

EDUCATION

Doctorate of Philosophy, Kinesiology **May, 2009**

Area of Concentration: Biomechanics Cognate: Exercise Physiology
 Michigan State University, Department of Kinesiology
 Dissertation: Biomechanical Comparison of Three Methods of Back Squatting
 Advisor: Dr. Eugene W. Brown

Master of Science, Human Performance **December, 2003**

University of Wisconsin - LaCrosse
 Thesis: Effects of an Unstable Surface on Free Throw Accuracy
 Advisor: Dr. Jeffery McBride

Bachelor of Science, Education **May, 1993**

Cognates: Math and Chemistry
 Concordia College, Nebraska

PROFESSIONAL EXPERIENCE

University of Central Arkansas	2008-Present
Associate Professor	2015-Present
Tenured	2014-Present
Graduate Coordinator	2014-Present
Assistant Professor	2009-2015
Instructor	2008-2009

Course Taught

Graduate Courses

Course	Semesters Taught
EXSS 6337 Evaluation of Neuromuscular Adaptation	S16
EXSS 6330 Foundations of KPED	SU9
EXSS 6310 Motor Learning	S9,S10,S11S12,S13,S15,S17
EXSS 6x01 Thesis	F14,S15,F15,S16, F16, S17
EXSS 6300 Independent Study	F9
EXSS 5371 Special Topics	S9,F10
KPED 5376/4376 Advanced Strength and Conditioning	F11,F12 F13,F14 F15,F17

PROFESSIONAL EXPERIENCE (CONTINUED)

Undergraduate	
Course	Semesters Taught
EXSS4395 Sport in American Society	F8,S9,SU9,SU10
EXSS 4320 Measurement and Evaluation	S11,S12,S13,S14S15,S16,S17
EXSS 4300 Exercise Physiology	SU9
EXSS 3382 Mechanical Kinesiology	F8,S10,F11,F12 F13,F14,SU15,F15,F16,S17,SU17, F17
EXSS 2381 Anatomical Kinesiology	F8,S9,F9,S10,SU10,F10,S11,SU11F11,S12,SU12, F12,S13,SU13,F13,S14,SU14,F14,SU15,F15,SU16
EXSS 2340 Growth and Motor Development	F9,S10,F10,S11,S12,S13,S14,S15

Michigan State University, Department of Kinesiology
Instructor of Undergraduate Courses

2003-2007

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|---|-------------------------------|
| KIN 370 Proseminar in Kinesiology | KIN 121 The Healthy Lifestyle |
| KIN 260 Growth and Motor Development | KIN 116B Golf II |
| KIN 250 Measurement in Kinesiology | KIN 106C Bowling |
| KIN 250 Measurement in Kinesiology-Online Class | KIN 106E Golf I |
| KIN 217 Human Anatomy Lab-Cadaver | KIN 106N Track and Field |
| KIN 217 Human Anatomy Lab-Computer Based | KIN 103T Distance Running |
| KIN 216 Anatomy and Physiology | KIN 103D General Conditioning |
| KIN 170 Introduction to Kinesiology | |

Lab Assistant for Graduate Courses, Department of Kinesiology 2005-2007

- KIN 830 Biomechanical Analysis of Physical Activity
- KIN 831 Advanced Biomechanical Analysis of Physical Activity
 - Taught EMG portion of class

Internship: United States Olympic Committee Sports Science Division, Summer 2005

Responsibilities:

- Evaluated the validity of instrumentation used as a coaching tool with the Olympic weightlifting team
- Ran computer evaluation instrumentation on athlete performance for weightlifting coaches
- Analyzed hydration status of weightlifting team
- Tested athletes' static and countermovement jumping ability
- Created record system in Excel for all athlete jump data

PROFESSIONAL EXPERIENCE (CONTINUED)

Related K-12 Teaching Experience

Lutheran High School-Bloomington, Minnesota 2000-2002

Athletic Director/Teacher/Coach

Courses Taught: Algebra 1, General Science, Chemistry

Coaching Responsibilities: Assistant Track Coach, Volunteer Football Coach

- Created a partnership with Outback Steakhouse to honor athletes of the week
- Procured and scheduled gyms for volleyball and basketball for a high school without its own gymnasium
- Maintained athletic budget for all sports
- Hired, supervised, and evaluated coaches in nine different sports

