Percentage on Sex Hormone Levels and Knee Laxity. Orthopaedic Transactions. 2023;Volume 48: Paper 0955 <https://www.ors.org/transactions/2023/955.pdf>
17. Shultz SJ, Montgomery MM, Schmitz RJ, Wideman L. Comparison of Leg Fat Mass and Lean Mass Indices in Males and Females Stratified by Body Mass Index. American College of Sports Medicine Annual Meeting; *Medicine and Science in Sport and Exercise.* 2022;54(9S):166. doi: 10.1249/01.mss.0000877112.78533.5c
18. Monroe DC, Park-Braswell K, Raisbeck L, Shultz SJ, Schmitz RJ. Eight Weeks of Attentionally Focused Neuromuscular Training Changes Single Leg Hop Performance and Brain White Mater Architecture. American College of Sports Medicine Annual Meeting; *Medicine and Science in Sport and Exercise* 2022; 54(9S):263
19. Bechke EE, Anderson T, Wideman L, Shultz SJ. Body Fat Percentage Does Not Predict Sex Hormone Variability Within and Between Menstrual Cycles. American College of Sports Medicine Annual Meeting; *Medicine and Science in Sport and Exercise (In Review)*.2022; 54(9S):599
20. Cerminaro RM, Gardner HM, Dollar J, Shultz SJ, Wideman L, Duffy DM. The Reliability of Adult Female's Recall of Their Menstrual Cycle Characteristics and Physical Activity Status at the Onset of Menses. American College of Sports Medicine Annual Meeting; *Medicine and Science in Sport and Exercise.* 2022;54(9S):600
21. Shultz SJ, Rodriguez-Cruz M, Casey E, Dompier T, Ford KR, Pietrosimone B, Schmitz RJ, Taylor JB. Developmental Trajectories of ACL Injury Risk Factors in Males and Females between 8 and 18 Years of Age. *Journal of Athletic Training.* 57(9):996
22. Park-Braswell K, Shultz SJ, Ross SE, Sunnassee D, Grooms DR, Schmitz RJ. The Impact of Differential Knee Laxity on Brain Function and Structure. *Journal of Athletic Training.* 57(9):1001
23. Park-Braswell, K, Raisbeck LD, Rhea CK, Shultz SJ, Grooms DR, Schmitz RJ. Sex-specific Brain Activation During Single Leg Movements. National Athletic Training Association Annual Meeting 2020. *Journal of Athletic Training* 2020; 55(5): S74
24. Schmitz RJ, Park-Braswell K, Raisbeck LD, Grooms DR, Shultz SJ, Rhea CK,: Wilkins RW. Neural Correlates of Knee Extension Exercise and Single Leg Hop following 8 Weeks of Attentionally Focused Neuromuscular Training. National Athletic Training Association Annual Meeting 2020. *Journal of Athletic Training* 2020; 55(5): S27
25. Taylor JB, Shultz SJ, Ford K. The effect of warm-up-based injury prevention program on ankle biomechanics. APTA Combined Sections Meeting, February 15th, 2020. Denver, CO. *Journal of Orthopaedic and Sports Physical Therapy.* 2020;50(1):
26. Shultz SJ, Anderson T, Park A, Gold L, Schmitz RJ. Relationships between ACL structural properties and inter-subject variability in anteroposterior knee laxity across the menstrual cycle and during exercise in physically active females. *Presented at the ACL Research Retreat VIII, Greensboro NC – March 14th, 2019.* *Journal of Athletic Training* 2019;54(9):989
27. Wang HM, Shultz SJ, Ross SE, Henson R, Perrin DH, Schmitz RJ. The Relationship of ACL Volume and T2* Relation Times to Anterior Knee Laxity. *Presented at the ACL Research Retreat VIII, Greensboro NC – March 14th, 2019.* *Journal of Athletic Training* 2019;54(9):989
28. Pierson M, Raisbeck L, Shultz SJ. Transferring the Optimal Theory Protocol to ACL Prevention. *Presented at the Human Movement Science Research Symposium, UNC Chapel Hill.* March 23rd, 2019.
29. Schmitz RJ, Park K, Raisbeck L, Wilking RW, Grooms DR, Rhea C, Shultz SJ. Changes in Brain Function During Knee Extension Exercise Following 8 Weeks of Attentionally Focused Neuromuscular Training. Presented at the NATA Annual Meeting and Clinical Symposium June 2018. *Journal of Athletic Training* 2018;53(6): S99
30. Hogg JA, Schmitz RJ, Ackerman TA, Shultz SJ. Mediating Effects of Gluteal Function on the Relationship Between Femoral Alignment and Functional Valgus Collapse. Presented at the NATA Annual Meeting and Clinical Symposium June 2018. *Journal of Athletic Training.* 2018;53(6): S360
31. Anderson T, Shultz SJ, Wideman L. Relaxin and Sex Hormone Contributions to Laxity Changes Across the

Menstrual Cycle. *Medicine and Science in Sports and Exercise*. 2017;45(5S):681. Presented at the American College of Sports Medicine Annual Meeting and Clinical Symposium, Denver, CO.

32. Wang HM, Shultz SJ, Ross SE, Henson RA, Perrin DH, Kraft RA, Schmitz RJ. Comparisons of ACL Laxity, Size and Intrinsic Properties Between ACLR and Healthy Individuals. *Journal of Athletic Training*. 2017;52(6):S-83. Presented at National Athletic Trainers Association Annual Meeting and Clinical Symposium June 2017.

33. Hogg JA, Shelton Z, Schmitz RJ, Shultz SJ. Neuromechanical Differences during a Single-Leg Forward landing in Females with High and Low Hip Internal Rotation Range of Motion. *Journal of Athletic Training*. 2017;52(6):S-90. Presented at National Athletic Trainers Association Annual Meeting and Clinical Symposium. June 2017.

34. Waxman JP, Blackburn JT, Rhea CK, Schmitz RJ, Henson RA, Shultz SJ. The Influence of Hamstring Stiffness on ACL Loading Characteristics. 41st Annual Meeting of the American Society of Biomechanics. (Accepted for Presentation, August 2017)

35. Taylor JB, Ford K, Nguyen A, Shultz SJ. Biomechanical characteristics of responders and non-responders to an ACL injury prevention program. APTA Combined Sections Meeting. February 2017, San Antonio, TX. (accepted)

36. Wittstein MW, Starobin JM, Schmitz RJ, Shultz SJ, Haran FJ, Rhea CK. Task Demands during Walking Enhance Cardioloocomotor Coupling. 40th Annual Meeting of the American Society of Biomechanics, August 2nd-5th, 2016.

37. Wang HM, Shultz SJ, Waxman JP, Pye MO, Kraft RA, Schmitz RJ. Dominant to Non-Dominant Limb Measures of ACL Volume and Anterior Knee Laxity. *Journal of Athletic Training*. 2016; 51(6):42

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Books

Shultz, S.J., Valovich McLeod, T, Hougum, P.A. & Perrin, D.H. *Examination of Musculoskeletal Injuries*. 5th Edition. Human Kinetics: Champaign, IL. (Revised and Submitted, December 2023)

Shultz, S.J., Hougum, P.A. & Perrin, D.H. *Examination of Musculoskeletal Injuries*. 4th Edition. Human Kinetics: Champaign, IL. 2016.

Shultz, S.J., Hougum, P.A. & Perrin, D.H. *Examination of Musculoskeletal Injuries*. 3rd Edition. Human Kinetics: Champaign, IL. 2010.

Shultz, S.J., Hougum, P.A. & Perrin, D.H. Examination of Musculoskeletal Injuries. 2nd Edition. Human Kinetics: Champaign, IL. 2005.

Shultz, S.J., Hougum, P.A. & Perrin, D.H. Assessment of Athletic Injuries. Human Kinetics: Champaign, IL. 2000.

Book Chapters

Shultz SJ. (2023) “Chapter 6: The Effect of Sex Hormones on Ligament Structure, Joint Stability and ACL Injury Risk”. In Sex Hormones, Exercise and Women: Scientific and Clinical Aspects. 2nd Edition Hackney A, Ed. Springer Science+Business Media, New York.

Shultz S.J. & Schmitz R.J. (2018) “Chapter 22. Current Understanding and Directions Future Research” In ACL Injuries in the Female Athlete. 2nd Edition FR Noyes & S Barber-Westin, Eds. Springer-Verlag. 271 pages (pp. 641-666)

Shultz SJ. (2016) “Chapter 6: The Effect of Sex Hormones on Ligament Structure, Joint Stability and ACL Injury Risk”. In Sex Hormones, Exercise and Women: Scientific and Clinical Aspects. Hackney A, Ed. Springer Science+Business Media, New York. 370 pages. (pp. 113-138)

Caldwell M, Casey E, Powell B & Shultz SJ. 2016 “Influence of Sex Hormones on the Musculoskeletal System” In Sex and Gender Differences in Sports Medicine. Demos Medical Publishing, New York.

