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OFFICE ADDRESS

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EDUCATION

May 2000	Ph.D. in Psychology, University of Virginia
May 1997	M.A. in Psychology, University of Virginia
May 1994	B.A. in Psychology, Colgate University

PROFESSIONAL EXPERIENCE

2006 – present	Associate Professor, Psychology Department, University of Utah
2006 – present	Adjunct Associate Professor, School of Computing, University of Utah
2005 – present	Faculty Participant, The Brain Institute, University of Utah
2001 – present	Faculty Participant, Graduate Program in Neuroscience, University of Utah
2000 – 2006	Assistant Professor, Psychology Department, University of Utah
2003 – 2006	Adjunct Assistant Professor, School of Computing, University of Utah
July 2000	Visiting Scientist, University of Western Ontario, London, Canada

ACADEMIC HONORS

2005	College of Social and Behavioral Science Superior Research Award	University of Utah
2003	Psi Chi Award for Excellence in Teaching	University of Utah
2002	Psi Chi Teaching Award, Best Lecturer	University of Utah
2001	Psi Chi Teaching Award, Best Presentation Skills	University of Utah
2000	Outstanding Graduate Teaching Award	University of Virginia
1999	Distinguished Teaching Fellow	University of Virginia
1999	McDonnell-Pew Summer Institute in Cognitive Neuroscience Fellowship	
1994	Phi Beta Kappa Society	

RESEARCH INTERESTS

Cognitive and neural mechanisms of space perception and spatial cognition, perception and action, spatial transformations and motor imagery, embodied cognition, virtual environments

PROFESSIONAL ACTIVITIES

Editorial Service

Associate Editor

Psychonomic Bulletin & Review, 2010-present

Consulting Editor

Journal of Experimental Psychology: Human Perception and Performance, 2011-

Frontiers in Cognition, 2010-present

Memory & Cognition, 2009-present

Guest Editor

Special Issue of ACM Transactions on Applied Perception, 2008 *Symposium on Applied Perception in Graphics and Visualization*

Program Co-Chair

5th Symposium on Applied Perception in Graphics and Visualization, August 2008, Los Angeles, CA.

Program Committees

7th Symposium on Applied Perception in Graphics and Visualization, July 2010

6th Symposium on Applied Perception in Graphics and Visualization, September 2009

4th Symposium on Applied Perception in Graphics and Visualization, August 2007

National Science Foundation panelist, *Perception, Action, & Cognition*.

National Science Foundation Site Visit Team member

Ad-hoc reviewer for the following journals and funding agencies:

ACM Transactions on Applied Perception, Acta Psychologica, Cerebral Cortex, Child Development, Cognitive, Behavioral, and Affective Neuroscience, Cognitive Psychology, Cognitive Neuropsychology, Cognition, Experimental Brain Research, Journal of Cognitive Neuroscience, Human Factors, Journal of Experimental Psychology: Applied, Journal of Experimental Psychology: General, Journal of Experimental Psychology: Human Perception and Performance, Journal of Experimental Psychology: Learning, Memory, and Cognition, Journal of Motor Behavior, Memory & Cognition, Neuroimage, Neuropsychologia, Perception, Perception & Psychophysics, Presence: Teleoperators and Virtual Environments, Psychological Science, Psychonomic Bulletin & Review, Vision Research, Visual Cognition, National Science Foundation

Professional Memberships

Association for Psychological Science

Psychonomic Society

Vision Sciences Society

Departmental Service

Area Coordinator, Cognition and Neural Sciences, 2005-present (except sabbatical 2006-2007)
Member, Executive Committee, 2008-present
Member, Graduate Committee, 2002-2006, 2010-present
Member, Personnel Committee, 2007-2008
Chair, Cognition and Neural Sciences Search Committee, 2004-2005, 2008-2009
Chair, Research Participation Committee, 2001-2002
Member, Cognition and Neural Sciences Search Committee, 2001-2002
Member, Ad-Hoc Graduate Recruitment Committee, 2000-2001

University Service

Member, Interdisciplinary Teaching Seed Grant review committee, 2008-2010
Co-Organizer, Utah Functional Neuroimaging Core, 2003-2006
Member, MEG/MSI Steering Committee, 2003-present
Reviewer, Graduate Research Fellowship Committee, 2003-2004
Breakout session leader for seminar on “Developing and Sustaining Research and Scholarly Careers” sponsored by the Presidential Commission on the Status of Women, Univ. of Utah, April 2002.

FUNDED GRANTS (EXTERNAL), PRESENT

National Institutes of Health/National Eye Institute, 1 R01 EY017835-01, Designing Visually Accessible Space, Co-PI with William Thompson, Robert Shakespeare, Daniel Kersten, and Gordon Legge (PI), (03/01/2007 - 02/29/2012), \$1,192,829 (\$2,575,146 total for all institutions).

National Science Foundation, IIS, HCC: Small: A New Method for Evaluating Perceptual Fidelity in Computer Graphics, PI: William Thompson, Co-PI: Sarah Creem-Regehr, (08/01/09-7/31/12), \$498,893.