Concordia Lutheran High School- Tomball, Texas 1994-2000

Teacher/Coach

Courses Taught: Physical Science, Honors Physical Science, Calculus, AP Calculus, Chemistry, AP Chemistry

Coaching Responsibilities: Assistant Football Coach, Head Cross Country Coach, Head Track Coach

- Implemented media based physical science curriculum
- Procured media and testing equipment for Science Department
- Implemented recycling program for entire school
- Organized and ran 15 track and field meets and 2 cross country meets
- Coached boys cross country and boys track and field to district championships in 1999

River Valley High School-Correctionville, Iowa 1993-1994

Teacher/Coach

Courses Taught: Chemistry, Physics, Physical Science, Applied Science

Coaching Responsibilities: Assistant Junior High Football, Assistant High School Wrestling, Head Jr. High Wrestling

- Helped start Junior High wrestling program

GRANTS

Internal Grants

University Research Council: Travel Grant “Bridging the gap: Easier said than done.” Seminar: Central States ACSM meeting in Fayetteville, AR, October 2017. **Adam J. Bruenger**. November 2014. \$150 (Funded)

Adam Bruenger
Associate Professor-University of Central Arkansas
Work Phone: 501-852-5228 Cell Phone: 501-908-5520
abruenger@uca.edu

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Internal Grants (continued)

University Research Council: Travel Grant “Squat and power clean strength are not related to appropriate drop jump height in female collegiate athletes.” Accepted-poster presentation: ISBS International meeting in Johnson City, TN, July 2014. **Adam J. Bruenger**. November 2014. \$200 (Funded)

University Research Council: Summer research stipend “Comparison of muscle activity during high and low stability ball presses” **Adam J. Bruenger**. February 2012. \$3300 (Funded)

University Research Council. “Evaluation of the step-up and single leg squat.” **Adam J. Bruenger**. November 2009. \$14,100 (\$10,000 Funded)

External Grants

Arkansas Department of Higher Education. “Effects of intermittent static stretching on bench press muscular endurance” **Adam J. Bruenger** and Daniel Heistand, November 2015 \$4000 (Not Funded)

Arkansas Department of Higher Education. “Evaluation of polyethylene and EVA-blended cheerleading mats for force reduction ability during backflip landings” **Adam J. Bruenger** and Terra Emerson, November 2013 \$2000 (Funded)

Arkansas Department of Higher Education. “A testing battery to assess collegiate cheerleaders” **Adam J. Bruenger** and Caroline Proctor, November 2011 \$4000 (Not Funded)

Arkansas Department of Higher Education. “Is there a lower extremity muscle strength ratio that optimizes vertical jump height?” **Adam J. Bruenger** and Karl Smith, November 2011 \$4000 (Funded)

Arkansas Department of Higher Education. “Comparative analysis of serratus anterior muscle activity in push-up and stability ball presses.” **Adam J. Bruenger** and Brad Jakel, November 2011 \$2750 (Not Funded)

Arkansas Department of Higher Education. “Effectiveness of an isometric squat for measuring maximum muscle activity.” **Adam J. Bruenger** and Matthew Holt, November 2010 \$2750 (Funded)

National Strength and Conditioning Association. “The effect of amino acid-carbohydrate versus carbohydrate supplementation prior to sequential bouts of resistance training on resting metabolism.” Kyle J. Hackney, **Adam J. Bruenger**, and Joseph J. Carlson. March 2007. \$2500 (Funded)

PUBLICATIONS

Peer Reviewed Publications

Lairamore, C., Morris, D., Schichtl, R., George-Paschal, L., Martens, H., Margakis, A., Garnica, M., Jones, B., Grantham, M., & **Bruenger, A.J.** Student perceptions of teamwork when the number of professions represented in a case-based interprofessionaleducation forum is expanded: A six-year cohort study. *Journal of InterprofessionalCare*. Accepted August 2017

Tucker, W.S., **Bruenger, A.J.**, Doster, C.M., & Hoffmeyer, D.R., (2011). Scapular muscle activity in overhead and non-overhead athletes during closed chain exercises. *Clinical Journal of Sports Medicine*, 21(5), 405-10.