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Shultz S.J. & Brumels K. “Chapter 7. Injury Mechanisms and Classifications” In Core Concepts in Athletic Training and Therapy. S.K. Hillman, Ed. Human Kinetics: Champaign. 613 pages. 2012 (pp. 163-182)

Shultz S.J. & Brumels K. “Chapter 8. Principles of Examination” In Core Concepts in Athletic Training and Therapy. S.K. Hillman, Ed. Human Kinetics: Champaign. 613 pages. 2012 (pp. 183-200)

Shultz S.J. & Brumels K. “Chapter 9. Upper Extremity Injury Recognition” In Core Concepts in Athletic Training and Therapy. S.K. Hillman, Ed. Human Kinetics: Champaign. 613 pages. 2012 (pp. 201-222)

Shultz S.J. & Brumels K. “Chapter 10. Lower Extremity Injury Recognition” In Core Concepts in Athletic Training and Therapy. S.K. Hillman, Ed. Human Kinetics: Champaign. 613 pages. 2012 (pp. 223-248)

Shultz S.J. & Brumels K. “Chapter 11. Head, Spine, and Thorax Injury Recognition” In Core Concepts in Athletic Training and Therapy. S.K. Hillman, Ed. Human Kinetics: Champaign. 613 pages. 2012 (pp. 249-276)

Shultz S.J. & Brumels K. “Chapter 12. General Medical Conditions” In Core Concepts in Athletic Training and Therapy. S.K. Hillman, Ed. Human Kinetics: Champaign. 613 pages. 2012 (pp. 277-306)

Shultz S.J., Nguyen A.D. “Gender Differences in Anatomy”. In Unique Considerations of the Female Athlete. Thomas Delmar Learning: New York. 2009

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Shultz S.J. Chapter 19: “Hormonal Influences on Ligament Biology” In Understanding and Preventing Non-Contact ACL Injury. TE Hewett, LY Griffin, & SJ Shultz Editors. Human Kinetics: Champaign, IL. 310 pages. 2007 (pp. 219-238)

Shultz S.J. Chapter 6: “Preventative Training Programs: Changing Strength Ratios versus Positions of Muscular Efficiency?” In Understanding and Preventing Non-Contact ACL Injury. TE Hewett, LY Griffin, & SJ Shultz Editors. Human Kinetics: Champaign, IL. 310 pages. 2007 (pp. 91-102)

Shultz S.J. *Introduction to Grant Writing and Research Funding Sources*. 2005. In: Arnold B.L., Perrin D.H. & Gansneder B.G. Research in Athletic Training. Philadelphia: F.A. Davis; Chapter 19.

Perrin D.H., Shultz S.J. *Models for clinical research involving proprioception and neuromuscular control*. 2000. In: Lephart SM, Fu FH, eds. Proprioception and Neuromuscular Control in Joint Stability. Champaign: Human Kinetics.

Book Editor

Section IV: Hormonal and Anatomical Risk Factors and Preventative Bracing for ACL Injuries. Shultz SJ. Section Editor. In Understanding and Preventing Non-Contact ACL Injury. 2005. Human Kinetics: Champaign, IL.

Book Ancillaries / Multimedia Publications

Shultz, S.J., Hougum, P.A. & Perrin, D.H. Examination of Musculoskeletal Injuries Presentation Package (CD ROM). 2000. Human Kinetics: Champaign, IL.

Valovich, T.C. for Shultz, S.J., Hougum, P.A. & Perrin, D.H. Assessment of Athletic Injuries Graphics Package (CD ROM). 2000. Human Kinetics: Champaign, IL.

Valovich, T.C. for Shultz, S.J., Hougum, P.A. & Perrin, D.H. Assessment of Athletic Injuries Instructor Guide and Test Package (CD ROM). 2000. Human Kinetics: Champaign, IL.

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Pollard CD, Sigward SM, and Shultz SJ. Risk Factors for ACL Injuries. Monograph for Independent Study Course 19.1 Update on Anterior Cruciate Ligament Injuries Orthopaedic Section, American Physical Therapy Association. Approval Dates 2009-2010.

Shultz, S.J., Valovich, T.C. & Zinder, S.M. Sports Medicine Handbook. 3rd Edition. National Federation of State High School Associations: Indianapolis, IN. In Press.

Shultz, S.J., Valovich, T.C. & Zinder, S.M. Sports Medicine Handbook. 2nd Edition. National Federation of State High School Associations: Indianapolis, IN. 2002.

Shultz, S.J., NFL Youth Football Project. Series of articles on the topic of Strength and Conditioning specific to youth football sport participation. “*Essential Components of a Strength and Conditioning Program*”, “*Proper Warm Up and Cool Down*”, and “*When Not to Ignore Aches and Pains*”. National Football League, 2002.

Shultz, S.J., Zinder, S.M. & Valovich, T.C. Sports Medicine Handbook. National Federation of State High School Associations: Indianapolis, IN. 2001.

Shultz, SJ, Rudd, D.A., Miller, D.A. & Dixon-Burns, A. Revised Recommendations and Guidelines for Appropriate Medical Coverage of Intercollegiate Athletics. National Athletic Trainers Association; Dallas, TX. March 2003

Shultz, SJ, Rudd, D.A., Miller, D.A. & Dixon-Burns, A. Recommendations and Guidelines for Appropriate Medical Coverage of Intercollegiate Athletics. National Athletic Trainers Association; Dallas, TX. March 2000

TEACHING AND ADVISING

Course Instruction

University of North Carolina @ Greensboro: Department of Exercise & Sport Sciences

| | |
|---|-------------------------------------|
| “ <i>Recognition of Injuries and Illness in Physical Activity</i> (KIN 353) | Spring 2018 - 2020 |
| “ <i>Neural Aspects of Injury and Rehabilitation</i> ” (KIN 711): Instructor | Spring 2012 |
| “ <i>Applying Research to Profession Practice in Kinesiology</i> ” (KIN 601): Instructor | Spring 2011, 2012 |
| “ <i>Research Seminar in Applied Neuromechanics</i> (KIN 702): Instructor | Fall & Spring 2005-Present |
| “ <i>Neural Aspects of Motor Control</i> (KIN 730): Co-Instructor | Spring 2004, 2006, 2008, 2010, 2018 |
| “ <i>Doctoral Seminar in Grant Writing</i> ” (KIN 798): Instructor | Fall 2003-2006, 2009-2020 |
| “ <i>Doctoral Seminar in Grant Writing (KIN 798 – Online)</i> : Developer and Instructor | Spring 2017 |
| “ <i>Management and Professional Issues in Athletic Training</i> ” (KIN725): Co-Instructor | Fall 2003, 2004, 2005 |
| “ <i>Therapeutic Techniques in Rehabilitating Athletic Injuries</i> ” (KIN 640): Instructor | Spring 2003 - 2006, 2008 |
| “ <i>Clinical Education III: Athletic Injury Assessment</i> ” (KIN 541): Co-Instructor | Fall 2002 |

University of Virginia: Department of Human Services

| | |
|---|-------------------------|
| “ <i>Orthopedic Basis of Sport Injury</i> ” (EDHS 841): Instructor | Spring 2002 |
| “ <i>Emergency Medical Care</i> ” (EDHS 451/552): Instructor | Spring 2000, 2001, 2002 |
| “ <i>Seminar in Educational Research</i> ” (EDHS 744): Co-Instructor | Spring 2000, 2001, 2002 |
| “ <i>Masters Thesis: Research in Athletic Training</i> ” (EDHS 899): Co-Instructor | Fall & Spring 1999-2002 |
| “ <i>Current Trends in Athletic Training</i> ” (EDHS 850): Instructor | Fall 1999, 2000, 2001 |
| “ <i>Doctoral Seminar in Grant Writing</i> ” (EDHS 850): Instructor | Fall 2000 |
| “ <i>Instrumentation in Clinical Assessment and Sports Medicine Research</i> ” (EDHS 589): Instructor | Spring & Fall 1999 |
| “ <i>Masters Thesis: Research in Athletic Training</i> ” (EDHS 899): Teaching Assistant | Fall & Spring 1997-98 |

| | |
|---|--------------------|
| "Anatomical Basis of Sports Medicine" (EDHS 758): Graduate Assistant Instructor | Summer 1998 |
| "Skeletal Biomechanics" (BIOM 793): Guest Lecturer | Fall, 2000 |
| "Orthopaedic Basis of Athletic Training" (EDHS 841): Guest Lecturer | Spring 1998 & 1999 |
| "Advanced Athletic Training" (EDHS 589): Guest Lecturer | Spring 1998 |

| | |
|---|--------------------|
| UCLA Extension: Department of Humanities, Sciences and Social Sciences | |
| "Basic Care and Prevention of Athletic Injuries" (X457.5) | Winter 1995 & 1996 |
| "Advanced Athletic Training: Evaluation of Athletic Injuries" (X457.4) | Spring 1993 & 1994 |
| "Prevention and Recognition of Injuries for Fitness Instructors" (X468) | Winter 1994 |

| | |
|---|------------------|
| California State University, Fullerton: Depart. of Kinesiology and Health Promotions | |
| "Rehabilitation and Therapeutic Modalities" (PHED 367): Co-Instructor | Fall 1993 & 1994 |

Doctoral Advisory / Dissertation Committee Chair

Beth Bacon (MS/PhD; 2020-2025). "Neural Dynamics in High and Low Laxity Females During Anterior Tibial Translation". Co-Chair with Dr. Randy J. Schmitz

Justin Fegley (2021-2023). DNF

Jennifer Hogg (2013 – 2017). "The Influence of Femoral Structure, Hip Capsular Constraints, and Gluteal Muscle Strength and Activation on Temporal Patterns of Functional Valgus Collapse"

Matthew Wittstein (2013 – 2016). "Variability and Coupling of Cardiac and Locomotor Rhythms During Treadmill Walking Tasks"

Justin Waxman (2012 – 2016). "The Influence of Hamstring Musculo-Articular Hamstring Stiffness on Biomechanical Factors of ACL Loading"

Jeffrey Taylor (2012 – 2016). "Differential Biomechanical Effects of an ACL Injury Prevention Program in Women's Basketball and Soccer Players"

Michele Pye (2010-2014). "Comparison of Neuromuscular Control Strategies between Collegiate Female Dancers and Athletes"

Amanda Tritsch (2009-2013). "Associations between Physical Characteristics and Landing Biomechanics in Adolescent Females"

Vasanth Subramanian (2009-2014; Co-Chair w/ K Kornatz). "Effect of Low Back Pain on Movement Accuracy" (DNF)

Melissa Montgomery (2007 – 2011). "The Effect of Lean Body Mass and Strength on Lower Extremity Energy Absorption Strategies during Landing"

John Cone (2007 – 2010). "The Effect of an Individualized Soccer Match Simulation on Movement and Performance"

Hyunsoo Kim (2006 – 2011). Did not complete program.

