

BENJAMIN A. CLEGG

Department of Psychology
Colorado State University
Fort Collins, Colorado 80523

PERSONAL

Telephone: (970) 491-2211
Fax: (970) 491-1032
E-mail: benjamin.clegg@colostate.edu

EDUCATION

Ph.D. in Psychology, University of Oregon (1998)
Advisor: *Michael I. Posner*
Specialization: Cognitive Psychology
Dissertation: The representation and transfer of sequence learning

M.S. in Psychology, University of Oregon (1996)
Advisor: *Steven W. Keele*
Thesis: Sequence learning in a categorical visual task

B.Sc. (Hons) in Sociology/Psychology, University of Bath (1991)
Undergraduate thesis: Components of visual mental imagery

PROFESSIONAL EXPERIENCE

Colorado State University (2011 to current)
Professor of Psychology with tenure

Colorado State University (2005 to 2011)
Associate Professor of Psychology with tenure

Colorado State University (1999-2005)
Assistant Professor of Psychology

University of Surrey (1999)
Research Fellow to Professor Neville Moray

University of Oregon (1994-1998)
Graduate student to Professor Michael Posner & Professor Steven Keele

MRC Applied Psychology Unit, Cambridge (1992-1994)
& University of Leeds. (1994)
Research Assistant to Professor John A. Groeger

Harvard University (1989-1990)
Research Assistant to Professor Stephen M. Kosslyn

BOOKS

Groeger, J. A. & **Clegg, B. A.** *Cognition: From brain to everyday behaviour*. Blackwell Publishing, UK. (Commissioned textbook in preparation).

PUBLICATIONS

Heggestad, E. D., **Clegg, B. A.**, Goh[†], A., & Gutzwiller[†], R. S. (2012). How cognitive ability and automation influence training performance and transfer. In A. F. Healy & L. E. Bourne (Eds.), *Training Cognition: Optimizing Efficiency, Durability, and Generalizability*. London: Psychology Press.

Blicht[†], J. G., & **Clegg, B. A.** (2011). Automation influence on unmanned aerial system operator training. *Proceedings of 55th Annual Meeting of the Human Factors and Ergonomics Society*.

Mong[†], H. M., McCabe, & **Clegg, B. A.** (2011). Evidence of automatic processing in sequence learning through a process-dissociation procedure. *Advances in Cognitive Psychology, in press*.

Mong[†], H. M. & **Clegg, B. A.** (2011). How to think straight about errors in your thinking: A review of tools of critical thinking: Metathoughts for psychology. *Inquiry: Critical Thinking Across the Disciplines, 26(1)*. 62-65.

Abrahamse[†], E. L., Jiménez, J., Verwey, W. B., & **Clegg, B. A.** (2010). Representing serial action and perception. *Psychonomic Bulletin and Review, 17(5)*, 603-623.

Clegg, B. A., Heggestad, E. D., & Durrance Blalock[†], L. (2010). The influences of automation and trainee aptitude on training effectiveness. *Proceedings of 54th Annual Meeting of the Human Factors and Ergonomics Society*.

Durrance Blalock[†], L., & **Clegg, B. A.** (2010). Encoding and representation of simultaneous and sequential arrays in visuospatial working memory. *Quarterly Journal of Experimental Psychology, 63(5)*, 856-862.

Durrance Blalock[†], L., Sawyer[‡], B. D., Kiken[‡], A. & **Clegg, B. A.** (2009). The impact of load on dynamic versus static situational knowledge while driving. *Proceedings of 53rd Annual Meeting of the Human Factors and Ergonomics Society*.

Francis[†], A. P., Schmidt[†], G. L., Carr, T. H., & **Clegg, B. A.** (2009). Incidental learning of abstract rules for non-dominant word orders. *Psychological Research, 73(1)*, 60-74.

Morett[‡], L., **Clegg, B. A.**, Blalock[†], L. D., & Mong[†], H. M. (2009). Applying multimedia learning theory to map learning and driving navigation. *Transportation Research Part F: Traffic Psychology & Behaviour, 12(1)*, 40-49.

