

# CHRIS BRAMMER

P.O. Box 2592  
Bloomington, IN 47402

(402) 212-5626  
brammer.chris@gmail.com

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## EDUCATION

### Indiana University

*Doctor of Philosophy*, Human Performance (Exercise Physiology)  
*Master of Science*, Kinesiology (Exercise Physiology)

Bloomington, IN  
*Expected grad: Summer 2016*  
*Summer 2010*

### Truman State University

*Bachelor of Science*, Exercise Science

Kirksville, MO  
*Spring 2006*

## TEACHING EXPERIENCE

### Indiana University, School of Public Health

*Associate Instructor*

Bloomington, IN  
*Fall 2012– current*

- Lab coordinator for undergraduate exercise physiology lab (6 semesters)
- Instructor for undergraduate exercise physiology lab (2 semesters)
- Undergraduate biomechanics lecture assistant (2 semesters)
- Undergraduate biomechanics lab instructor (7 semesters)
- Instructor for undergraduate exercise physiology lab (4 semesters). *Fall 2006–Spring 2009*
- Instructed personal fitness, fitness and jogging, weight training, and beginning and intermediate swimming courses.

## WORK EXPERIENCE

### Counsilman Center for the Science of Swimming

*Swimming Laboratory Coordinator*

Bloomington, IN  
*Fall 2012– current*

- Constructed a suitable valve and tubing system for metabolic measurement whilst swimming
- Established swimming maximal oxygen consumption ( $\dot{V}O_{2\max}$ ) protocols
- Responsible for maintenance (water sanitization and filtration) of “swimming treadmill” (Endless Pool)

### Davidson College

*Assistant Men's and Women's Swimming Coach*

Davidson, NC  
*Fall 2009–Spring 2012*

- Directed team's strength and conditioning program
- Implemented innovative technology that measures swimming power and velocity as a means to determine strategies for improving technique
- Developed and implemented season training plan for the sprint-event focused athletes
- Recorded, analyzed, and evaluated weekly performance test data

### Dhahran Youth Swim League (DYSL)

*Head Swimming Coach*

Dhahran, Saudi Arabia  
*March–June 2010*

- Directed the preparation of all members (120 athletes, ages 5-16 years) as DYSL's first-ever professional coach
- Developed a team grouping and management strategy to maximize skill acquisition and performance progress
- Helped to define the role of a parent in a child's swimming experience through individual conversation and team email messaging

### Hector Engineering

*Southeastern Sales Representative*

Ellettsville, IN  
*Fall 2010–Spring 2013*

- Informed potential users of the Torrent E-Rack Electronic Swim Power Trainer and the Torrent E-Rack Swim Speed Analyzer

## SKILLS

### Computer Programming

- Highly competent in data processing and analysis using R, with experience creating data displays using Shiny and Plotly
- Working knowledge of Python, particularly for use in crafting solutions to problems related to data mining and processing
- Possess the ability to manage and query simple databases using MySQL
- Experience in developing and deploying static web sites using tools such as HTML/CSS, Jekyll, and Apache
- Familiarity with using LaTeX to prepare scientific documents and presentations

## SKILLS (continued)

### *Statistics*

- Expert in the use of inferential statistics to estimate population parameters and test hypotheses
- Highly skilled in the use of exploratory data analysis techniques (data displays, re-expression, evaluating distributions, standardization, robust regression)
- Proficient with many time series analysis techniques (smoothing techniques, spectral analysis, autoregressive (AR) and moving average (MA) models)
- Competent with various methods of multivariate analysis (basic matrix algebra, MANOVA, cluster analysis, factor analysis, multiple regression, linear mixed effect models)

### *Data Collection*

- Demonstrated success managing a team of researchers in the data collection process for both small and large-scale projects
- Extensive background in obtaining various physiological measurements related to the cardiovascular, respiratory, and nervous systems
- Highly committed to ensuring measurement on human subjects is valid and reliable, especially as it relates to instrumentation and experimental protocol

## RESEARCH PUBLICATIONS

**Brammer, C.**, Cornett, A., & Stager, J. (In Press). Lane Bias in Elite-level Swimming Competition. *Journal of Sports Sciences*.

Cornett, A., **Brammer, C.**, & Stager, J. (2015). Current Controversy: Analysis of the 2013 FINA World Swimming Championships. *Medicine and science in sports and exercise*, 47(3), 649-654.