Aaron Terranova, Ed.D. (2005 – 2008; Co-Chair with JM Henning). "The Relationship Between Job Satisfaction and Intent to Leave in Collegiate Certified Athletic Trainers"

Anh-Dung Nguyen, PhD (2004 – 2007). "Effects of Lower Extremity Posture on Hip Strength and Their Influence on Lower Extremity Kinematics During a Single Leg Squat"

Yohei Shimokochi, PhD (2003 – 2006). "The Effect of Tibialis Anterior Fatigue on Knee Internal Rotation and Ankle Eversion During Heel to Toe Landings"

Jatin Ambegoankar, PhD (2003 – 2006; Co-Chair with DH Perrin). "A Comparison of Muscle Activation and Knee Joint Stiffness between Female Dancers and Basketball Players during Drop Jumps"

Michelle Lesperance, Ed.D (2002 – 2008; Co-Chair with JM Henning). "The Effects of Problem-Based Learning on Students' Critical Thinking Skills"

Thomas Windley, PhD (2002 – 2005). "Anatomical and Neuromuscular Contributions to Anterior Knee Shear Force During Single-Leg Landings in Females"

Christopher Garcia, PhD (1999 – 2002). "Effect of Controlled Loading on Knee Ligament Behavior Between Genders"

Todd Sanders, PhD (2000-2003). "Sex Related Motor Control Compensations During Landing Tasks"

Doctoral Advisory / Dissertation Committee Member

Jacob Thompson, NC State University (2023 -).

Elizabeth Bjornsen, UNC Chapel Hill (2022-2024). “*Effect of Development and Maturation on Biomechanics and Self-Reported Outcomes in Pediatric Patients Following an ACL Reconstruction*”.

Brandon Warner (2019-2024). “*Development of Practice-Based Seminar for the Use of Electrical Stimulation on Acute and Post-Operative Pain*”

Anne Park-Braswell (2016-2020). “*The Impact of Differential Knee Laxity on Brain Function/Structure and Postural Control*”

Hsing-Min Wang (2011 – 2017). “*The Relationship of ACL Morphology and Structural Composition to Knee Joint Laxity*”

Marc Norcross (2010-2012). “*Energetic Analysis of Landing: A Novel Approach to Understanding Anterior Cruciate Ligament Injuries*” (Doctoral Student at University of North Carolina at Chapel Hill)

Jerome Sauret (2007 – 2011). “*The Validation of sEMG-Torque Relationship During a Dynamic Landing Task*”

Megan Granquist (2005 – 2008). “*Development of a Rehabilitation Adherence Measure for Athletic Training*”

Lee Howard, PhD (2002 – 2005). “*Kinematic and Kinetic Effects of Knee and Ankle Sagittal Plane Joint Restrictions During Squatting*”

Anthony Kulas, PhD (2002 – 2005). “*Effects of the Abdominal Hollowing Maneuver on Lower Extremity Biomechanics during Drop Landings*”

Carrie Docherty, PhD (2000 – 2003). “*Characteristic changes in functional performance in volunteers with ankle instability*” (Advisory Committee Only)

Joshua Drouin, PhD (1999 – 2002). “*The Relationship Between Muscular Timing and Magnitude During a Stepping Task and Subjectively Reported Ankle Instability*”

Steven Zinder, PhD (1999 – 2002). “*The Effect of Ankle Bracing and Functional Ankle Instability on Inversion/Eversion Ankle Stiffness*”

Tamara Valovich, PhD (1998 – 2001). “*The Use of the Standardized Assessment of Concussion and Balance Error Scoring System and Learning Effects in Youth Sports Participants*”

Masters Thesis Committee Chair

Joseph Anello (2023-2025). “*The Effect of Sport or Recreation-Related Concussions on the Development of Functional Networks in Adolescents*”. Co-Chair with Dr. Derek Monroe.

Beth Bacon (2020-2023). “*Differences in Cortical Activation During Anterior Tibial Translation Between Females with High and Low Laxity*”

Elvis Foli (2017- 2021). “*The Biological Effect of Progestins on Anterior Knee Laxity in Females on Oral Contraceptive Pills*”

Mara Mohler (2012 – 2014). “*The Ability of the FMS to Predict Knee Injury in Female Collegiate Athletes*”

Elena Schacht (2012 – 2014). “*Effect of Ankle Dorsiflexion Range of Motion on Knee Biomechanics; Implications for Patellofemoral Pain Syndrome*”

Lavanya Kailas (2009 – 2011). “*Effect of Oral Contraceptive Pills on Anterior Cruciate Ligament Injury Risk*”

Ashley Rockey, MS (2006 – 2008). “*The Relationship between Anterior Pelvic Tilt, Hamstring Extensibility and Hamstring Strength*”

Krystal Smith, MS (2005 – 2007). “*Hormone Status and Measures of Joint Laxity*”

Tyler Hamilton, MS (2004 – 2006). “*Tests of Lower Limb Strength, Power and Balance as Predictors of Performance on a Single Leg Triple Hop for Distance*”

Timothy Botic, MS (2003 – 2005). “*Development of a Landmark Protocol to Construct Segment Axes for Lower Extremity Kinematic Analyses*”

Linda Anstee, M.Ed. (2001 – 2002). *“Intertester and Intratester Reliability of a Functional Movement Screen™”*

David Bell, M.Ed. (2001 – 2002). *“The Effect of Trunk Position on Reflex Timing and Amplitude in Response to a Lower Extremity Perturbation”*

James Eggen, M.Ed. (2001 – 2002). *“Hip Abductor Fatigue Affects Frontal Plane Motion Following a Drop Jump”*

Scott Gross, M.Ed. (2001 – 2002). *“Effect of Rate of Force Application on Anterior Knee Laxity and Stiffness”*

Timothy Kelly, M.Ed. (2001 – 2002). *“The Effect of Peroneal Muscle Fatigue on Medial/Lateral Ankle Stiffness”*

Sarah Lathrop, M.Ed. (2001 – 2002). *“Evaluation of Eating Behaviors and Attitudes in Male Athletes Using Two Survey Instruments”*

Monica Murrell, M.Ed. (2001 – 2002). *“The Effect of Moderate Exertion on Neuromuscular Activation Following a Lower Extremity Perturbation”*

Katie Rybak, M.Ed. (2001 – 2002). *“The Effect of Functional Ankle Instability on Static and Dynamic Joint Reposition Sense”*

Thomas Susco, M.Ed. (2001 – 2002). *“Gender Effects on Balance Recovery Timelines from Exertion as Measured using the Balance Error Scoring System.”*

Lauren Swisher, M.Ed. (2001 – 2002). *“Gender Differences in Muscular Activation Patterns at the Knee in Pre-pubescents”*

Brady Tripp, M.Ed. (2001 – 2002). *“The Effects of Functional Fatigue on Active Multi-joint Position Reproduction of the Throwing Shoulder”*

Shelley Croom, M.Ed. (2001 – 2002). *“The Effect of Lower Extremity Injury on Postural Control as Measured by the Balance Error Scoring System”*

Karen Cote, M.Ed. (2000 – 2001). *“Effect of Foot Type on Center of Pressure and Balance”*

Jennifer D’Amico, M.Ed. (2000 – 2001). *“The Effect of Functional Fatigue on Balance in Stable and Unstable Ankles”*

Melissa Hargrave, M.Ed. (2000 – 2001). *“Influence of Navicular Drop on Ground Reaction Forces and Rate of Loading During Landing”*

Aaron Terranova, M.Ed. (2000 – 2001). *“The Effect of Athletic Taping on Fibularis Muscle Latency”*

Tori Depp, M.Ed. (1999 – 2000). *“The Effect of Foot Orthotics on Muscle Activation Patterns in Selected Lower Extremity Muscles During Gait”*

Brian Moore, M.Ed. (1999 – 2000). *“The Effect of Gender and Fatigue on Electromechanical Delay in Elite Athletes”*

Lauren Olmsted, M.Ed. (1999 – 2000). *“Effects of Functional Ankle Instability on the Performance of the Star Excursion Balance Test”*

Jasper Richardson, M.Ed. (1999 – 2000). *“The Relationship between Foot Placement Angle and Navicular Drop”*

LEADERSHIP TRAINING

BRIDGES Academic Leadership for Women

Fall 2015

BRIDGES is an inclusive professional development program for women in higher education who seek to gain or strengthen their academic leadership capabilities. It is designed to help women identify, understand, and build their leadership roles in the academy. Through an intensive program, participants: 1) develop insights into leadership, with a particular focus on the special skills and attributes women bring to their leadership roles; 2) acquire an understanding of the many facets of colleges and universities; 3) refine and improve their cross-cultural communication skills; and 4) create a program of personal and professional development to benefit themselves and their institutions.

SERVICE

University Service - Administrative

University of North Carolina at Greensboro

Director, Center for Women’s Health and Wellness, School of Health and Human Sciences

August 2020 - Present

The mission of the Center for Women's Health and Wellness is to advance the health and wellness of all women and girls through collaborative research, educational programs, and community engagement.

Chair, Department of Kinesiology

April 2013 – June 2017

Responsible for planning, program development, budget allocations and management of resources, student services, curricula, accreditation, recommendation for appointments as well as promotion and tenure recommendations in consultation with the faculty, faculty and staff orientation and development, resource enhancement, and the advancement of the department's mission and goals within the University and the College or school. The department head represents the department on and off campus and fosters interdepartmental relationships as well as interactions with appropriate external constituencies.

Interim Chair, Department of Kinesiology

August 2012 – April 2013

Responsible for planning, program development, budget allocations and management of resources, student services, curricula, accreditation, recommendation for appointments as well as promotion and tenure recommendations in consultation with the faculty, faculty and staff orientation and development, resource enhancement, and the advancement of the department's mission and goals within the University and the College or school. The department head represents the department on and off campus and fosters interdepartmental relationships as well as interactions with appropriate external constituencies.

Graduate Studies Committee (Department of Kinesiology)

September 2010 – August 2011

In cooperation with The Graduate School, Department Head, and Director of Graduate Studies establish, collate, and administer departmental policies regarding a) the recruitment, admission, retention and advising of graduate students; b) the evaluation of graduate program effectiveness; c) the administration of department graduate programs, and d) the monitoring and evaluation of student progress for those who are matriculating through the graduate programs in the Department of Kinesiology. Review and select applicants for graduate student grants and awards.