- Richard[†], M. V., **Clegg, B. A.**, & Seger, C. A. (2009). Implicit motor sequence learning is not represented purely in response locations. *Quarterly Journal of Experimental Psychology*, *62*(8), 1516-1522.
- Smith, C. A. P., **Clegg, B. A.**, Heggstad, E. D., & Hopp-Levine, P. J., (2009). Interruption management: A comparison of auditory and tactile cues for both alerting and orienting. *International Journal of Human-Computer Studies*, *67*(9), 777-786.
- Groeger, J. A. & **Clegg, B. A.** (2007). Systematic changes in the rate of instruction during driver training. *Applied Cognitive Psychology*, *21*(9), 1229-1244.
- Bugg[†], J. M., DeLosh, E. L., & **Clegg, B. A.** (2006). Physical activity moderates time-of-day differences in older adults' working memory performance. *Experimental Aging Research*, *32*(4), 431-446.
- Hopp-Levine[†], P. J., Smith, C. A. P., **Clegg, B. A.**, & Heggstad, E. D. (2006). Tactile interruption management: Tactile cues as task-switching reminders. *Cognition, Technology, and Work*, *8*(2), 137-145.
- O'Shea[†], G. & **Clegg, B. A.** (2006). Stimulus and response chunking in the Hebb Digits task. *Psychological Research*, *70*, 180-192.
- Clegg, B. A.** (2005). Stimulus-specific sequence representation in serial reaction time tasks. *Quarterly Journal of Experimental Psychology*, *58A*(6), 1087-1101.
- Groeger, J. A., **Clegg, B. A.**, & O'Shea[†], G. (2005). Conjunction in simulated railway signals: A cautionary note. *Applied Cognitive Psychology*, *19*(8), 973-984.
- Hopp[†], P. J., Smith, C. A. P., **Clegg, B. A.**, & Heggstad, E. D. (2005). Interruption management: The use of attention-directing tactile cues. *Human Factors*, *47*(1), 1-11.
- Verwey, W. B. & **Clegg, B. A.** (2005). Effector dependent sequence learning in the serial RT task. *Psychological Research*, *69*(4), 242-251.
- Clegg, B. A.**, Wood[‡], J. A., & Bugg[†], J. M. (2004). Real and imagined movements in older and younger adults. *Journal of Mental Imagery*, *28*(1&2), 1-16.
- Young, P. M., **Clegg, B. A.**, & Smith, C. A. P. (2004). Dynamic models of augmented cognition. *International Journal of Human-Computer Interaction*, *17*(2), 259-273.
- DiGirolamo, G. J. & **Clegg, B. A.** (2002). Brain imaging: observing ongoing neural activity. In *Encyclopedia of Life Sciences*, vol. 3, pp. 426-432. London: Nature Publishing Group.

- Groeger, J. A. & **Clegg, B. A.** (2000). *Practice and instruction when learning to drive*. London: HMSO.
- Posner, M. I. & **Clegg, B. A.** (1999). Stages and energetics in laboratory and life. A book review of A. F. Sanders "Elements of human performance: Reaction processes and attention in human skill." *Contemporary Psychology*, 44(4), 312-314.
- Sabbagh, M. A. & **Clegg, B. A.** (1999). Some costs of over-assimilating data to the implicit/explicit distinction. *Behavioral and Brain Sciences*, 22, 783-784.
- Clegg, B. A.**, DiGirolamo, G. J., & Keele, S. W. (1998). Sequence learning. *Trends in Cognitive Sciences*, 2(8), 275-281.
- Groeger, J. A. & **Clegg, B. A.** (1997). Automaticity and driving: time to change gear? In T. Rothengatter & E. Carbonell Vaya (Eds.), *Traffic and Transportation Psychology: Theory and Application* (pp. 137-146). Oxford: Pergamon.
- Groeger, J. A., **Clegg, B. A.** & Chapman, P. R. (1995). Novice drivers' judgements of traffic scenes. In G. B. Grayson (Ed.), *Behavioural Research in Road Safety: V* (pp. 121-127). Transport Research Laboratory, Crowthorne (U.K.).
- Groeger, J. A. & **Clegg, B. A.** (1994). Why isn't driver training contributing more to road safety? In G. B. Grayson (Ed.), *Behavioural Research in Road Safety: IV* (pp. 61-68). Transport Research Laboratory, Crowthorne (U.K.).

† denotes graduate student

‡ denotes undergraduate student

CURRENT GRANTS

SPACEPRINT: Development and validation of a tool to predict, evaluate, and mitigate excessive workload effects. Awarded 10/1/11. National Aeronautics and Space Administration (NASA). Co-investigator & Institutional PI, with PI Angelia Sebok (Alion Science and Technology Corporation). *Total CSU funding \$254,701.*

Mitigating analytical bias through CYCLES of transformative learning in serious games. Awarded 9/26/11. Intelligence Advanced Research Projects Activity (IARPA). Key personnel, with PI Tomek Strzalkowski (State University of New York - Albany).

PREVIOUSLY FUNDED GRANTS

Training knowledge and skills for the networked battlefield. Awarded 2/28/05. US Army Research Office (ARO). With Alice Healy (PI; University of Colorado, Boulder). Co-investigator & Institutional PI to Multidisciplinary University Research Initiative featuring investigators at University of Colorado, Boulder; Carnegie Mellon University; Colorado State University; Purdue University. *Total Colorado State University funding \$540,176.*

Closed loop system for cognitive workload assessment. Awarded 2/20/03. The Boeing Company, PI with Co/PIs Cap Smith (Computer Information Systems, Colorado State University) and Peter Young (Electrical & Computer Engineering, Colorado State University). *Total funding \$39,991.*

Multi-modal support for augmented cognition. Awarded 10/12/01. Office of Naval Research (ONR)/Defense Advanced Research Projects Agency (DARPA), Co/PI with Cap Smith (PI; Computer Information Systems, Colorado State University) and Peter Young (Electrical & Computer Engineering, Colorado State University). *Total funding \$381,874.*

Multi-modal support for augmented cognition. Awarded 4/12/01. Defense Advanced Research Projects Agency (DARPA), Co/PI with Cap Smith (PI; Computer Information Systems, Colorado State University) and Peter Young (Electrical & Computer Engineering, Colorado State University). *Total funding \$71,500.*

CURRENT GRANT SUBMISSIONS

Adaptive supervisory control. Submitted 8/19/11. Office Naval Research (ONR). Co/PI with co/PI Cap Smith (Computer Information Systems, Colorado State University). *Total funding \$126,618.*

The role of automation and aptitude in effective training of complex tasks. Submitted 10/1/11. US Army Research Institute (ARI). PI with Co/PI Eric Heggstad (University of North Carolina, Charlotte). *Total funding \$736,518.*

CONTRACTS

Timesharing: Its future implications for the Navy. Awarded 9/26/01. Battelle (subcontracting for the US Navy). Co/PI with Eric Heggstad (PI; Department of Psychology, Colorado State University) and Edward DeLosh (Department of Psychology, Colorado State University).

