

KEITH LOHSE -CURRICULUM VITAE

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Education

Degrees

- 2012 Joint PhD in Neuroscience, Cognitive Science, and Psychology,
University of Colorado, Boulder.
Advisors: Professor Alice Healy; Professor David Sherwood
- 2009 Master of Arts in Cognitive Psychology, University of Colorado at
Boulder. Advisor: Professor Alice Healy.
- 2007 Bachelor of Science, Idaho State University, graduated cum laude in
Psychology.

Professional Certifications

- 2009 Level 1 Track and Field Coach, by USA Track and Field.
- 2009 State-Level Judo Coach (formerly “E-Level” certification), by USA Judo.
- 2008 Certified Strength and Conditioning Specialist, by the National Strength
and Conditioning Association (NSCA).
- 2003 Certified First Aid and CPR, by the American Red Cross (renewed in
2010).

Academic Appointments

- 2012- Postdoctoral Research Fellow, Motor Skills Lab, Department of
Kinesiology, University of British Columbia. Supervisor: Nicola Hodges.
(Beginning July 2012)
- 2011 Instructor for the Department of Psychology and Neuroscience, University
of Colorado, Boulder. (Summer, 2011)
- 2007-2012 Teaching assistant for the Department of Psychology and Neuroscience,
University of Colorado, Boulder.

Professional Memberships & Service

Professional Memberships

- 2011-present. Member of the American Society for Biomechanics.
- 2009-present. Member of the North American Society for the Psychology of Sport and
Physical Activity.
- 2008-2011. Member of the International Society for Biomechanics.
- 2007-present. Member of the National Strength and Conditioning Association.
- 2006-present. Member of USA Track and Field.
- 2005-2009. Member of the Association for Psychological Science.

Professional Service

Editorial

2011-present. Review Editor for *Frontiers in Psychology*.

Reviewer

- Reviewer for the *Journal of Biomechanics*.
- Reviewer for the *Journal of Sport & Exercise Psychology*.
- Reviewer for *Psychology of Sport and Exercise*.
- Reviewer for *Medicine & Science in Sports & Exercise*.
- Reviewer for *Human Movement Science*.

Academic Publications

Peer-Reviewed Publications

- 2012 **Lohse, K. R.**, & Healy, A. F. (2012). Exploring the contributions of procedural and declarative training to performance: A test of the procedural reinstatement principle. *Journal of Applied Research in Memory and Cognition*. doi:10.1016/j.jarmac.2012.02.002
- 2012 **Lohse, K. R.** (2012). The influence of attention on learning and performance: Pre-movement time and accuracy in an isometric force production task. *Human Movement Science*, 31, 12-25. doi:10.1016/j.humov.2011.06.001.
- 2011 **Lohse, K. R.** & Sherwood, D. E. (2011). Defining the focus of attention: Effects of attention on perceived exertion and fatigue. *Frontiers in Psychology*, 2, 332. doi: 10.3389/fpsyg.2011.00332.
- 2011 **Lohse, K. R.**, Sherwood, D. E., & Healy, A. F. (2011). Neuromuscular effects of shifting the focus of attention in a simple force production task. *Journal of Motor Behavior*, 43, 174-184. doi: 10.1080/00222895.2011.555436.
- 2010 **Lohse, K. R.**, Healy, A. F., & Sherwood, D. E. (2010). Mental practice in the intermanual transfer of motor skills. *Journal of Imagery Research in Sport and Physical Activity*, 5, A1. doi: 10.2202/1932-0191.1052.
- 2010 **Lohse, K. R.**, Sherwood, D. E., & Healy, A. F. (2010). How changing the focus of attention affects performance, kinematics, and electromyography in dart throwing. *Human Movement Science*, 29, 542-555. doi:10.1016/j.humov.2010.05.001.