Director of Graduate Study (Department of Kinesiology)

January 2006 – August 2011

Responsible for the administration of processes related to the recruitment, admission, advising and qualifying of graduate students in the Department of Kinesiology. Directors of Graduate Study work collaboratively with The Graduate School on all matters relating to graduate education. Chair the Department of Kinesiology Graduate Studies Committee.

University Service – Committee Work

UNCG Research Policies Committee

August 2019 – 2022, 2023-Present

To make advisory recommendations to the Faculty Senate and/or to the Vice Chancellor for Research & Economic Development, acting for the provost, about new policies or changes in existing policies that affect research conducted by faculty at the University. The overall goal for the committee is to enhance the research climate of the University. This is a dean-appointed committee with a three-year term.

UNC Faculty Senate Budget Committee

August 2022 - 2023

To make recommendations to the Vice Chancellor for Business Affairs, the Provost, and other appropriate administrators and to the Senate regarding strategic planning related to the University budget.

HHS Master of Science in Information Analytics (MSIA) task force

April 2019

To identify at least one concentration related to health informatics and capitalize on synergies with our expanding collaborations with Cone and planning for the Millennial campus.

Faculty Mentor

UNCG ACE Mentor; Associate Professor, Department of History

2023 - Present

Grant Writing Mentor; Professor, Department of Public Health Education

2021-2022

New Faculty Mentor; Assistant Professor, Department of Kinesiology

2018 - Present

New Faculty Mentor; Assistant Professor, Department of Kinesiology

2017 - Present

Grant Writing Mentor; Professor, Department of Kinesiology

2018 -

2019

2018-2019

Faculty Search Committees

Assistant/Associate Professor of Neuroscience; Department of Kinesiology (Chair)

August 2018 - 2020

Department Chair and Professor of Nursing; Department of Family and Comm Health

October 2016 – April 2017

Assistant/Associate Professor and MSAT Program Director

October 2011 – February 2012

Assistant/Associate Professor, Sports Medicine and Applied Neuromechanics (Chair)

December 2009 – May 2010

Associate Dean for Research, School of Health and Human Performance

May 2007 – July 2007

Professor and Head, Department of Exercise and Sport Science (Chair)

December 2006 - 2008

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| Provost and Vice Chancellor for Academic Affairs | November 2006 – May 2007 |
| Director of Undergraduate Research, Office of the Vice Provost for Research | August 2005 – December 2005 |
| Senior Faculty Member, Department of Public Health Education | October 2003 – June 2004 |
| Senior Research Professor (2 positions), Office of the Provost | November 2003 – June 2005 |
| Athletic Training Program Director, Department of Exercise & Sport Science (Chair) | January 2004-May 2004 |
| <i>Research Excellence Selection Committee</i> | <i>2010, 2014, 2024</i> |
| Reviewed Materials and Selected Research Excellence Award Recipients for the 2009-2010, 2013-14 and 2023-2024 Academic Years | |
| <i>Promotion & Tenure Committees</i> | |
| Promotion to Full Professor; Department of Peace and Conflicts Studies | Fall, 2021 |
| Promotion with Tenure; Department of Nanoscience | Fall, 2013 |
| <i>Research Advisory Council (School of Health and Human Performance)</i> | <i>January 2005 – 2008</i> |
| Advisory committee to the Associate Dean of Research in the School of Health and Human Performance; Serve as Awards Committee for all School research awards. | |
| <i>Center for Women's Health and Wellness (School of Health and Human Performance)</i> | <i>August 2004 – 2007</i> |
| The mission of the Center for Women's Health and Wellness is to advance the health and wellness of all women and girls through collaborative research and educational programs. | |
| <i>Ed.D. Curriculum Task Force</i> | <i>Spring 2006; 2012-2014</i> |
| Revised the Ed.D. Program Mission, Vision, Goals and Curricular Program of Study in the Department of Exercise and Sport Science (2006); transition EdD in Kinesiology to fully online program (2012-) | |
| <i>Undergraduate Research Committee</i> | <i>September 2003 – 2006</i> |
| <i>Interim Chair (2005-2006)</i> | |
| This University Wide committee is intended to support undergraduate research activities on campus, including the review and selection of candidates for undergraduate research internships. | |
| <i>External Grant Reviewer</i> | <i>February 2004</i> |
| NCARS Proposal: "Effect of Exercise Training During Lactation on Maternal Bone Status". C. Lovelady, Principal Investigator. School of Human Environmental Sciences. | |
| <i>Grant Writing Workshop Selection Committee</i> | <i>April 2003</i> |
| Committee selected by the Associate Provost for Research to review applications and select participants for a one-year intensive grant writing course. | |
| <i>Program Director – CAAHEP Accredited Entry Level Masters Degree Program in Athletic Training</i> | <i>2002 – 2004</i> |
| Responsible for overall direction of the CAAHEP Accredited Entry Level Masters Degree Program; including admission and retention of students, on-going program evaluation, curricular revisions, student orientation and advisement, coordination of in-services, and preparation of annual reports to the Joint Review Committee on Athletic Training Programs. | |
| <i>CAAHEP Accreditation Committee – Entry Level Masters' Degree Program</i> | <i>August 2002 - April 2003</i> |
| Assisted with completion of the self-study document, and in coordination and preparation for the site-visit. Responsible for the preparation and submission of the UNCG Site Visit Rejoinder. | |
| <i>University of Virginia</i> | |
| <i>Interim Program Director- Graduate Program in Athletic Training</i> | <i>2001-02</i> |
| Responsible for overall direction of the NATA Accredited Post-Certified Masters Degree Program in Athletic Training, including admission and retention of students, student advisement, program evaluation and annual reporting. | |
| <i>NATA Accreditation Self Study Committee – Advanced Graduate Program in Athletic Training</i> | <i>1999 - 2000</i> |
| Assisted with completion of the self-study document, and in the coordination and preparation for the site-visit. | |

Professional Organizations / Committees – International / National

| | |
|--|--------------------|
| <i>ACL Injury Research Retreat IV, V, VI, VII, VIII & IX</i> | <i>2007 - 2022</i> |
| <i>Conference Co-Chair – 2008, 2010, 2012, 2015, 2019 & 2022 meetings</i> | |
| Plan and organize meeting, seek sponsors and outside funding to support meeting, review, and selection of abstracts for presentation, program development, secure keynote speakers and moderators. | |
| <i>National Academy of Kinesiology</i> | <i>2017 – 2021</i> |
| <i>Executive Committee – Member at Large (2021-2023)</i> | |

Doctoral Program Review (2021)
Membership Committee (2016-2019)

National Athletic Trainers' Association - Fellows Award Committee 2020-Present
 Review and make recommendations to the Board regarding the awarding of fellowship status.

Orthopedic Research Society- Abstract Reviewer for 2022 Annual Meeting September 2021
American Kinesiology Association 2014-2018
 Board of Directors (Chair, Future Directions Committee 2016-2018)

NATA Foundation Mentorship Program 2013 - 2015
 Professional Mentor for Marc F Norcross, PhD
 Serve as professional and scientific mentor to young academic-researchers in the field of athletic training.

American Academy of Orthopaedic Surgeons 2015
Appropriate Use Criteria for Management of Anterior Cruciate Ligament Injuries

American Academy of Orthopaedic Surgeons 2011 - 2015
 Writing Group Member; *The Management of Anterior Cruciate Ligament Injuries: Evidence-Based Guideline and Evidence Report.* <http://www.aaos.org/research/guidelines/ACLGGuidelineFINAL.pdf>. Published September 8, 2014.
 Participate on a committee of orthopaedists, pediatricians, physical therapists, biomechanists and athletic trainer clinician/researchers to develop clinical practice guidelines on the diagnosis, care, rehabilitation, and prevention of ACL Injuries.

National Athletic Trainers' Association 2010-2013
Awards Recognition Task Force (Member)
 Review and revise existing award mechanisms.

Pronouncements Committee - Writing Group Member ACL Injury Prevention Position Statement 2010 – 2016
 Develop a position statement on the current state of knowledge in ACL injury prevention programs and make recommendations for clinical practice and future research.

Fellows Award Committee (Chair, 2009 - 2013) 2008-2013
 Review and make recommendations to the Board regarding the awarding of fellowship status.

Convention Committee 2003-2007
 Past Chair (2006-2007); Committee Chair (2004-2006); Chair Elect (2003-04). Oversee the planning and organization of the NATA's Annual Meeting and Clinical Symposia for ~10,000 attendees.

Appropriate Medical Care for Secondary School Athletes Task Force 2002-2005
 Writing Team / Research Consultant, Task Force Member. The mission of this task force (comprised of physician, allied health professional, and high school athletic administrative organizations) was to write a consensus statement and background document providing recommendation and guidelines for appropriate medical care of secondary school aged athletes.

Strategic Planning Task Force 2001-2002
 Task Force Member; Team Leader for Strengthening Credibility and Visibility. To develop a strategic plan for the National Athletic Trainers' Association to clarify and strengthen professional and public identity; increase funding levels; and effectively address the employment reimbursement, education and regulatory issues affecting the membership.

Convention Committee 1998-2002
 Organization and planning of educational programming for the NATA's Annual Meeting and Clinical Symposium; Clinical Program Sub-Committee Chair planning 65 Workshops, Dallas, TX - June 2002; Clinical Program Sub-Committee Chair planning 16 Symposia Sessions, Los Angeles, CA - June 2001; Clinical Program Sub-Committee Chair planning 12 Minicourses, Nashville, TN - June 2000

Appropriate Medical Coverage for Intercollegiate Athletics Task Force 1998-2003
 Writing Group Chair; Committee Member. To develop and publish recommendations and guidelines for appropriate medical coverage and care of intercollegiate athletes.

Pronouncements Committee 1997-2004
 Committee member. Oversee the development, review, and approval of NATA Position Statements on Lightning Safety (2000), Fluid Replacement (2000), Emergency Planning (2002), Exertional Heat Illness (2002), Spearing (2004), and Sport Related Concussion (2004).