PRESENTATIONS, & POSTERS

Clegg, B. A. (2011). Applying cognitive psychology to understand and improve training in systems featuring automation. Presented at the *119th Annual Meeting of the American Psychological Association*, Washington, D.C., August 4th-7th 2011.

Gutzwiller[†], R. S., & **Clegg, B. A.** (2011). Situation awareness and training influence multiple vehicle control. Poster presented at the *23rd Annual Meeting of the Association for Psychological Science*, Washington, D. C., May 26th-29th 2011.

Lewis[‡], J., Mong[†], H. M., Deffenbacher, J., & **Clegg, B. A.** (2011). The impact of state-anger on cognitive components of driving. Poster presented at the *23rd Annual Meeting of the Association for Psychological Science*, Washington, D. C., May 26th-29th 2011.

- Blalock, L. D., & **Clegg, B. A.** (2011). Training improves stability of visual working memory representations. Poster presented at the *11th Annual Meeting of the Vision Sciences Society*, Naples, Florida, May 6th-11th 2011.
- Blicht[†], J.G., Umada[‡], E., Fischer[‡], J.E., & **Clegg, B. A.** (2011). Cognitive workload survey influence on autonomy assisted unmanned aerial system training. Poster presented at the *81st Annual Meeting of the Rocky Mountain Psychological Association*, Salt Lake City, Utah, April 14th-16th 2011.
- Blicht[†], J.G., Lucchesi[‡], C.M., Hachmeister[‡], S.B., Gorman, [‡] K.E, & **Clegg, B. A.** (2011). An exploration of effectiveness tradeoffs in automation assisted unmanned aerial system training. Poster presented at the *81st Annual Meeting of the Rocky Mountain Psychological Association*, Salt Lake City, Utah, April 14th-16th 2011.
- Blalock, L. D., & **Clegg, B. A.** (2011). The impact of automation and teamwork on training in a dynamic micro-world simulation task. Presented at the *57th Annual Meeting of the Southeastern Psychological Association*, Jacksonville, Florida, March 2nd-5th 2011.
- Lewis[‡], J., Mong[†], H. M., Deffenbacher, J., & **Clegg, B. A.** (2011). The impact of state-anger on cognitive components of driving. Poster presented at the *81st Annual Meeting of the Rocky Mountain Psychological Association*, Salt Lake City, Utah, April 14th-16th 2011.
- Murchison[‡], N., Mong[†], H. M., & **Clegg, B. A.** (2010). Preference and performance for simulated heads-up display navigation using real-life traffic photos. Poster presented at the *22nd Annual Meeting of the Association for Psychological Science*, Boston, Massachusetts, May 27th-30th 2010.
- Sawyer[‡], B. D., & **Clegg, B. A.** (2010). Impact of components of text messaging on simulated driving performance. Poster presented at the *22nd Annual Meeting of the Association for Psychological Science*, Boston, Massachusetts, May 27th-30th 2010.
- Durrance Blalock[†], L., & **Clegg, B. A.** (2010). The impact of load on simulated driving and situational awareness. Poster presented at the *80th Annual Meeting of the Rocky Mountain Psychological Association*, Denver, Colorado, April 15th-17th 2010.
- McGill[‡], C., Durrance Blalock[†], L., & **Clegg, B. A.** (2010). Ratings of importance and risk of objects in simulated driving scenes. Poster presented at the *80th Annual Meeting of the Rocky Mountain Psychological Association*, Denver, Colorado, April 15th-17th 2010.
- Mong[†], H. M., Murchison[‡], N., & **Clegg, B. A.** (2010). Effects of spatial training on hazard detection with simulated head up displays. Poster presented at the *80th Annual Meeting of the Rocky Mountain Psychological Association*, Denver, Colorado, April 15th-17th 2010.