Hackney, K.V., **Bruenger, A. J.**, & Lemmer, J. T. (2010). Timing protein intake increases energy expenditure 24 hours post-resistance training. *Medicine and Science in Sports and Exercise*. 42(5), 998-1003.

Bruenger, A. J., Smith, S. L., Sands, W. A., & Leigh, M. R. (2007). Validation of instrumentation to monitor dynamic performance of Olympic weightlifters. *Journal of Strength and Conditioning Research*, 21(2), 492-499.

Master's Thesis

Garten, D. Neuromuscular recruitment and vertical jump performance following antagonist stretching. Graduated Summer 2017. (Master's Thesis Committee Chair)

Walker, C. Comparison of muscle activity during a ring muscle up and bar muscle up. Graduated Summer 2017. (Master's Thesis Committee Chair)

Flynn, A. Do drop jump training recommendations need to be updated? Graduated Summer 2016. (Master's Thesis Committee Chair)

Tsutai, S. The effect of orthotics on knee and hip kinematics in populations with flexible pes planus. Graduated Fall 2015. (Master's Thesis Committee Chair)

Undergraduate Honors Thesis

Carruthers, B. Progress versus tradition: An argument on whether martial arts can and should be improved through biomechanic analyzation. Undergraduate Honors Thesis, University of Central Arkansas, In Progress. (Honors Thesis Advisor)

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Undergraduate Honors Thesis (continued)

Selman, E. A two week preseason training program for a women's collegiate soccer team. Undergraduate Honors Thesis, University of Central Arkansas, May 2011. (Honors Thesis Advisor)

Other Publications

Moreno, A., Kielbaso, J., **Bruenger, A.**, & Gilson, T. (2006). *Strength and Conditioning*. Adult learning module for the Coaches Advancement Program, Michigan High School Athletic Association (MHSAA). MI: MHSAA

Bruenger, A.J. (2007, February). Is “more” better? *Game Plans* (MHSAA’s Coaching Advancement Program Newsletter)

Published Abstracts/Conference Papers

Bruenger, A.J., Stiner, R., & Fotioo, A. Prediction of collegiate football players’ squat maximum from height, weight, and vertical jump height. Accepted-Poster presentation: NSCA National meeting in Las Vegas, NV, July 2017.

Heistand, D. & **Bruenger, A.J.** Effects of intermittent static stretching on bench press muscular endurance. Accepted- Oral presentation: Central States ACSM meeting in Fayetteville, AR October, 2017. **-Undergraduate Research Award Winner**

Lairamore, C., George-Pascal, L., Morris, D., **Bruenger, A.J.**, Garnica, M., Grantham, M., Jones, B., & Martens, H. A comparison between cohorts of health science student participants in an interprofessional education forum: Does the number of professions influence outcomes? Collaborating Across Borders meeting in Roanoke, VA, October 2, 2015.

Emerson, T., Frerichs, H., Dansby, A., & **Bruenger, A.J.**, Measurement of maximal force experienced by males during assisted and unassisted pull-ups. Accepted-Poster presentation: ISBS International meeting in Johnson City, TN, July 2014.

Bruenger, A.J., Squat and power clean strength are not related to appropriate drop jump height in female collegiate athletes. Accepted-Poster presentation: ISBS International meeting in Johnson City, TN, July 2014.

Emerson, T., Frerichs, H., Dansby, A., & **Bruenger, A.J.** Measurement of maximal force exerted by females during assisted pull-ups. Accepted-Poster presentation: Central States ACSM meeting in Warrensburg, MO, Oct. 2013.

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Published Abstracts/Conference Papers (Continued)

Proctor, C. Wilson, S., & **Bruenger, A.J.** Changes in strength and power variables from pre- to post-competitive season in collegiate cheerleaders. . Accepted-Poster presentation: Central States ACSM meeting in Warrensburg, MO, Oct. 2013.