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|--|-----------------------|
| <i>Education Council - Entry Level Education Committee</i> | 1997-2000 |
| Committee member. A sub-committee of the National Athletic Trainers' Association Education Council, providing direction, guidelines, and resources for entry-level athletic training education programs. | |
| <i>District Secretary and Treasurer's Committee</i> | 1996-1999 |
| Committee member. A committee comprised of the district secretaries and treasurers of the 10 districts of the NATA, to address membership, financial and organization issues. | |
| <i>College and University Athletic Trainers Committee</i> | 1994 – 1996 |
| Committee member, 1994-1996; Task Force Member, 1993-94. Mission is to 1) promote institutional ownership in the integrated health care delivery system in intercollegiate athletics; 2) identify and address issues related to the health and safety of the student athlete; and 3) address concerns of the certified athletic trainer in the collegiate setting. | |
| <i>National Athletic Trainers' Association Research and Education Foundation Research Committee</i> | 2006-2012 |
| <i>Vice Chair for Student Grants 2009-2012</i> | |
| Review and make recommendations to the Board regarding all grant and research applications awarded through the Foundation; Review, approve and schedule all Free Communications for the Annual Meeting. Review and select research excellence awards. | |
| <i>World Congress of Sport Injury Prevention</i> | |
| <i>Scientific Committee (2nd Congress Tromso, Norway 2008; 3rd Congress, Monaco 2011)</i> | 2006 – 2011 |
| The role of the scientific committee is to contribute to the planning phase of the meeting, review and selection of topic proposals, speaker selection. | |
| <i>Joint Review Committee on Athletic Training Education Programs (JRC-AT)</i> | |
| Site-Visitor; Long Island University, Brooklyn, NY | Spring 2004 |
| Site-Visitor; Northeastern University, Boston, MA | Spring 2005 |
| <i>American College of Sports Medicine</i> | 1998 - Present |
| Member #126976 | |
| <i>National Strength and Conditioning Association</i> | 1988 - Present |
| Certified Member | |
| <i>REEBOK C.O.R.P.S. Program</i> | 1991 - 1996 |
| Member | |

Professional Organizations / Committees - Regional

| | |
|---|-----------------------|
| <i>Mid Atlantic Athletic Trainers' Association</i> | 1999 - Present |
| Certified Member | |
| <i>Far West Athletic Trainers' Association</i> | 1980 - 1999 |
| District Secretary-Treasurer (1996-1999) College and University Athletic Trainers Committee, Chair (1994 - 1996) | |

Professional Organizations / Committees - State or Local

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|---|-----------------------|
| <i>North Carolina Athletic Trainer's Association</i> | 2002 - Present |
| Certified Member | |
| <i>Virginia Athletic Trainer's Association</i> | 1999 - 2002 |
| Certified Member | |
| <i>California Athletic Trainer's Association</i> | 1985 - 1999 |
| Treasurer: Political Action Committee (1987-1990) | |

Consultant / Panelist / Advisory Roles

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|---|----------------------|
| <i>External Review</i> | February 2022 |
| AAOS Clinical Practice Guideline for the Management of Anterior Cruciate Ligament Injuries; American Academy of Orthopaedic Surgeons. | |
| <i>External Examiner</i> | April 2016 |
| Samantha J Beckley, PhD Thesis (2021). <i>Exploring the Genetic Contribution to Knee Joint Laxity</i> | |

External Program Review*Department of Kinesiology, California State University Fullerton**October 2017***External Examiner***Aaron S. Fox, PhD Thesis (2016). Neuromechanics of the Lower Limb: Implications for ACL Injury Prevention**April 2016***External Examiner***MC Burger, PhD (2014). Genetic Risk Factors for Carpal Tunnel Syndrome. University of Cape Town, South Africa**October 2014***Samara Innovations LLC***Consultant to assist in the development of a business opportunity and associated products in athletic injury prevention, rehabilitation, and performance improvement.**July 2008 – 2010***International Olympic Committee; Lausanne, Switzerland***Participated on an International Expert Panel for Consensus Meeting on ACL Injury in the Female Athlete**February 2008***Oslo Sports Trauma Research Center, Norwegian School of Sports Sciences; Oslo Norway***May 2007**Invited guest to participate in three-day research retreat to critique and provide feedback on student research projects at the MS, PhD, and Post-Doctoral levels.***University of Michigan Sports Injury Prevention Center***August 2006 – Present**Advisory Council Member: Assist with defining the research direction for the center. Participated in Inaugural symposium to open the center (May 2007).***Hunt Valley II: Consensus Conference on ACL Injury Prevention Programs***January 2005**Participant and Presenter: Impact of Prevention Programs on Agonist/Antagonist Strength Ratios**Sponsored by the American Orthopaedic Society for Sports Medicine, Atlanta, GA***Greensboro Youth Soccer Sports Medicine Consortium***September 2002 – Present**This non-profit group of sports medicine and fitness professionals are developing a web site and educational materials with the goal of “Soccer-related Injury Prevention through Education and Performance Enhancement.”***Sports Health Care Community Advisory Committee***October 2002 – Present**Arizona School of Health Sciences; Mesa Arizona**The committee serves to insure the ASHS Sport Health Care Program remains in the professional forefront, exceeds accreditation requirements, attracts qualified students and faculty, and improves the health within their community, the nation and profession.***AOSSM, NATA & NCAA Consensus Group on Non-Contact ACL Injury***June 1999**Participant: Development of a Consensus Statement on Non-Contact ACL Injuries; Hunt Valley, MD***National Collegiate Athletic Association***1996 - 2000**Participant: Anterior Cruciate Ligament Study Group***Reebok Women's Sports Training Program***1995 -1996**Technical Consultant / Development Team***United States Tennis Association - Player Development Program***1989 - 1992**Sports Science Advisor***Editorial****Journal of Athletic Training***2000 - 2023**Senior Associate Editor (2015- 2023)**Guest Editor, Special Issue on ACL Injury in the Pediatric Athlete (2021-2022)**Guest Editor-n-Chief, Special Issue on Women's Scholars in Athletic Training (2020-2021)**Section Editor: Biodynamics and Motor Control (July 2007 – Present)**Editorial Board Member (August 2000 – July 2007)**Editorial Assistant (September 1996 - May 2000)***Sports Health***2008 - Present**Editorial Board Member***Medicine and Science in Sport and Exercise***2010 - 2022**Editorial Board Member (May 2010 – 2022)***Isokinetics and Exercise***2008 - 2020**Editorial Board Member*

External Reviewer for Promotion and Tenure

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|---|-----------------------|
| <i>Promotion to Associate with Tenure, Dept of Orthopaedic Surgery, University of Virginia</i> | <i>October 2001</i> |
| <i>Promotion to Associate with Tenure, Dept of Physical Education and Health, College of Charleston</i> | <i>October 2002</i> |
| <i>Review for Continuing Faculty Status, Dept of Exercise Science, Brigham Young University</i> | <i>August 2008</i> |
| <i>Promotion to Associate with Tenure, School of HPER, Indiana University</i> | <i>August 2008</i> |
| <i>Promotion to Associate with Tenure, Dept of Kinesiology, University of Michigan</i> | <i>October 2009</i> |
| <i>Promotion to Associate with Tenure, Dept of Kinesiology, University of Georgia</i> | <i>March 2011</i> |
| <i>Promotion to Full Professor, Dept of Exercise Science, Brigham Young University</i> | <i>September 2011</i> |
| <i>Promotion to Associate with Tenure; PT and Rehabilitation Science, University of Iowa</i> | <i>October 2011</i> |
| <i>Promotion to Full Professor; Health Sciences, University of Cape Town</i> | <i>August 2012</i> |
| <i>Promotion to Tenure; Dept of Nanoscience, University of North Carolina at Greensboro</i> | <i>October 2013</i> |
| <i>Promotion to Full Professor; School of Physical Therapy and Athl Training Old Dominion University</i> | <i>November 2013</i> |
| <i>Promotion to Associate with Tenure; Dept of Kinesiology, University of Connecticut</i> | <i>June 2014</i> |
| <i>Promotion to Full Professor; Dept of Exercise Science, University of Cape Town, South Africa</i> | <i>August 2014</i> |
| <i>Promotion to Full Professor; Dept of Kinesiology, Indiana University</i> | <i>July 2015</i> |
| <i>Promotion to Full Professor; Dept of Kinesiology and Applied Physiology, University of Delaware</i> | <i>July 2015</i> |
| <i>Promotion to Full Professor; Dept of Kinesiology and Dept of Orthopaedics, University of Virginia</i> | <i>October 2019</i> |
| <i>Promotion to Full Professor; Dept of Kinesiology, University of Connecticut</i> | <i>August 2020</i> |
| <i>Promotion to Associate with Tenure; Divs of PM&R, Sports Medicine, and Research, Univ of Florida</i> | <i>August 2020</i> |
| <i>Promotion to Clinical Associate Professor; School of Kinesiology, University of Michigan</i> | <i>October 2021</i> |

Manuscript Reviewer

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| <i>American Journal of Sports Medicine</i> | <i>2011- 2016, 2020-2023</i> |
| <i>British Journal of Sports Medicine</i> | <i>2001, 2007, 2008, 2023</i> |
| <i>BMC Musculoskeletal Disorders</i> | <i>2020</i> |
| <i>Clinical Biomechanics</i> | <i>2009, 2010, 2011</i> |
| <i>Clinical Journal of Sports Medicine</i> | <i>2011</i> |
| <i>Exercise and Sport Science Reviews</i> | <i>2009</i> |
| <i>Journal of Athletic Training</i> | <i>1997 – Present</i> |
| <i>Journal of Applied Biomechanics</i> | <i>2011</i> |
| <i>Journal of Biomechanics</i> | <i>2006, 2008, 2010, 2012, 2014, 2021</i> |
| <i>Journal of Bone and Joint Surgery</i> | <i>2003</i> |
| <i>Journal of Electromyography and Kinesiology</i> | <i>2012, 2013, 2014, 2015</i> |
| <i>Journal of Motor Learning and Development</i> | <i>2021</i> |
| <i>Journal of Orthopaedic Research</i> | <i>2006, 2008, 2010, 2018, 2020, 2021</i> |
| <i>Journal of Sports Health</i> | <i>2008 - Present</i> |
| <i>Journal of Sport Sciences</i> | <i>2018</i> |
| <i>International Journal of Sports Medicine</i> | <i>2006, 2007, 2011</i> |
| <i>Medical Engineering and Physics</i> | <i>2009, 2013, 2020</i> |
| <i>Medicine and Science in Sport and Exercise</i> | <i>2005, 2007-Present</i> |
| <i>Neuroscience Letters</i> | <i>2010</i> |
| <i>Plus One</i> | <i>2015</i> |
| <i>Research Quarterly</i> | <i>2006, 2009</i> |
| <i>Scandinavian Journal of Sports Medicine</i> | <i>2008</i> |
| <i>Sport and Exercise Science</i> | <i>2020</i> |
| <i>Sports Medicine</i> | <i>2006, 2010, 2011, 2019, 2020</i> |
| <i>Women in Sport and Physical Activity</i> | <i>2006</i> |