- Durrance Blalock[†], L., & **Clegg, B. A.** (2009). Impact of item familiarity on short-term consolidation in visual working memory. Poster presented at the *50th Annual Meeting of the Psychonomic Society*, Boston, Massachusetts, November 19th-22nd 2009.
- Mong[†], H. M., **Clegg, B. A.**, & Seger, C. A. (2009). Implicit learning in enumeration with a process dissociation knowledge test. Poster presented at the *50th Annual Meeting of the Psychonomic Society*, Boston, Massachusetts, November 19th-22nd 2009.
- Clegg, B. A.**, & Heggstad, E. D. (2009). Automation and training. Report presented at the *Training MURI 5th Annual Meeting*, Pittsburgh, Pennsylvania, August 14th 2009.
- O'Shea, G., **Clegg, B. A.**, & Herman, A. (2009). Cross-language facilitation for serial order: Evidence using the Hebb digits task. Poster presented at the *21st Annual Meeting of the Association for Psychological Science*, San Francisco, California, May 22nd-25th 2009.
- Mong[†], H. M., & **Clegg, B. A.** (2009). Enhancement of enumeration through incidental learning of repeated visual arrays. Poster presented at the *21st Annual Meeting of the Association for Psychological Science*, San Francisco, California, May 22nd-25th 2009.
- Durrance Blalock[†], L., & **Clegg, B. A.** (2009). Impact of global vs. local attentional processing on visual working memory organization. Poster presented at the *9th Annual Meeting of the Vision Sciences Society*, Naples, Florida, May 8th-13th 2009.
- Gutzwiller[†], R. S., & **Clegg, B. A.** (2009). The generation effect on route memorization in a navigational task. Paper presented at the *79th Annual Meeting of the Rocky Mountain Psychological Association*, Albuquerque, New Mexico, April 16th-18th 2009.
- Murchison[‡], N., Mong[†], H. M., & **Clegg, B. A.** (2009). Effect of conformal and non-conformal arrow placement on the safety of a heads-up display navigation aid. Poster presented at the *79th Annual Meeting of the Rocky Mountain Psychological Association*, Albuquerque, New Mexico, April 16th-18th 2009.
- Sawyer[‡], B. D., & **Clegg, B. A.** (2009). Cognitive versus motor components of text messaging impairment of driving. Poster presented at the *79th Annual Meeting of the Rocky Mountain Psychological Association*, Albuquerque, New Mexico, April 16th-18th 2009.
- Sawyer[‡], B. D., Ahmed[‡], A. N., Mong[†], H. M., & **Clegg, B. A.** (2009). Virtually there: A comparison of conventional navigational aids with HUD alternatives. Poster presented at the *79th Annual Meeting of the Rocky Mountain Psychological Association*, Albuquerque, New Mexico, April 16th-18th 2009.

- Abrahamse[†], E. L., **Clegg, B. A.**, & Verwey, W. B. (2009). The nature of perceptual-motor sequence learning. Poster presented at *ESF-JSPS Frontier Science Conference for Young Researchers*, Acquafredda di Maratea, Italy, February 27th - March 4th 2009.
- Mong[†], H. M., & **Clegg, B. A.** (2008). Implicit learning for contextual cuing in multiple-object tracking. Poster presented at the *49th Annual Meeting of the Psychonomic Society*, Chicago, Illinois, November 13th-16th 2008.
- Richard[†], M. V., **Clegg, B. A.**, Verwey, W. B., & Seger, C. A. (2008). Quantity of practice leads to effector-dependent learning in the serial reaction time task. Poster presented at the *49th Annual Meeting of the Psychonomic Society*, Chicago, Illinois, November 13th-16th 2008.
- Clegg, B. A.**, & Heggstad, E. D. (2008). Training: Automation and aptitude. Report presented at the *Training MURI 4th Annual Meeting*, Boulder, Colorado, September 11th-12th 2008.
- Morett[‡], L., Durrance[†], L. M., Mong[†], H. M., & **Clegg, B. A.** (2008). Application of multimedia learning theory to map learning and driving navigation. Poster presented at the *20th Annual Meeting of the Association for Psychological Science*, Chicago, Illinois, May 22nd-25th 2008.
- Anderson[‡], L. S., Richard[†], M. V., & **Clegg, B. A.** (2008). The effectiveness of part versus whole training in a motor skill acquisition task. Poster presented at the *78th Annual Meeting of the Rocky Mountain Psychological Association*, Boise, Idaho, April 10th-12th 2008.
- Morett[‡], L., Durrance[†], L. M., Mong[†], H. M., & **Clegg, B. A.** (2008). Application of multimedia learning theory to map learning and driving navigation. Poster presented at the *78th Annual Meeting of the Rocky Mountain Psychological Association*, Boise, Idaho, April 10th-12th 2008.
- Thompson[‡], M. V., Utschig[‡], J. L., Vaughan[‡], M. K., Richard[†], M. V., & **Clegg, B. A.** (2008). The effect of aimed movements in sequenced motor skill learning. Poster presented at the *78th Annual Meeting of the Rocky Mountain Psychological Association*, Boise, Idaho, April 10th-12th 2008.
- O'Shea, G., Sena, K., Peterson, D., **Clegg, B. A.**, McIntosh, G.C., & Thaut, M. (2008). Learning and awareness in multiple sclerosis: Dissociating age-related effects from cognitive performance. Poster presented at the *15th Annual Meeting of the Cognitive Neuroscience Society*, San Francisco, April 12th-15th 2008.
- Richard[†], M. V., **Clegg, B. A.**, Davalos, D. B., Rhodes, M. G., & Peary[‡], K. V., (2008). A bull's-eye view: Marksmanship education, constructivism, and cognitive science. Paper presented at the *Annual Meeting of the American Educational Research Association*, New York, New York, March 23rd-29th 2008.