Book Chapters

- 2012 **Lohse, K. R.**, Wulf, G., & Lewthwaite, R. (2012). Attentional focus and movement efficiency. In N. J. Hodges and A. M. Williams (Eds.), *Skill acquisition in sport: Research, theory & practice (2nd Ed)*. New York, NY: Routledge.
- 2012 **Lohse, K. R.** & Ketels, S. L. (2012). Implications of dual-process theories for optimizing motor learning and performance. In A. L. Magnusson & D. J. Lindberg (Eds). *Psychology of performance and defeat*. Hauppauge, NY: Nova Science Publishers.

2012 **Lohse, K. R.**, & Bourne, L. E., Jr. (2012). Cognitive retraining following acquired brain injury. In A.F. Healy and L. E. Bourne, Jr. (Eds.), *Training cognition: Optimizing efficiency, durability, and generalizability* (pp. 307-325). London: Psychology Press.

Publications in Press

Lohse, E.S., Schou, C., **Lohse, K. R.**, & Sammons, D. (in press). Using AI to establish greater rigor in characterization of stone tools. In H. J. Lerner & A. A. Evans (Eds.), *How to Get There from Here? Papers in Honor of George Odell*. Bradford, UK: Bradford University.

Manuscripts Submitted for Publication

Lohse, K. R., & Sherwood, D. E. (2012). Thinking about muscles: The neuromuscular effects of internally focused attention in accuracy and fatigue. *Manuscript submitted for publication*.

Carpenter, S. K., **Lohse, K. R.**, Healy, A. F., Bourne, L. E., & Clegg, B. (2011). External focus of attention improves retention and transfer in a speeded aiming task. *Manuscript submitted for publication*.

Lohse, K. R., Jones, M. C., Healy, A. F. & Sherwood, D. E. (2011). The role of attention in motor control. *Manuscript submitted for publication*.

Manuscripts in Preparation

Lohse, K. R., & Wager, T. D. (in prep). Placebo effects in human motor performance. *Manuscript in preparation*.

Presentations and Invited Talks

Conference Presentations

2011 Ketels, S., **Lohse, K. R.**, & Healy, A. F. (2011). Attentional focus and the learning of a complex motor task: The case of snowboarding. *Talk presented at Annual Summer Interdisciplinary Conference*, Caldes de Boi, Spain.

2011 **Lohse, K. R.**, Jones, M., Healy, A., F. & Sherwood, D. E. (2011). The role of attention in motor control. *Talk presented at Annual Summer Interdisciplinary Conference*, Caldes de Boi, Spain.

2011 **Lohse, K. R.**, Jones, M. C., Healy, A. F. & Sherwood, D. E. (2011, June). Attention as a control parameter in the regulation of human movement. *Abstract published in the proceedings of the North American Society for the Psychology of Sport and Physical Activity*. Burlington, VT.

2011 **Lohse, K. R.**, Jones, M. C., Healy, A. F. & Sherwood, D. E. (2011, April). Attention as a control parameter in the regulation of human movement. *Presented as a poster at the regional meeting of the American Society for Biomechanics*. Estes Park, CO.

2010 **Lohse, K. R.**, Sherwood, D. E., & Healy, A. F. (2010, June). How changing the focus of attention affects performance, kinematics, and electromyography.