Grant Reviewer

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| <i>NIH-NIAMS 2023/03 AMS Study Section – K01, K08 and K23 Mechanisms</i> | <i>March 2023</i> |
| <i>NIH-NIAMS 2021/08 ZAR1 FY (M2) 1 - NIAMS Loan Repayment Program Review</i> | <i>March 2021</i> |
| <i>NIH-NIAMS AMSC Study Section – R21 and R01 Clinical Trials, R01 Observation studies</i> | <i>June 2019</i> |
| <i>NIH-NIAMS ZRG1 F10B Study Section - NRSA Fellowships</i> | <i>July 2013</i> |
| Special Emphasis Grants Review Committee (1 primary review, 3 secondary reviews, 4 discussant reviews) | |
| <i>NIH-NIAMS ZRG1 F10B Study Section - NRSA Fellowships</i> | <i>July 2012</i> |
| Special Emphasis Grants Review Committee (2 primary review, 3 secondary reviews, 4 discussant reviews) | |
| <i>NIH-NIAMS ZRG1 F10B Study Section - NRSA Fellowships</i> | <i>October 2011</i> |

Special Emphasis Grants Review Committee (3 primary review, 3 secondary reviews, 3 discussant reviews)

NIH-NIAMS ZRG1 F10B Study Section - NRSA Fellowships

July 2011

Special Emphasis Grants Review Committee (3 primary review, 4 secondary reviews, 3 discussant reviews)

NIH-NIAMS ZRG1 F10B Study Section - NRSA Fellowships

March 2011

Special Emphasis Grants Review Committee (2 primary review, 3 secondary reviews, 4 discussant reviews)

NIH-NIAMS ZRG1 F10B Study Section - NRSA Fellowships

November 2010

Special Emphasis Grants Review Committee (1 primary review, 1 secondary review, 2 discussant reviews)

NIH-NIAMS AMS 1 - Arthritis and Musculoskeletal and Skin Diseases

October 2007

Special Emphasis Grants Review Committee (1 primary review, 1 secondary review, 2 discussant reviews)

National Athletic Trainers' Association - Research and Education Foundation

2000-Present

University of Florida - Doctoral Student Grant Proposal

2000

Book Reviewer

Human Kinetics Publishers

March 2001

Delforge, G. Sports Injury Management: A Problem-Solving Approach. Human Kinetics: Champaign, IL

Athletic Training Service

Area Medical Coordinator

United States Olympic Festival

Los Angeles, July 1991

Athletic Trainer

USA Track and Field vs. Great Britain

Edinburgh Scotland; June 1993

Sunkist Indoor Track Meet

Los Angeles; California 1985 - 1993

PAC - 10 Women's Basketball All-Star Tour

Belgium & France; August 1992

Volvo Men's Professional Tennis Tournament

Los Angeles; August 1990 & 1991

World Cup / ADT London Marathon

London, England; April 1991

Mobil / USA Track and Field National Championships

Cerritos, California; July 1990

Women's International Ekiden

Yokahama, Japan; February 1990

Los Angeles Times Indoor Track Meet

Los Angeles, California; 1985 - 1990

Games of the XXIII Olympiad

Los Angeles, California; July / August 1984

Professional Presentations – National / International

2nd Conference on ACL Injury in Female Football Players, Barcelona, Spain

October 2023

Expert Panel: ACL Injury Prevention and Rehabilitation

Orthopaedic Research Society Annual Meeting, Dallas, TX

February 2023

Leveraging qMRI to Assess ACL Structural Integrity and Injury Risk

National Athletic Trainers Association 72nd Annual Meeting and Clinical Symposium, Philadelphia PA

June 2022

ACL Injury in the Pediatric Athlete: A Review of the Journal of Athletic Training Special Issue

National Academy of Kinesiology, Bellevue, WA

September 2019

“Recent Advances in Primary and Secondary ACL Injury Prevention: What Does the Future Hold?”

Eastern Athletic Trainers Association Annual Meeting and Clinical Symposium, Philadelphia, PA

Jan 2017

Marjorie King Research to Reality Lecture – “The Role of Knee Laxity in ACL Injury Risk: Implications for Clinical Practice”

American Orthopaedic Society of Sports Medicine Annual Meeting, Orlando, FL

July 2015

NATA Exchange Lecture “The Role of Knee Joint Laxity in the ACL Injury Risk Equation”

National Athletic Trainers Association 66th Annual Meeting and Clinical Symposium

June 2015

“Clinical Management of Gender and Hormone Issues in Lower Extremity Injury”

American College of Sports Medicine Annual Meeting, San Diego, CA

May 2015

NATA Exchange Lecture “The Role of Sex Hormones and Knee Joint Laxity in the ACL Injury Risk Equation”

FA Masterclass: Women's Sport and Exercise in Football Conference, St George Park, Great Britain

Nov 2014

“Genetics and Hormonal Influences on Knee Joint Laxity and ACL Injury Risk”

National Academy of Kinesiology Annual Meeting; Austin, TX

Sept 2014

“ACL Injury Risk in the Physically Active: Why Are Females More Susceptible?”

National Athletic Trainers Association 65th Annual Meeting and Clinical Symposium, Indianapolis

June 2014

Featured Presentation: “Predisposition to Musculoskeletal Injury: Can We Blame our Parents - Genetic Associations with Joint Laxity and ACL Injury”

Distinguished Scholars Presentation: “Understanding the Role of Joint Laxity in the ACL Injury Risk Equation”

National Athletic Trainers Association – Athletic Training Educators Conference; Dallas, TX

Jan 2013

Robert S. Behnke Keynote Address

National Athletic Trainers Association 63rd Annual Meeting and Clinical Symposium; St Louis, MO

June 2012

Symposium: “ACL Prevention Strategies: Efficacy of Current Prevention Strategies in Decreasing Injury Vulnerability”

National Athletic Trainers Association 63rd Annual Meeting and Clinical Symposium; St Louis, MO

June 2012

Special Topics: “NIH NRSA Fellowship Grants: Keys to Submitting a Competitive Application”

27th Annual Hawkeye Sports Medicine Symposium; Coralville, IA

Dec 2011

ACL Injury Prevention Strategies: How Effective Are They?

Update on ACL Injury Risk Factors

Enhancing Hamstrings Co-Activity Through Functional Training

Special Operations Optimal Warfighter Performance Workshop; Kannapolis, NC

August 2011

Symposium: “Can You Hear Me Now? Technical Writing for the Researcher”.

National Athletic Trainers Association 62nd Annual Meeting and Clinical Symposium; New Orleans, LA

June 2011

Symposium: “Can You Hear Me Now? Technical Writing for the Researcher”.

National Athletic Trainers Association 61st Annual Meeting and Clinical Symposium; Philadelphia, PA

June 2010

Symposium: “PRISMA Statement” in “Guidelines for Reporting Research”.

American Physical Therapy Association, Combined Sections Meeting; San Diego, CA

February 2010

Symposium: “ACL Injury Prevention Strategies” in “ACL Injury: A Multidisciplinary Approach to Prevention, Treatment and Assessment of Outcomes in 2010”.

2009 Sport Injury, Prevention and Rehabilitation International Seminar; Beijing Sport University, China

July 2009

“Theories and Findings of Hormonal Risk Factors for ACL Injury”

“Enhancing Hamstring Co-Activation through Functional Training”

2nd World Congress of Sport Injury Prevention; Tromso, Norway

June 2008

“Anatomical and Postural Contributions to Knee Injury Risk – A Relationship That Remains Poorly Understood”

National Athletic Trainers Association 59th Annual Meeting and Clinical Symposium; St Louis, MO

June 2008

Research Forum Symposium: Effective Strategies for Grant Writing

Research Retreat IV: ACL Injuries – The Gender Bias; Greensboro, NC

April 2008

Keynote Address: “Current Theory and Findings Related to Anatomical and Hormonal Risk Factors”

International Olympic Committee Medical Commission Consensus Statement on ACL Injury in Female Athletes; Lausanne, Switzerland

“ACL Biology and Physiology”

“Thigh Muscle Function and ACL Injury”

National Athletic Trainers Association 58th Annual Meeting and Clinical Symposium; Anaheim, CA

June 2007

Symposium: Cycling Sex Hormones: Is There a Connection with ACL Injury?

“Defining Menstrual Cycle Phase: The Ultimate Challenge” and “Cyclic Changes in Knee Laxity and Stiffness”

Knee Special Interest Group: “Role of Thigh Muscles in Knee Stability” with T. Blackburn, PhD, ATC

Oslo Sports Trauma and Research Center, Norwegian School of Sports Sciences; Oslo Norway

May 2007

“Sex Differences in Lower Extremity Anatomy and Posture, Implications for ACL Injury”

University of Michigan Sports Injury Prevention Center; Ann Arbor Michigan

May 2007

“ACL Injuries: What do We Still Need to Know in Order to Prevent Them?”