- Durrance[†], L. M., & **Clegg, B. A.** (2007). Encoding, representation, and general fluid intelligence in visuospatial working memory. Poster presented at the *48th Annual Meeting of the Psychonomic Society*, Long Beach, California, November 15th-18th 2007.
- Clegg, B. A.**, & Heggstad, E. D. (2007). Training: Automation and aptitude. Report presented at the *Training MURI 3rd Annual Meeting*, Pittsburgh, Pennsylvania, September 7th 2007.
- Richard[†], M. V., **Clegg, B. A.**, & Seger, C. A. (2007). Response types and movements in sequence learning. Poster presented at the *115th Annual Meeting of the American Psychological Association*, San Francisco, California, August 17th-20th 2007.
- Durrance[†], L. M., & **Clegg, B. A.** (2007). Aspects of spatial cognition: Representation in visuospatial working memory. Poster presented at the *19th Annual Meeting of the Association for Psychological Science*, Washington, DC, May 24th-27th 2007.
- Mong[†], H., & **Clegg, B. A.** (2007). Learning dynamic context: contextual cueing benefits performance in multiple object tracking. Poster presented at the *19th Annual Meeting of the Association for Psychological Science*, Washington, DC, May 24th-27th 2007.
- Florez[‡], D., Richard[†], M. V., & **Clegg, B. A.** (2007). Seductive detail effects on neighboring items. Paper presented at the *77th Annual Meeting of the Rocky Mountain Psychological Association*, Denver, Colorado, April 12th-14th 2007.
- Tracey[‡], N., Mong[†], H. M., & **Clegg, B. A.** (2007). Effects of presentation type on driving direction retention. Poster presented at the *77th Annual Meeting of the Rocky Mountain Psychological Association*, Denver, Colorado, April 12th-14th 2007.
- Richard[†], M. V., **Clegg, B. A.**, & Seger, C. A. (2006). Of mice and movement: Using a computer mouse in the serial reaction time task. Poster presented at the *47th Annual Meeting of the Psychonomic Society*, Houston, Texas, November 16th-19th 2006.
- Clegg, B. A.**, & Heggstad, E. D. (2006). Automation and ability. Report presented at the *Training MURI 2nd Annual Meeting*, Boulder, Colorado, September 26th 2006.
- Durrance[†], L. M., **Clegg, B. A.**, & DeLosh, E. L. (2006). Can spatial information improve item recall? Paper presented at the *76th Annual Meeting of the Rocky Mountain Psychological Association*, Park City, Utah, April 20th-22nd 2006.
- Mong[†], H., & **Clegg, B. A.** (2006). Contextual cueing in multiple object tracking. Paper presented at the *76th Annual Meeting of the Rocky Mountain Psychological Association*, Park City, Utah, April 20th-22nd 2006.

- Francis[†], A. P., Schmidt[†], G. L., & **Clegg, B. A.** (2005). The separation of words and rules: Implicit learning of abstract rules for word orders. Poster presented at the *46th Annual Meeting of the Psychonomic Society*, Toronto, Canada, November 10th-13th 2005.
- Clegg, B. A.**, & Heggstad, E. D. (2005). Aptitude, levels of automation, and the effectiveness of training. Report presented at the *Training MURI 1st Annual Meeting*, Arlington, Virginia, November 4th 2005.
- Clegg, B. A.**, & Heggstad, E. D. (2005). Aptitude, levels of automation, and the effectiveness of training. Report presented at the *Training MURI Preliminary Meeting*, Boulder, Colorado, May 25th 2005.
- Hopp[†], P. J., Smith, C. A. P., **Clegg, B. A.**, & Heggstad, E. D. (2005). Tactile interruption management: A resource-efficient method for managing multiple tasks. Poster presented at the *20th Annual Society for Industrial and Organizational Psychology Conference*, Los Angeles, California, April 15th-17th 2005.
- O'Shea[†], G., Sena,[†] K., Peterson[†], D., **Clegg, B. A.**, McIntosh, G. C., & Thaut, M. (2005). Mechanisms in the formation of implicit representations: Implicit learning in adults with multiple sclerosis. Poster presented at the *12th Annual Meeting of the Cognitive Neuroscience Society*, New York, New York, April 9th-12th 2005.
- Clegg, B. A.**, Young, P. M., & Smith, C. A. P. (2004). Dynamic models of augmented cognition for executive function. *Proceedings of Meeting on Improving Warfighter Information Intake Under Stress*, Defense Advanced Research Projects Agency, Orlando, Florida, January 5th-8th 2004.
- Hopp[†], P. J., Smith, C. A. P., **Clegg, B. A.**, & Heggstad, E. D. (2004). Managing multiple workplace tasks: Tactile cues and task switching performance. Poster presented at the *19th Annual Society for Industrial and Organizational Psychology Conference*, Chicago, Illinois, April 2nd-4th 2004.
- O'Shea[†], G. & **Clegg, B. A.** (2004). Chunking in an implicit serial learning task. Poster presented at the *11th Annual Meeting of the Cognitive Neuroscience Society*, San Francisco, California, April 18th-20th 2004.
- Tooley[‡], K. M., **Clegg, B. A.**, & DeLosh, E. L. (2004). Implicit learning of serial order: Findings from a modified version of the Hebb Digits task. Poster presented at the *74th Annual Meeting of the Rocky Mountain Psychological Association*, Reno, Nevada, April 15th-17th 2004.
- Bugg[†], J. M., DeLosh, E. L., & **Clegg, B. A.** (2003). The influence of physical activity and time of day on age-related executive control decline. Poster presented at the *10th Annual Meeting of the Cognitive Neuroscience Society*, New York, New York, March 30th-April 1st 2003.