FUNDED GRANTS (EXTERNAL), PAST

National Science Foundation, HCC: Improving Spatial Perception in Virtual Environments. PI: William Thompson, Co-PI: Sarah Creem-Regehr, (09/1/07-2/28/10), \$99,970.

National Science Foundation, ITR/SY: Collaborative Research on the Perceptual Aspects of Locomotion Interfaces, Co-PI with William Thompson (PI), Peter Shirley, John Hollerbach, John Rieser, Herbert Pick, Claude Fennema (9/01/01 – 08/31/08), \$1,400,000 (\$2,493,705 total for all participating institutions).

National Science Foundation, CCF-Advanced Volume Visualization Techniques, Co-PI with Chuck Hanson (PI), (2/1/06-1/31/09), \$250,721.

National Science Foundation, ITR/HCI: Collaborative Research: Generating an Accurate Sense of Depth and Size Using Computer Graphics, Co-PI with William Thompson (PI), (10/01/00 – 9/01/04), \$378,881.

FUNDED GRANTS (INTERNAL)

University of Utah Pilot Program in Imaging Research, “Individual Differences in Spatial Cognition”, awarded April 2009, \$5000.

University of Utah Magnetic Source Imaging Pilot Grant, “Defining neural networks for real and imagined grasping: An MEG Study,” awarded December 2004.

University Funding Incentive Seed Grant, University of Utah, “Functional MRI Investigations of Imagined Grasping: Do Semantic and Motor Systems Interact?” awarded April 2002, \$29,430.

University Research Committee Faculty Grant, University of Utah, “Investigations into the Interactions between Perception and Action,” awarded February 2001, \$5955.

CURRENTLY SUBMITTED EXTERNAL PROPOSALS

National Science Foundation, HCC: Small: Collaborative Research: The Influence of Self-Avatars on Perception and Action in Virtual Worlds, submitted 12/17/10, \$250,000.

PUBLICATIONS, *student co-authors

Journal Articles

Rand, K. M.*, Tarampi, M. R.*, Creem-Regehr, S. H., & Thompson, W. B. (in press). The importance of a visual horizon for distance judgments under severely degraded vision. *Perception*.

Kunz, B.R.*, Creem-Regehr, S.H., & Thompson, W.B. (2010). Visual capture influences body-based indications of visual extent. *Experimental Brain Research*, 207(3-4), 259-268.

Creem-Regehr, S. H. & Kunz, B. R.* (2010). Perception and Action. *Wiley Interdisciplinary Reviews: Cognitive Science*, 1(6), 800-810.

Mohler, B.J.*, Creem-Regehr, S.H., Thompson, W.B., & Bulthoff, H.B. (2010). The effect of viewing a self-avatar on distance judgments in an HMD-based virtual environment. *Presence: Teleoperators and Virtual Environments*, 19(3), 230-242.

Tarampi, M.*, Creem-Regehr, S.H., & Thompson, W.B. (2010). Intact spatial updating with severely degraded vision. *Attention, Perception & Psychophysics*, 72, 23-27.

Creem-Regehr, S. H. (2009). Sensory-motor and cognitive functions of the human posterior parietal cortex involved in manual actions. *Neurobiology of Learning and Memory*, 91, 166-171.

Creem-Regehr, S.H. & Myszkowski, K. (2009). Guest Editorial. *ACM Transactions on Applied Perception*, 6(3), 13: 1-2.