International Sports Medicine Conference; University of Vermont

October 2006

“Sex Hormones, Knee Laxity and ACL Injury Risks”

“Sex Differences in Posture: Implications for Injury”

“Management of Lower Extremity Postural Malalignment”

"Role of Proprioception in Injury and Rehabilitation"

"Enhancing Hamstring Co-Activation through Functional Training"

American College of Sports Medicine Annual Meeting; Denver, CO

June 2006

Clinical Colloquium: "Sex Hormones and Anterior Cruciate Ligament Injury and Biology"

National Athletic Trainers' Association 55th Annual Meeting and Clinical Symposium; Baltimore, MD
Symposium; "Advances in ACL Management; Influence of Sex Hormones on Knee Joint Function"

June 2004

American Medical Society of Sports Medicine; Vancouver, British Columbia

April 2004

NATA Research Lecture Exchange; "ACL Injury in the Female Athlete: Assessment of Neuromuscular Risk Factors"

National Athletic Trainers' Association 54th Annual Meeting and Clinical Symposium; St Louis, MO

June 2003

Distinguished Scholars Session; Freddie H. Fu, MD New Investigator Award Presentation,
"ACL Injury in the Female Athlete: Assessment of Neuromuscular Risk Factors"

National Athletic Trainers' Association 53rd Annual Meeting and Clinical Symposium; Dallas, TX

June 2002

Researcher's Forum: "Quantification of Muscle Function - Electromyography"

American College of Sports Medicine Annual Meeting; St. Louis, MO

May 2002

Mini-Symposium: "Update on ACL Injuries in the Female Athlete: Anatomical Risk Factors in ACL Injury"

American College of Sports Medicine Annual Meeting; St. Louis, MO

May 2002

Mini-Symposium: "Proprioception: Mechanisms and Measurement"

"Factors Influencing Reactive Neuromuscular Responses Following Lower Extremity Perturbation"

16th Annual Hawkeye Sports Medicine Symposium and University of Iowa Inaugural Orthopaedic

December 2000

Sports Medicine Society Meeting for Orthopaedic Surgeons; Iowa City, IA

"ACL Injuries in Female Athletes: Assessment of Risk Factors" &

"Role of Hamstring Co-Activation in Preventing and Rehabilitating ACL Injuries."

National Athletic Trainers' Association 51st Annual Meeting and Clinical Symposium; Nashville, TN

June 2000

"Enhancing Hamstring Co-Activity and Functional Knee Stability Through Training" (Workshop)

National Athletic Trainers' Association 51st Annual Meeting and Clinical Symposium; Nashville, TN

June 2000

Specialty Day Symposium sponsored by the College and University Athletic Trainers Committee:

"Recommendations and Guidelines for Appropriate Medical Coverage in Intercollegiate Athletics"

American College of Sports Medicine Annual Meeting; Indianapolis, IN

May 2000

"Recommendations and Guidelines for Appropriate Medical Coverage in Intercollegiate Athletics"

American Medical Society for Sports Medicine Annual Meeting; San Diego, CA

April 2000

"Recommendations and Guidelines for Appropriate Medical Coverage in Intercollegiate Athletics"

National Association of Intercollegiate Athletics Annual Meeting

October 1999

"Appropriate Medical Coverage in Intercollegiate Athletics"

National Athletic Trainers' Association 50th Annual Meeting & Clinical Symposium; Kansas City, MO

June 1999

"Enhancing Hamstring Co-Activity and Functional Knee Stability Through Training" (Workshop)

American College of Sports Medicine 46th Annual Meeting; Seattle, WA

June 1999

Symposium on Anterior Cruciate Ligament Injury in the Female Athlete: "Gender Differences in Neuromuscular Response Characteristics Following Knee Perturbation in a Functional Weight Bearing Stance"

NATA Annual Meeting and Clinical Symposia; Baltimore, MD

June 1998

"The Role of Dynamic Stability in Preventing Knee Ligament Injury: A Comparison of Neuromuscular Response Characteristics in Males and Females"

NATA Annual Meeting and Clinical Symposia; Orlando, FL

June 1996

"Use of Sport Cord in Exercise and Rehabilitation"

Professional Presentations - Regional / State / Local

Sex Differences in Anterior Cruciate Ligament (ACL) Morphology and Knee Joint Laxity: Implications for ACL Injury Risk and Prevention

February 2022

NC State – UNC CH Joint Department of Biomedical Engineering Coulter Seminar Series

Hidden Threats to Women in the Academy: Barriers to Well-being and Promotion

December 2021

ACE Leadership for Women; University of North Carolina, Greensboro, Greensboro NC

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| <i>Scholarly Entrepreneurship – UNCG Department of Kinesiology Graduate Colloquium</i> University of North Carolina, Greensboro, Greensboro NC | <i>November 2021</i> |
| <i>Athletic Training Student Association – The Intersection of my Faith and Career in Athletic Training</i> Liberty University, Lynchburg, VA (Virtual) | <i>October 2020</i> |
| <i>Robert Kersey Distinguished Scholars Presentation - “The Role of Knee Laxity in ACL Injury Risk: Implications for Clinical Practice”</i> – California State University Fullerton | <i>March 2018</i> |
| <i>United States Military Academy – West Point, NY</i> “The Role of Knee Joint Laxity in ACL Injury Risk: Implications for Future Research and Clinical Practice | <i>October 2017</i> |
| <i>Marquette University – Clinical Translational Research Program</i> “The Role of Knee Joint Laxity in the ACL Injury Risk Equation” | <i>April 2015</i> |
| <i>Girls and Women in Sports Conference, Greensboro, NC</i> Female Athletes and Injury: Prevention, Treatment and Recovery “An Update on ACL Injury Risk Factors: Implications for Prevention.” | <i>October 2013</i> |
| <i>40th Annual Arts and Sciences of Sports Medicine; University of Virginia, Charlottesville, VA</i> “Understanding the Role of Joint Laxity in the ACL Injury Risk Equation” | <i>June 2012</i> |
| <i>University of Vermont</i> “Implications of Hormone Mediated Knee Laxity on Knee Joint Neuromechanics” | <i>May 2009</i> |
| <i>Mid-Atlantic Athletic Trainers Association Annual Meeting, Virginia Beach, VA</i> Keynote Address: Hormonal Influences in ACL Injury – From Research to Reality | <i>May 2009</i> |
| <i>University of Michigan Bone and Joint Injury Prevention Center</i> “ACL Injury Risk in Female Athletes: Role of Anatomy and Hormones” | <i>November 2008</i> |
| <i>35th Annual Art and Science of Sports Medicine Symposium; University of Virginia, Charlottesville</i> “The Gender Bias in ACL Injuries: Current Concepts” and “Enhancing Hamstring Co-Activation Through Functional Training” | <i>June 2008</i> |
| <i>UNC/UNCG/Duke Universities Human Movement Science Research Symposium, Chapel Hill, NC</i> Keynote Address: “Shaping a Career Path: What I have Learned Through My Experiences” | <i>February 2008</i> |
| <i>United States Army Research Internal and Environmental Medicine Center, Nantucket, MA</i> “Risk Factors for ACL Injury: What Do We Still Need to Know in Order to Prevent Them” | <i>January 2008</i> |
| <i>2002 University of Virginia General Clinical Research Center Scientific Symposium; Charlottesville</i> “Gender, Hormones and Anterior Cruciate Ligament Compliance” | <i>Oct 2002</i> |
| <i>The Distinguished Lecture Series in Sports Medicine; Hope College, Holland MI</i> “Strategies for Preventing Knee Injuries in Female Athletes” | <i>November 2002</i> |
| <i>29th Annual Art and Science of Sports Medicine Symposium; University of Virginia, Charlottesville</i> “Current Trends and the Gender Bias of ACL Injury” | <i>June 2002</i> |
| <i>Mid-Atlantic Athletic Trainers Association Annual Meeting; Virginia Beach, VA</i> “Implementation Strategies for Containing the Cost of Appropriate Medical Coverage” | <i>May 2002</i> |
| <i>Sports Medicine Expo; “Intra-Articular Tibio-Femoral Injuries in the Athlete”</i> Middle Tennessee State University; Murfreesboro, TN “Current Status of ACL Injuries in Female Athletes” | <i>April 2002</i> |
| <i>South Eastern Athletic Trainers Association Annual Meeting; Atlanta, GA</i> “Implementation Strategies for Containing the Cost of Appropriate Medical Coverage” | <i>March 2002</i> |
| <i>Virginia Horne Henry Lecture Series; University of Wisconsin, Madison WI</i> “Anterior Cruciate Ligament Injury in the Female Athlete: Assessment of Neuromuscular Risk Factors” | <i>March 2002</i> |
| <i>Southwest Athletic Trainers’ Association Annual Meeting – Arlington, TX</i> “Update on Implementation of NATA Recommendations and Guidelines for Appropriate Medical Coverage in Intercollegiate Athletics” | <i>July 2001</i> |
| <i>Missouri Valley Conference Athletic Directors Educational Forum - Bronson, MO</i> “Review and Implementation Strategies of NATA Recommendations and Guidelines for Appropriate Medical Coverage in Intercollegiate Athletics” | <i>May 2001</i> |