Bruenger, A.J. Comparison of serratus anterior and trapezius muscle activity during high and low stability ball presses. Poster presentation: ACSM national meeting in Indianapolis, IN, June 2013 (Acceptance notification: February 2013).

Jakel, B. & **Bruenger, A.J.** Comparison of serratus anterior and upper trapezius muscle activity during push-up and stability ball presses. Oral presentation: Central States ACSM meeting in Columbia, MO, Oct. 2012.-**Undergraduate Research Award Winner**

Bruenger, A.J., Carruth, J., and Tucker, W.S. Comparison of muscle activity during step ups and single leg squats. Poster presentation: ISBS International meeting in Melbourne AU, July 2012.

Bruenger, A.J., Carruth, J., and Tucker, W.S. Comparison of joint shear stresses and moments during step ups and single leg squats. Poster presentation: ISBS International meeting in Melbourne AU, July 2012.

Holt, M., & **Bruenger, A.J.** Effectiveness of an Isometric squat for normalizing muscle activity. Accepted-Poster presentation: NSCA National meeting in Los Vegas, July 2011.

Bruenger, A. J., Braman, J., Brown, E.W., & Haut, R.J. Comparison of EMG activity during and recovery from three methods of squatting. Accepted-Oral presentation: ACSM Annual Meeting in Baltimore, MD, June 2010.

Tucker, W.S., **Bruenger, A.J.**, Doster, C.M., Hoffmeyer, D.R. Scapular muscle activity in overhead and non-overhead athletes during closed chain exercises. Accepted - Poster presentation: NATA Annual Meeting & Clinical Symposia in Philadelphia, PA, 2010.

Doster, C.M., Tucker, W.S., **Bruenger, A.J.** A comparison of scapular muscle activation during a push and a pull exercise. Accepted - Student poster presentation: NATA Annual Meeting & Clinical Symposia in Philadelphia, PA, 2010.

Hackney, K.V., **Bruenger, A. J.**, & Lemmer, J. T. (2007). Increased post-exercise resting energy expenditure using protein or carbohydrate supplementation prior to an acute bout of strength training. Presented at the Mid-Atlantic ACSM Conference in Harrisburg, PA; November, 2007.

Published Abstracts/Conference Papers (Continued)

Bruenger, A. J., Smith, S. L., Sands, W. A., & Leigh, M. R. (2006). Comparison of an encoder based bar tracking system to standard kinematic analysis. Presented at the National Strength and Conditioning Association National Conference in Washington, D.C.; July, 2006.

Brown, E., Narvaez, M., Tanaka, T., Kortrla, K., & **Bruenger, A.** (2004). Design of machine to evaluate ankle joint under variable inversion-eversion torques and degrees of plantar flexion-dorsiflexion. In M. Lamontagne, D.G. Robertson, & H. Sveistrup (Eds.), *Proceedings XXIIInd International Symposium on Biomechanics in Sports* (pp. 58-60). Faculty of Health Sciences University of Ottawa.

Narvaez-Silva, M., Brown, E., Moreno, A., Kotrla, K., Tanaka, T., & **Bruenger, A.** (2004). Kinematic analysis of the crescent kick in taekwondo. In M. Lamontagne, D.G. Robertson, & H. Sveistrup (Eds.), *Proceedings XXIIInd International Symposium on Biomechanics in Sports* (pp. 601). Faculty of Health Sciences University of Ottawa.

Presentations

Bruenger, A.J., Stretching the truth. Presented at the Central States ACSM conference, Fayetteville, AR, October, 2017.

Bruenger, A.J., Contraindicated Exercises. Presented at the Arkansas NSCA conference, Conway, AR, June, 2016.

Bruenger, A.J., Stretching the truth. Presented at the Arkansas NSCA conference, Conway, AR, April, 2015.

Bruenger, A.J., Stretching the truth. Presented at the Arkansas AHPERD conference, Little Rock, AR, November, 2011.