**Brammer, C. L.**, Cornett, A. C., & Stager, J. M. (2014). Lane bias at the 2013 World Swimming Championships. In B. Mason (Ed.), *Biomechanics and medicine in swimming XII* (pp. 558–565). Canberra: Australian Institute of Sport. (conference proceedings)

Kojima, K., **Brammer, C.L.**, Sossong, T.D., Abe, T., & Stager, J.M. (2014). In-water resisted sprint swim training for age-group swimmers. In B. Mason (Ed.), *Biomechanics and medicine in swimming XII* (pp. 431–437). Canberra: Australian Institute of Sport. (conference proceedings)

**Brammer, C.L.**, Stager, J.M., Tanner, D.A. (2012). Beyond the “high-tech” suits: Predicting 2012 Olympic swim performances. *Measurement in Physical Education and Exercise*, 16, 183-193.

Stager, J.M., **Brammer, C.L.**, Tanner, D.A. (2010). Identification of a bias in the natural progression of swim performance. In P. Kjendlie, R. Stallman, & J. Cabri (Eds.), *Biomechanics and Medicine Swimming XI* (pp. 294-296). Champaign: Human Kinetics.

**Brammer, C.L.** (2010). Cutaneous Input and Motorneuron Excitability (Masters thesis). Retrieved from Indiana University Library.

## RESEARCH PRESENTATIONS

Wright, B.V., **Brammer, C.L.**, Stager, J.M. (2015). Estimating swimming energy expenditure using accelerometer-based activity monitors. *Medicine and Science in Sports and Exercise*, 47, S125. (presented as a poster)

Stager, J. M., **Brammer, C. L.**, Sossong, T., Kojima, K., Spanbauer, D., Grand, K., & Wright, B. V. (2014). Supplemental recovery nutrition affects swim performance following glycogen depleting exercise. *Medicine and Science in Sports and Exercise*, 46(5), 156-156. (presented as a poster)

**Brammer, C.**, & Stager, J. (2013). Swimsuit constraints favor women at the 2012 Olympic swim competition. *Medicine and Science in Sports and Exercise*, 45(5), 406-406. (oral presentation)

**Brammer, C.L.**, Kocejka, D.M., & Stager, J.M. (2010). Shaving and perceptual sensory threshold. In P. Kjendlie, R. Stallman, & J. Cabri (Eds.), *Biomechanics and Medicine Swimming XI* (p. 77). Champaign: Human Kinetics. (oral presentation)

**Brammer, C.L.**, Tanner, D.A., Stager, J.M. (2009). Identification of bias in the natural progression of swim performance. *Medicine and Science in Sports and Exercise*, 41, S306. (presented as a poster)

Kojima, K., **Brammer, C.L.**, Stager, J.M. (2009). Age Classification in USA swimming: Are current competitive age groups appropriate? *Medicine and Science in Sports and Exercise*, 41, S306. (presented as a poster)

Wright, B.V., **Brammer, C.L.**, Stager, J.M. (2009). Five week assessment of in-water power output in competitive swimmers. *Medicine and Science in Sports and Exercise*, 41, S302. (presented as a poster)

## RESEARCH GRANTS

Counsilman-Hunsaker pool design company. **Brammer, C.**, Cornett, A., Stager, J. (July 2014). Lane assignment and distance freestyle split variability in elite-level swimming competition. Awarded \$5,000.

Fédération Internationale de Natation (FINA). Stager, J., **Brammer, C.**, Schlader, Z., Cornett, A., Rodeo, S., Abe, T., Wright, B. (June 2014). Identification of a minimum safe water temperature for open-water swimming competition. This proposal was not funded.

National Fluid Milk Processor Promotion Board. Stager, J., Klaunig, J., Lindeman, A., Grand, K., Stickford, J., Sossong, T., **Brammer, C.**, Spanbauer, D. (October 2012). Swimmers, got chocolate milk? Awarded \$100,000.

USA Swimming. **Brammer, C.**, Cornett, A., Stager, J. (December 2008). Shaving, Perceptual Sensory Threshold, and Motorneuron Excitability. Awarded \$3,000.

## INVITED PRESENTATIONS

Beijing Sport University & Shanghai Sport University. (May 2016). Data Science in Sport.

Midwestern Swimming Coaching Clinic. (Aug 2013). Application of research to age-group swimming.

Total Performance Swim Camp. (June 2007). Swimming power.