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| <i>Mid Atlantic Athletic Trainers' Association Annual Meeting - Greenville, SC</i> | <i>May 2001</i> |
| "Update on Implementation of NATA Recommendations and Guidelines for Appropriate Medical Coverage in Intercollegiate Athletics" | |
| <i>Pennsylvania State University Department of Kinesiology's Colloquium Series - State College, PA</i> | <i>March 2001</i> |
| "Neuromuscular Contributions to ACL Injury in the Female Athlete" | |
| <i>Pennsylvania State University Dept of Kinesiology's Student Athletic Training Club - State College, PA</i> | <i>March 2001</i> |
| "Professional Issues in Athletic Training" | |
| <i>South Eastern Athletic Trainers' Association Annual Meeting - Atlanta, GA,</i> | <i>March 2000</i> |
| "Update on Implementation of NATA Recommendations and Guidelines for Appropriate Medical Coverage in Intercollegiate Athletics" | |
| <i>Southwest Athletic Trainers' Association; Arlington, TX</i> | <i>July 2000</i> |
| "Recommendations and Guidelines for Appropriate Medical Coverage in Intercollegiate Athletics" | |
| <i>Mid Atlantic Athletic Trainers' Association Annual Meeting; Greenville, SC</i> | <i>May 2000</i> |
| "Recommendations and Guidelines for Appropriate Medical Coverage in Intercollegiate Athletics" | |
| <i>Mid Atlantic Athletic Trainers' Association Annual Meeting; Greenville, SC</i> | <i>May 2000</i> |
| "Anterior Cruciate Ligament Injury in the Female Athlete: Assessment of Risk Factors" | |
| <i>South Eastern Athletic Trainers' Association Annual Meeting</i> | <i>March 2000</i> |
| "Recommendations and Guidelines for Appropriate Medical Coverage in Intercollegiate Athletics" | |
| <i>University of Virginia 26th Annual Arts and Science of Sports Medicine Conference</i> | <i>June 1999</i> |
| "Anterior Cruciate Ligament Injury in the Female Athlete: Assessment of Risk Factors" | |
| <i>Joint Gait Lab / Sports Medicine Research Laboratories Neuromechanics Seminar; Univ. of Virginia</i> | <i>December 1998</i> |
| "Assessing Neuromuscular Response Characteristics at the Knee Following Perturbation in a Weight Bearing Stance" | |
| <i>FWATA Annual Meeting and Clinical Symposia; Honolulu, HI</i> | <i>July 1998</i> |
| "Neuromuscular Response Characteristics Following Knee Perturbation" | |
| <i>The Art and Science of Sports Medicine Post Graduate Course; University of Virginia</i> | <i>June 1997</i> |
| "Overtraining in Athletics: Recognition and Prevention" | |
| <i>UCLA Extension: Japanese Sport Institute and Apple Sport College - Summer Intensive Program for Fitness Instructors; Los Angeles, CA</i> | <i>Summer 1994 & 1995</i> |
| " Prevention and Care of Athletic Related Injuries" | |
| " Reconditioning of Athletic Related Injuries" | |
| " Supportive Taping and Bracing Workshop" | |
| <i>UCLA Extension: ACSM Review Course; Los Angeles, CA</i> | <i>March 1994</i> |
| "Emergency Procedures, Prevention & Recognition of Injuries and Low Back Care" | |
| <i>UCLA 8th Annual Sports Medicine Symposium; Los Angeles, CA</i> | <i>May 1993</i> |
| "Functional Training of the Shoulder Complex" | |
| <i>AAF / CIF Coaches Educational Program; Los Angeles, CA</i> | <i>August 1991</i> |
| "Care and Prevention of Track and Field Injuries" | |
| <i>TRACC Sport Medicine 7th Anniversary Seminar on Women in Sport; Los Angeles, CA</i> | <i>October 1989</i> |
| "Strength Training: Developing a Program to Fit Your Needs" | |
| <i>AFAA Specialty Workshop on Low Weight / Low Impact Aerobics; Los Angeles, CA</i> | <i>September 1986</i> |
| "Principles of Strength Training" | |
| <i>Judi Garman's Softball Clinic for Coaches; Fullerton, CA</i> | <i>January 1985</i> |
| "Problems Particular to the Female Athlete" | |
| <i>California State University, Fullerton: Upper Division Athletic Training Courses</i> | <i>Fall 1983</i> |
| "Anorexia and Bulimia in Athletics" | |

Conference / Symposium / Workshop Participant

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| <i>Panelist, Adapt's Academic Integrity for Online Learning</i> | <i>June 2020</i> |
| UNCG Teaching and Learning Commons | |

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| <i>Moderator, Free Communications Session</i> | | |
| National Athletic Trainers' Association Annual Meeting and Clinical Symposium, New Orleans, LA | | June 2018 |
| <i>Moderator, Free Communications Session</i> | | |
| National Athletic Trainers' Association Annual Meeting and Clinical Symposium, Houston, TX | | June 2017 |
| <i>Moderator, Free Communications Session</i> | | |
| National Athletic Trainers' Association Annual Meeting and Clinical Symposium, San Antonio, TX | | June 2009 |
| <i>Moderator, Free Communications Session</i> | | |
| 2 nd World Congress of Sport Injury Prevention, Tromso, Norway | | July 2008 |
| <i>Moderator, Free Communications Session "ACL Injury Risk Factors"</i> | | |
| National Athletic Trainers' Association Annual Meeting and Clinical Symposium, St Louis, MO | | June 2008 |
| <i>Participant, Site Visitor Workshop</i> | | |
| Joint Review Committee for Athletic Training Programs; Baltimore, MD | | June 2004 |
| <i>Moderator & Lead Discussant, ACL Injuries – The Gender Bias Research Retreat II.</i> | | |
| Moderated the session on Hormonal Factors, Assisted with writing of the consensus statement for Neuromuscular Factors, Lexington, KY | | April 2003 |
| <i>Participant, Faculty Grant Writing Workshop</i> | | |
| University of North Carolina at Greensboro, Greensboro, NC | | September 2002 – June 2003 |
| <i>Moderator, "Advance Track: Management of Acute Illness in the Athletic Training Room"</i> | | |
| National Athletic Trainers' Association Annual Meeting and Clinical Symposium, Dallas, TX | | June 2002 |
| <i>Moderator, "Update on ACL Injury Risk Factors and Prevention Strategies in the Female Athlete"</i> | | |
| National Athletic Trainers' Association Annual Meeting and Clinical Symposium, Los Angeles, CA | | June 2001 |
| <i>Moderator, J&J Symposium: "Valgus Overload Injury Continuum of the Elbow"</i> | | |
| National Athletic Trainers' Association Annual Meeting and Clinical Symposium, Los Angeles, CA | | June 2001 |

Media Interviews & Publications

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| CT Insider “Connecticut High School Girl’s Soccer Players Suffering from ‘Epidemic’ of ACL Injuries” | October 2024 |
| https://www.ctinsider.com/gametimect/girls-soccer/article/connecticut-acl-injuries-girls-soccer-19772943.php | |
| UNCG News “How Puberty can Impact Teen’s Knees” | April 2022 |
| https://news.uncg.edu/how-puberty-can-impact-teens-knees/ | |
| WXII Channel 9 “Who Wants to Know” | July 2008 |
| ACL Injury Prevention in Females | |
| WFMY Channel 2 “Who Wants to Know” | July 2008 |
| ACL Injury Prevention in Females | |
| NY Times Magazine | May 11, 2008 |
| “Uneven Playing Field” by Mike Sokolov | |
| Wake Forrest University (WFDD) Voices and Viewpoints with Denise Franklin | October 2006 |
| Radio interview highlighting recent NIH Grant award. | |
| UNCG Research Magazine; University of North Carolina Greensboro | May 2004 |
| “Staying in the Game”; An article highlighting the research of Drs. Shultz and Perrin on ACL Injuries in Females | |
| With Good Reason; Virginia Radio Broadcast –Charlottesville, VA | February 2002 |
| “Shaky Knees and Pain”; Discussing risk factors and care of knee injuries in females | |
| Training and Conditioning Journal | October 2001 |
| “Unreasonable Expectations” Article addressing Appropriate Medical Coverage in Intercollegiate Athletics | |
| Virginia Radio Network; Charlottesville VA | December 2000 |
| Radio Interview Discussing Current Research in Assessment of ACL Injury Risk in Females | |
| Inside UVA | December 1, 2000 |
| Interview for feature article "When Women Get Physical, Knees Take the Brunt of It", highlighting Perrin DH and Shultz SJ research and funding of ACL injury risk factors in the female athlete | |

Daily Progress; Regional and State Section

Interview for feature article "UVa Receives \$275,000 grant to study knee injuries in women"

December 1, 2000

WWKY.790 Radio Talk Show; Louisville, KY

Guest on "Active Lifestyles", Hosted by David Conrad

December 1996

HONORS and AWARDS

National

2020 Stanford University List of World's Top 2% Scientists November 2020-Present
<https://cecbm.com/2023/10/04/stanford-university-names-worlds-top-2-scientists-2023/>

2020 NATA Foundation Free Communication Award for Established Career: Schmitz RJ, Park-Braswell K, Raisbeck LD, Grooms DR, Shultz SJ, Rhea CK,: Wilkins RW. Neural Correlates of Knee Extension Exercise and Single Leg Hop following 8 Weeks of Attentionally Focused Neuromuscular Training. National Athletic Training Association Annual Meeting 2020

2015 Hall of Fame; National Athletic Trainers' Association (Inducted June 2015)

2014 Medal for Distinguished Athletic Training Research; National Athletic Trainers' Association

2013 Fellow, National Academy of Kinesiology #530

2012 Sayer "Bud" Miller Distinguished Educator Award; National Athletic Trainers' Association

2008 Fellow (FACSM); American College of Sports Medicine

2008 Fellow (FNATA); National Athletic Trainers' Association

2005 Most Distinguished Athletic Trainer Award; National Athletic Trainers' Association

2003 Freddie H. Fu, MD New Investigator Award; National Athletic Trainers' Association Research & Education Foundation

2001 Journal of Athletic Training Kenneth L. Knight Award for the Outstanding Research Manuscript: "Neuromuscular Response Characteristics in Men and Women after Knee Perturbation in a Single-leg, Weight-bearing Stance"

Regional

2018 Hall of Fame; Mid Atlantic Athletic Trainers Association

National Athletic Trainers' Association Special Recognition Award, April 2001; For service to the profession of athletic training and the Far West Athletic Trainers' Association

Local

2022 HHS Excellence in Research; School of Health and Human Sciences, Univ. of North Carolina at Greensboro

2014 HHS Excellence in Research; School of Health and Human Sciences, Univ. of North Carolina at Greensboro

2008 HHP Excellence in Research; School of Health and Human Performance, Univ. North Carolina at Greensboro

2005 Gail A. Hennis Graduate Teaching Award; School of Health and Human Performance, University of North Carolina at Greensboro.

2005 University Research Excellence Award; University of North Carolina at Greensboro

2005 Summer Excellence Award; University of North Carolina at Greensboro

2001 Summer Teaching Enhancement Award; University of Virginia

1999 Mosaic Technologies Doctoral Student Award; University of Virginia