Bruenger, A. J., Smith, S. L., Sands, W. A., & Leigh, M. R. Validation of a weightlifting bar tracking instrument. Presented at the Michigan ACSM conference; February, 2006.

Bruenger, A. J. The group project: Methods to encourage accountability. Presented at the Michigan State University College of Education Excellence and Innovation in Teaching Exposition; January, 2007.

Black, M., **Bruenger, A.**, Ladig, S., & Ulibarri, D. Kinetic analysis of walking gait with and without an orthotic: A case study. Presented at the Michigan ACSM conference; February, 2007.

PROFESSIONAL SERVICE

University of Central Arkansas

University

Tester- Athlete testing for men's soccer, men's and women's cross country, women's basketball, men's baseball, men's football, and women's volleyball. 2009-Present

University Sabbatical committee member 2009-2011

College

College Tenure and Promotion committee chair 2016

College Tenure and Promotion committee 2015-Present

University Research Council (URC) college committee chair 2014-2017

URC college committee member 2013-Present

KPED representative for the InterProfessional Education (IPE) committee. 2012-2016

Department

FACS tenure and promotion committee member 2017-2017

Search committee chair (Athletic Training (AT) tenure track position) 2016-2017

Search committee chair (Athletic Training (AT) tenure track position) 2015-2016

Search committee member (Department Chair and AT position) 2014-2015

Graduate Coordinator 2014-Present

KPED department budget committee chairperson 2013-2014

Search committee member (two AT positions) 2012-2013

Human Performance Lab coordinator 2008-2015

Exercise science curriculum committee member 2008-Present

Guest lecturer for various KPED classes 2008-Present

Student

Research supervisor for Daniel Heistand's stretching study 2017

Research supervisor for Terra Emerson's cheerleading mat study 2014

Research supervisor for Caroline Procotor's cheerleading study 2013

PROFESSIONAL SERVICE (Continued)

Student

Research supervisor for Karl Smith's vertical jump study	2012
Research supervisor for Brad Jakel's stability ball study	2012
Research supervisor for Matt Holt's EMG study	2011
Student supervisor Central States American College of Sports Medicine Conference	2010, 2012, 2014-17
Organized field trip for anatomical kinesiology students to BodyWorks exhibit	2008

Professional

President Elect, Central States American College of Sports Medicine Hosted National Social: 2017 Organized Regional Conference Abstract Review: 2017	2016
Reviewer, Book Proposal, James Bartlett Publishing	2016
Reviewer, Journal of Applied Biomechanics	2015-Present
State coordinator, National Strength and Conditioning Association Hosted State Clinics: April 2015, June 2016, November 2016 April, 2017, August 2017	2013-Present
Reviewer, Book, Applied Biomechanics Wolters Kluwer Publishing	2014
Reviewer, Book, Research Methods in Kinesiology Wolters Kluwer Publishing	2014
Reviewer, Book, Manual of Structural Kinesiology, McGraw Hill Publishing	2013
Reviewer, Book, Motor Behavior, Wolters Kluwer Publishing	2013
Reviewer, Book, Basic and Applied Sports Kinesiology, Wolters Kluwer Publishing	2012
President's Challenge demonstration coordinator- Arkansas	2010-2013
Reviewer for International Journal of Exercise Science	2010-Present

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PROFESSIONAL SERVICE (Continued)

Michigan State University

Kinesiology Graduate Student Organization Co-Chair and Treasurer	2004-2005
Kinesiology Graduate Student Organization Treasurer	2005-2007
Faculty Advisory Committee Student Representative	2006-2007
Coaches Education Program (PACE) Lecturer	2003-2004
Coaching Advancement Program (CAP) Lecturer	2006-2007
Moderator for the Michigan State University Undergraduate Research and Arts Forum	2006

PROFESSIONAL MEMBERSHIPS

International Society of Biomechanics in Sports
American College of Sports Medicine
Central States American College of Sports Medicine
National Strength and Conditioning Association

CERTIFICATIONS

Certified Strength and Conditioning Specialist (CSCS), National Strength and Conditioning Association

Level II Certification-Sprints and Hurdles, United States Track and Field Association