- Herman[‡], A. J., O'Shea[†], G., & **Clegg, B. A.** (2003). The effects of language switching on bilingual implicit serial learning. Poster presented at the *73rd Annual Meeting of the Rocky Mountain Psychological Association*, Denver, Colorado, April 11th-13th 2003.
- O'Shea[†], G. & **Clegg, B. A.** (2003). Behavioral and neural correlates of between- versus within-session learning. Poster presented at the *10th Annual Meeting of the Cognitive Neuroscience Society*, New York, New York, March 30th - April 1st 2003.
- O'Shea[†], G. & **Clegg, B. A.** (2003). Explicit but not implicit learning without responding. Poster presented at the *44th Annual Meeting of the Psychonomic Society*, Vancouver, Canada, November 6th-8th 2003.
- Clegg, B. A.** & O'Shea[†], G. (2002). Presentation and response structure in implicit learning. Poster presented at the *43rd Annual Meeting of the Psychonomic Society*, Kansas City, Missouri, November 21st-23rd 2002.
- DiGirolamo, G. J. & **Clegg, B. A.** (2002). The interaction of attentional set and spatial distance judgments. Poster presented at the *9th Annual Meeting of the Cognitive Neuroscience Society*, San Francisco, California, April 14th-16th 2002.
- O'Shea[†], G. & **Clegg, B. A.** (2002). Response patterns in the Hebb Digit task. Poster presented at the *72nd Annual Meeting of the Rocky Mountain Psychological Association*, Park City, Utah, April 5th-7th 2002.
- Ploucher[‡], A. & **Clegg, B. A.** (2002). The implicit learning of grammatical concepts. Poster presented at the *72nd Annual Meeting of the Rocky Mountain Psychological Association*, Park City, Utah, April 5th-7th 2002.
- Smith, C. A. P., **Clegg, B. A.**, & Young, P. M. (2002). Closed loop effects of augmented cognition. Paper presented at *DARPA Augmented Cognition Workshop*. Dulles, VA, June 13th-15th 2002.
- Wood[‡], J. A., Bugg[†], J. M., & **Clegg, B. A.** (2002). Real and imagined movements in older and younger adults. Poster presented at the *72nd Annual Meeting of the Rocky Mountain Psychological Association*, Park City, Utah, April 5th-7th 2002.
- Clegg, B. A.** (2001). The nature of representation in sequence learning. Poster presented at the *42nd Annual Meeting of the Psychonomic Society*, Orlando, Florida, November 15th-18th 2001.
- Clegg, B. A.**, Smith, C. A. P., & Young, P. M. (2001). Multi-modal support for augmented cognition. Paper presented at *DARPA Augmented Cognition Conference: Improving Human-Machine Information Capacity*. Austin, Texas, December 3rd-5th 2001.

- Smith, C. A. P., **Clegg, B. A.**, & Young, P. M. (2001). Multi-modal support for augmented cognition. Paper presented at *Augmented Cognition Workshop*. Krasnow Institute, Fairfax, Virginia, June 13th-15th 2001.
- Moray, N., Rodriguez[†], D. & **Clegg, B. A.** (2000). Levels of automation in process control. *Proceedings of 44th Annual Meeting of the Human Factors and Ergonomics Society*. San Diego, California, July 30th-August 4th 2000.
- Clegg, B. A.** (1999). The nature of representation in sequence learning. Paper presented at the *British Psychological Society Cognitive Section Annual Conference*, York, United Kingdom, September 13th-15th 1999.
- Clegg, B. A.** & Groeger, J. A. (1998). Unique versus common elements in driving instruction, and the potential for transfer of practice. Paper presented at the *24th International Congress of Applied Psychology*, San Francisco, California, August 9th-14th 1998.
- Clegg, B. A.**, Rakitin, B. C., Mayr, U., & Keele, S. W. (1998). Evidence from event-related potentials for chunking of motor and perceptual sequences. Poster presented at the *5th Annual Meeting of the Cognitive Neuroscience Society*, San Francisco, California, April 5th-7th 1998.
- Groeger, J. A., **Clegg, B. A.**, & Chapman, P. R. (1995). Novice drivers' judgements of traffic scenes. *Proceedings of British Psychological Society*, 3, 1, 33.
- Groeger, J. A. & **Clegg, B. A.** (1994). Reduction in the rate of driving instruction: An index of pupils' learning? *Proceedings of 23rd International Congress of Applied Psychology*, Madrid, Spain, July 17th-22nd 1994.
- Groeger, J. A. & **Clegg, B. A.** (1993). What is learned by drivers during training, and how can we improve it? *Proceedings of Working Conference on Novice Driver Education*, Edmonton, Canada, 22nd-23rd April 1993.