- Abstract published in the proceedings of the North American Society for the Psychology of Sport and Physical Activity. Tucson, AZ.*
- 2010 **Lohse, K. R.**, Sherwood, D. E., & Healy, A. F. (2010, June). The Influence of attention on learning and performance: Two experiments in isometric force production. *Abstract published in the proceedings of the North American Society for the Psychology of Sport and Physical Activity. Tucson, AZ.*
- 2010 **Lohse, K. R.**, Sherwood, D. E., & Healy, A. F. (2010). How changing the focus of attention affects performance, kinematics, and electromyography. *Paper presented at the Rocky Mountain Psychological Association Conference. Denver, CO.*
- 2009 **Lohse, K. R.**, Healy, A. F., & Sherwood, D. E. (2009). Task-level and effector-level representation in the intermanual transfer of fine motor skills. *Presented as a poster at the 50th Annual Meeting of the Psychonomic Society. Boston, MA.*
- 2008 **Lohse, K. R.**, & Healy, A. F. (2008). Exploring the Contributions of Declarative and Procedural Training to Performance. *Presented as a poster at the 49th Annual Meeting of the Psychonomic Society. Chicago, IL.*
- 2008 **Lohse, K. R.** (2008). Performatory knowledge: Exploring the contributions of procedural and declarative training to skilled performance. *Paper presented at the Ekstrand Memorial Mini-Convention. Boulder, CO.*
- 2008 **Lohse, K. R.** (2008). Intermanual transfer in handwriting: Evidence of asymmetrical transfer and priming. *Paper presented at the Rocky Mountain Psychological Association Conference. Boise, ID.*
- 2007 Schou, C. D., Lohse, E. S., Turley-Ames, K. J., **Lohse, K. R.**, Sammons, D., Smuin, M. (2007). SIGGI: Automated Multivariate Archaeological Classification. *Peer-reviewed paper presented at the 12th International Congress on Cultural Heritage and New Technology. Vienna, Austria.*
- 2007 Sammons, D., **Lohse, K. R.**, Strickland, A. W., Turley-Ames, K. J., & Lohse, E. S. (2007). Collaborative concept mapping: Using cognitive systems engineering to explore expert knowledge. *Peer-reviewed paper accepted for presentation at ED-MEDIA 2007--World Conference on Educational Multimedia, Hypermedia & Telecommunications. Vancouver, B.C.*
- 2007 Lohse, E. S., **Lohse, K. R.**, Turley-Ames, K. J., Schou, C. D., Sammons, D., and Strickland, A. W. (2007). Archaeological classification explored: The Gault site. *Paper presented at the Annual Meeting of the Society for American Archaeology. Austin, TX.*
- 2007 **Lohse, K. R.**, Moser, C., & Turley-Ames, K.J. (2007). Eliciting semantic and procedural knowledge: Cognitive analysis of expert archaeologists' conceptual structures. *Presented as a poster at the Idaho State University Psychology Department Symposium, Pocatello, ID.*
- 2006 **Lohse, K. R.**, Thompson, H., & Turley-Ames K.J. (2006). Working memory and reading comprehension: Assessing the intersection between metacognition and executive function. *Presented as a poster at the 18th Annual Association for*

- Psychological Science Convention* , New York City, NY.
- 2006 Lohse, E. S., Sammons, D., & **Lohse, K. R.** (2006) Bringing Crabtree to DVD. *In the proceedings of the 51 st Annual North-West Anthropology Conference* , Seattle, WA.
- 2006 **Lohse, K. R.**, Thompson, H., Turley-Ames, K. J., & Anderson, T. (2006) Working memory and metacognition in reading comprehension. *Presented as a poster at the Idaho State University Psychology Department Symposium*, Pocatello, ID.

Invited Talks

- 2010 **Lohse, K. R.** (2010, June). Qualitative methods in movement science. *Invited lecture in a graduate seminar for the Department of Education at Idaho State University*, Pocatello, ID.

Grants and Funding

- 2012 *Increasing patient engagement in motor skill rehabilitation*. Killiam Postdoctoral Research Fellowship awarded by the Izaak Walton Killiam Fund for Advanced Studies (*pending*).
- 2011 *Attention as a control parameter in the regulation of human movement*. Travel grant awarded by the Institute of Cognitive Science at CU Boulder.
- 2010 Completed NIH predoctoral fellowship application (PA-10-108) to conduct research on the role of attention in motor control and learning in collaboration with Alice Healy, PhD, and David Sherwood, PhD. (*Unfunded*).
- 2010 *Training complex motor skills*. Student research grant awarded by the Institute of Cognitive Science at CU Boulder.
- 2010 *Changing the focus of attention effects outcomes, biomechanics, and neuromuscular coordination*. Travel grant awarded by the Institute of Cognitive Science at CU Boulder.
- 2009 *How does the focus of attention affect the quality of movement?* Student research grant awarded by the Institute of Cognitive Science at CU Boulder.
- 2008 *Exploring the Contributions of Declarative and Procedural Training to Performance*. Travel grant award by the Institute of Cognitive Science at CU Boulder.
- 2006 *Working memory and reading comprehension: Assessing the intersection between metacognition and executive function*. Research grant awarded by the Idaho State Undergraduate Research Committee.