[†] denotes graduate student

[‡] denotes undergraduate student

INVITED PRESENTATIONS

- Clegg, B. A.**, Heggstad, E. D., Durrance Blalock[†], L., & Blich[†], J. (2010). Levels of automation, aptitude, and the effectiveness of training. Invited presentation at the Ellis-Battig Memorial Symposium of the *80th Annual Meeting of the Rocky Mountain Psychological Association*, Denver, Colorado, April 15th-17th 2010.
- Clegg, B. A.** & O'Shea[†], G. (2003). Chunking in implicit learning. Invited presentation at the Ellis-Battig Memorial Symposium of the *73rd Annual Meeting of the Rocky Mountain Psychological Association*, Denver, Colorado, April 11th-13th 2003.

Clegg, B. A. (November, 2001). The nature of sequence learning. *Invited talk at University of Colorado, Boulder.*

Clegg, B. A. (December, 2001). Automaticity and driving. *Invited talk at US Air Force Academy, Colorado Springs.*

REPORTS

Clegg, B. A., & Heggstad, E. D. (2010). *Automation and effective training.* Colorado State University Technical Report for U.S. Army Research Office MURI Grant W911NF-05-1-015.

Healy, A. F., Bourne, L. E., Jr., **Clegg, B. A.**, Fornberg, B., Gonzalez, C., Heggstad, E. D., & Proctor, R. W. (2009). *Training knowledge and skills for the networked battlefield.* Annual Technical Report for U.S. Army Research Office, MURI Grant W911NF-05-1-015.

Healy, A. F., Bourne, L. E., Jr., **Clegg, B. A.**, Fornberg, B., Gonzalez, C., Heggstad, E. D., & Proctor, R. W. (2008). *Training knowledge and skills for the networked battlefield.* Annual Technical Report for U.S. Army Research Office, MURI Grant W911NF-05-1-015.

Healy, A. F., Bourne, L. E., Jr., **Clegg, B. A.**, Fornberg, B., Gonzalez, C., Heggstad, E. D., Laughery, R., & Proctor, R. W. (2007). *Training knowledge and skills for the networked battlefield.* Annual Technical Report for U.S. Army Research Office, MURI Grant W911NF-05-1-015.

Healy, A. F., Bourne, L. E., Jr., **Clegg, B. A.**, Fornberg, B., Gonzalez, C., Heggstad, E. D., Laughery, R., & Proctor, R. W. (2006). *Training knowledge and skills for the networked battlefield.* Annual Technical Report for U.S. Army Research Office, MURI Grant W911NF-05-1-015.

Smith, C. A. P., **Clegg, B. A.**, & Young, P. M. (2002). *Dynamic models of augmented cognition.* Technical Report for the Defense Advanced Research Projects Agency, Control Number: N00014-02-1-0368.

Heggstad, E. D., & **Clegg, B. A.** (Eds.) (2002). *Timesharing: Its future implications for the Navy.* Technical Report for the U.S. Navy, Battelle Task Control Number: 01150.

Moray, N., **Clegg, B. A.**, & Rodriguez, D. (2000). *Choosing levels of automation in human-machine system design.* Technical Report on research funded by the Defense Evaluation and Research Agency, Contract Number: CU005-1597 (ex-CHS8323).

Groeger, J. A. & **Clegg, B. A.** (1995). *Driving instruction and the development of novice drivers' judgments of traffic scenes.* Final Report on research funded by the Department of Transport as part of their "Measurement of driver skills during early driving experience" research initiative, Contract Number: S213H.

Groeger, J. A. & Clegg, B. A. (1994). *Instruction given to drivers during training*. Technical Report on research funded by the Department of Transport as part of their "Measurement of driver skills during early driving experience" research initiative, Contract Number: S213H.

Groeger, J. A. & Clegg, B. A. (1994). *Early driving experience and the development of novice drivers' judgments of traffic scenes*. Technical Report on research funded by the Department of Transport as part of their "Measurement of driver skills during early driving experience" research initiative, Contract Number: S213H.

AWARDS AND FELLOWSHIPS

Colorado State University, Department of Psychology, Excellence in Graduate Student Mentoring Award (2010).

Colorado State University, College of Natural Sciences Undergraduate Research Mentoring Award (2008).

Nominated, Colorado State University Best Teacher Awards (2004).

Supervisor of undergraduate Daniel Florez's PsiChi award winning presentation for Rocky Mountain Psychological Association 2007 annual conference.

Supervisor of graduate student Marc Richard's runner-up award in APA Division 3 (Experimental Psychology) poster contest at the 2007 Annual Meeting of the American Psychological Association.

Host and Mentor to visiting Fulbright graduate student Elger Abrahamse, University of Twente, The Netherlands (September 2008 – January 2009).

Interval Corporation Research Fellowship. (1997). Awarded through the Department of Psychology, University of Oregon.

McDonnell-Pew Graduate Training Fellowship. (1995). Awarded through the Center for the Cognitive Neuroscience of Attention, University of Oregon.