Teaching Experience

Undergraduate Courses Taught

University of Colorado, Boulder

- PSYC 2145 "Introduction to Cognitive Psychology," Department of Psychology and Neuroscience, University of Colorado at Boulder.

Teaching Assistant

University of Colorado, Boulder

- PSYC 2145 Introduction to Cognitive Psychology (led lectures on

reasoning and decision making).

- PSYC 2606 Social Psychology (led lectures of aggression).
- PSYC 3101 Statistics (taught lab sections and guest lectured for instructor).
- PSYC 3101.800 Honors Statistics and Research Methods (taught lab sections and guest lectured for instructor).
- NRSC 4155 Cognitive Neuroscience (taught lab sections on neuroscience research methods and gave lectures on Motor Control and Movement Disorders).
- PSYC 4733 Testing and Assessment (led recitation sections).

Academic Awards and Honors

- 2011 Co-recipient of the Dossier Award (an award for academic excellence, given to doctoral candidates) from the Department of Psychology and Neuroscience at the University of Colorado, Boulder.
- 2007 Graduated with Honors in Psychology from Idaho State University
- 2006 Inducted into the Phi Kappa Phi honors society.
- 2005 Inducted into the Golden Key International Honor Society.
- 2005 Inducted into the Psi Chi Honors Society in Psychology.
- 2005-7 Big Sky Conference All-Academic Team Honoree.
- 2005-7 Recipient of Idaho State University's Athletic Department's "Bengal Scholar" Award.
- 2005 Kasiska College of Health Professions – Psychology Department Scholarship.
- 2005 United State Achievement Academy, Collegiate All-American Scholar Award.
- 2003-7 Named to the Dean's List in the College of Arts and Science at Idaho State University for eight semesters
- 2003-4 Named Academic All-American by the United States of America Judo Organization.
- 2003 Awarded the Idaho State University Presidential Scholarship (equivalent to full tuition) for academic excellence.
- 2003 Awarded the Idaho Promise Scholarship by Idaho State University

Athletics Experience and Honors

Track and Field

- Idaho State University Student Athlete: Men's Track and Field (2005-2007) as a Decathlete/Heptathlete.
- Member of the Big Sky Conference Indoor Track and Field Championship Team 2005-2006, as a Heptathlete.
- Big Sky Conference All-Academic Team (2005-2007).
- Student-Athlete Advisory Council, Men's Track and Field Representative 2005-2006.

Judo

- 2nd Place at the USA Judo Collegiate Nationals (2004), Men's -100kg division.

- 7th Place at the USA Judo National Championships (2004), Men's -100kg division.
- 2nd Place at the USA Judo High School Nationals (2003), Men's -100kg division.

Rock Climbing

- Currently, I am a strength and conditioning coach at Movement Climbing and Fitness in Boulder, CO. I teach general fitness classes for recreational climbers, but also work with elite/professional climbers. For these elite athletes, I have implemented programs designed by the head strength coach (Dave Wahl, MS) and also lead presentation/discussion sections with coaches and athletes on the psychology of human performance.
- 5+ years of climbing experience. Highest rated climbs: Sport – “Ripcord”, 5.12a, in Boulder Canyon, CO; Bouldering – “Pocket Rocket”, V5, in Joe's Valley, UT.

References

Alice Healy, Ph.D. Director of the Center for Research on Training, Faculty in the Institute for Cognitive Science, Professor of Psychology and Neuroscience, University of Colorado at Boulder.

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David Sherwood, Ph.D. Associate Professor of Integrative Physiology, Faculty in the Center for Research on Training, Faculty in the Center for Neuroscience, University of Colorado at Boulder.

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Matt Jones, Ph.D. Assistant Professor of Psychology and Neuroscience, Faculty in the Institute for Cognitive Science, University of Colorado at Boulder.

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Gabriele Wulf, Ph. D. Professor of Kinesiology, University of Nevada, Las Vegas.

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