TEACHING EXPERIENCE

Colorado State University

PSY252 *Mind, Brain, & Behavior* (co-instructor of 2 sections, with Deana Davalos & Patrick Monnier). (Fall 2009; Fall 2011)

PSY350 *Applied Research Methods*. (Spring 2008; Spring 2009, Spring 2010; Fall 2011)

PSY452 *Cognitive Psychology*. (Fall 2000, Spring 2002, Spring 2003, Fall 2003, Spring 2004, Fall 2005, Spring 2007, Spring 2008, Fall 2008, Spring 2010, Fall 2010)

PSY492 *Undergraduate Seminar – How the Mind Works*. (Spring 2008)

PSY600L *Human Performance*. (Spring 2001, Spring 2003, Spring 2005, Fall 2006, Fall 2008, Fall 2010)

PSY652 *Methods of Research in Psychology I (graduate statistics)*. (Fall 2001 & Fall 2004)

PSY653 *Methods of Research in Psychology II (graduate statistics)*. (Spring 2000)

PSY655B *Research Issues and Models in Psychology (graduate research methods)*. (Spring 2000)

PSY692BV *Graduate Seminar – Mental Imagery*. (Spring 2002)

PSY692GV *Graduate Seminar – Cognition and Instruction*. (Spring 2006)

PSY792C *Graduate Seminar – Integrating Principles of Learning into Effective Training (co-instructor with Kurt Kraiger)*. (Fall 2008)

PSY792B *Graduate Seminar – Future Directions in Applied Cognitive Psychology*. (Spring 2011)

University of Oregon

PSY302 *Statistical Methods in Psychology*. (Fall 1998)

PSY410 *Applied Statistics*. (Spring 1997 & Winter 1997)

PSY436 *Human Performance*. (Summer 1997 & Spring 1998)

ADVISING

Doctoral committee chair

Geoffrey O'Shea (2005), tenured faculty in the Department of Psychology, State University of New York, College at Oneonta.

Lisa Durrance Blalock (2010), currently tenure track faculty in the School of Psychological and Behavioral Sciences, University of West Florida.

Masters' committee chair

Lisa Durrance Blalock (2007).

Robert S. Gutzwiller (2011)

Heather M. Mong (2008).

Marc V. Richard (2006) co-advisor.

John Blich (expected 2012)

Completed graduate committee membership (excluding those chaired)

12 Doctoral dissertations, 22 Masters theses, 7 Masters committees (non-thesis).

Undergraduate advising

Chaired 7 undergraduate theses (including 4 Honors Thesis projects).

Mentor to 7 visiting students participating in the Research Experiences for Undergraduates summer program on Mind and Brain at Colorado State University (NSF funded program, 2006, 2007, 2008, 2009, 2010).

Mentor to 1 College of Natural Sciences URI Research Fellowship student (2010).

PROFESSIONAL AFFILIATIONS & SERVICE

Department of Psychology Executive Committee (2008 to 2010, & 2011 to current, Chair 2009 to 2010)

Department of Psychology Cognitive Program Coordinator (2007 to 2008)

Department of Psychology, Faculty Council Representative (2011 to current)

Department of Psychology Graduate Committee (2000 to 2007, Chair 2005/6)
 Department of Psychology Undergraduate Committee (2002 to 2005)
 Department of Psychology, Tenure Review Subcommittee (Chair) – Dr. Matthew Rhodes
 (2011)
 Department of Psychology, Tenure Review Subcommittee – Dr. Zinta Byrne (2007)
 Department of Psychology, Pre-tenure 3rd Year Review Subcommittee (Chair) – Dr.
 Matthew Rhodes (2009)
 Department of Psychology Cognitive Search Committee (2011/12)
 Department of Psychology Cognitive Search Committee (2005/6)
 Department of Psychology Strategic Planning Committee (2003, 2005, 2008)
 Department of Psychology Colloquium Series Coordinator (2000 to 2002)
 Department of Psychology Cognitive Psychology Doctoral Program Admissions (2001 to
 2008, Chair 2001 - 2005)
 College of Natural Sciences Scholarship Committee (2003 to current)
 College of Natural Sciences K-12 Education Committee (2001)
 College of Natural Sciences Committee for Strategic Planning: Learning (2005)
 Visiting Faculty, Center for Research on Training, University of Colorado at Boulder
 (2006 to current)

Behavioral and Brain Sciences Associate
Member of Psychonomic Society
Member of Rocky Mountain Psychological Association

Journal reviewing

Consulting editor

American Journal of Psychology (2009 – 2011)

Ad Hoc Reviewing

Acta Psychologica

Advances in Cognitive Psychology

Applied Cognitive Psychology

Applied Ergonomics

Cognitive Processing

Cognitive Psychology

Consciousness and Cognition

Experimental Aging Research

Experimental Brain Research

Human Movement Science

International Journal of Psychology

Journal of Cognitive Engineering and Decision Making

Journal of Experimental Psychology: Human Perception and Performance

Journal of Experimental Psychology: Learning, Memory, and Cognition

Journal of Gerontology: Psychological Sciences

Memory

Memory & Cognition

Neuropsychologia

Psychonomic Bulletin and Review
Quarterly Journal of Experimental Psychology
TheScientificWorld
Transportation Research: Traffic Psychology & Behaviour

Other reviewing

National Science Foundation ad hoc grant reviewer
Army Research Office ad hoc grant reviewer
Augmented Cognition: A Practitioner's Guide editorial and review board
Lawrence Erlbaum Associates textbook chapter reviewer
Rocky Mountain Psychological Association Annual Meeting ad hoc reviewer