- Kuhl, S. A.*, Thompson, W. B. & Creem-Regehr, S. H. (2009). HMD calibration and its effects on distance judgments. *ACM Transactions on Applied Perception*, 6(3), 19:1-20.
- Kunz, B. R.*, Creem-Regehr, S. H., & Thompson, W. B. (2009). Evidence for motor simulation in imagined locomotion. *Journal of Experimental Psychology: Human Perception and Performance*, 35, 1458-1471.
- Kunz, B. R.*, Wouters, L.*, Smith, D. G.*, Thompson, W. B., & Creem-Regehr, S. H. (2009). Revisiting the effects of quality of graphics on distance judgments in virtual environments: A comparison of verbal reports and blind walking. *Attention, Perception & Psychophysics*, 71, 1284-1293.
- Willemsen, P., Colton, M. B., Creem-Regehr, S. H., & Thompson, W.B. (2009). The effects of head-mounted display mechanics on distance judgments in virtual environments. *ACM Transactions on Applied Perception*, 6(2), 8:1-14.
- Kuhl, S. A.*, Creem-Regehr, S. H., & Thompson, W. B. (2008). Recalibration of rotational locomotion in immersive virtual environments. *ACM Transactions on Applied Perception*, 5(3), 17:1-11.
- Willemsen, P., Gooch, A. A., Thompson, W. B., & Creem-Regehr, S. H. (2008). Effects of stereo viewing conditions on distance perception in virtual environments. *Presence: Teleoperators and Virtual Environments*, 17(1), 91-101.
- Creem-Regehr, S. H., Dilda, V.*, Vicchilli, A.*, Federer, F.*, & Lee, J. N. (2007). The influence of complex action knowledge on representations of novel graspable objects: Evidence from fMRI. *Journal of the International Neuropsychological Society*, 13, 1009-1020.
- Creem-Regehr, S. H., Neil, J. A.*, & Yeh, H. J.* (2007). Neural correlates of two imagined egocentric spatial transformations. *Neuroimage*, 35, 916-927.
- Thompson, W. B., Dilda, V.*, & Creem-Regehr, S. H. (2007). Absolute distance perception to locations off the ground plane. *Perception*, 36, 1559-1571.
- Mohler, B. J.*, Thompson, W. B., Creem-Regehr, S. H., Willemsen, P., Pick, Jr., H. L., & Rieser, J. J. (2007). Calibration of locomotion due to visual motion in a treadmill-based virtual environment. *ACM Transactions on Applied Perception*, 4(1), 1-15.
- Mohler, B. J.*, Thompson, W. B., Creem-Regehr, S. H., Pick, H. L., & Warren, W. H. (2007). Visual flow influences gait transition speed and preferred walking speed. *Experimental Brain Research*, 181, 221-228.
- Marchand, W. R., Lee, J. N., Thatcher, G.W., Jensen, C., Stewart, D., Dilda, V.*, Thatcher, J., & Creem-Regehr, S. H. (2007). A functional MRI study of a paced motor activation task to evaluate frontal-subcortical circuit function in bipolar depression. *Psychiatry Research: Neuroimaging*, 155, 221-230.

- Hedges, D. W., Thatcher, G. W., Bennett, P. J., Sood, S., Paulson, D., Creem-Regehr, S. H., Brown, B., Allen, S., Johnson, H., & Bigler, E. (2007). Brain integrity and cerebral atrophy in Vietnam combat veterans with and without posttraumatic stress disorder. *Neurocase*, *13*, 402-410.
- Creem-Regehr, S. H., Willemsen, P., Gooch, A. A., & Thompson, W. B. (2005). The influence of restricted viewing conditions on egocentric distance perception: Implications for real and virtual environments. *Perception*, *34*, 191-204.
- Creem-Regehr, S. H. & Lee, J. N. (2005). Neural representations of graspable objects: Are tools special? *Cognitive Brain Research*, *22*, 457-469.
- Sahm, C. S.*, Creem-Regehr, S. H., Thompson, W. B., & Willemsen, P. (2005). Throwing versus walking as indicators of distance perception in real and virtual environments. *ACM Transactions on Applied Perception*, *2*, 35-45.
- Creem-Regehr, S. H., Gooch, A. A., Sahm, C. S.*, & Thompson, W. B. (2004). Perceiving virtual geographical slant: Action influences perception. *Journal of Experimental Psychology: Human Perception and Performance*, *30*, 811-821.
- Thompson, W. B., Willemsen, P., Gooch, A. A., Creem-Regehr, S. H., Loomis, J. M., & Beall, A. C. (2004). Does the quality of the computer graphics matter when judging distance in visually immersive environments? *Presence: Teleoperators and Virtual Environments*, *13*, 560-571.
- Wraga, M., Creem-Regehr, S. H., & Proffitt, D. R. (2004). Spatial updating of virtual displays during self- and display-rotation. *Memory & Cognition*, *32*, 399-415.
- Creem-Regehr, S. H. (2003). Updating space during imagined self- and object-translations. *Memory & Cognition*, *31*, 941-952.
- Hu, H. H.*, Creem-Regehr, S. H., Gooch, A. A., & Thompson, W. B. (2002). Visual cues for perceiving distances from objects to surfaces. *Presence: Teleoperators and Virtual Environments*, *11*, 652-664.
- Creem, S. H., Downs, T. H., Wraga, M., Harrington, G., Proffitt, D. R., & Downs, J. H. (2001). An fMRI study of imagined self-rotation. *Cognitive, Affective & Behavioral Neuroscience*, *1*, 239-249.
- Creem, S. H., Wraga, M., & Proffitt, D. R. (2001). Imagining physically impossible transformations: Geometry is more important than gravity. *Cognition*, *81*, 41-64.
- Creem, S. H., & Proffitt, D. R. (2001). Defining the cortical visual systems: What, where, and how. *Acta Psychologica*, *107*, 43-63.
- Creem, S. H., & Proffitt, D. R. (2001). Grasping objects by their handles: A necessary interaction between cognition and action. *Journal of Experimental Psychology: Human Perception and Performance*, *1*, 218-228.

Proffitt, D. R., Creem, S. H., & Zosh, W. D. (2001). Seeing mountains in molehills: Geographical slant perception. *Psychological Science, 12*, 418–423.

Wraga, M., Creem, S. H., & Proffitt, D. R. (2000). Perception-action dissociations of a walkable Muller-Lyer configuration. *Psychological Science, 11*, 239–243.

Wraga, M., Creem, S. H., & Proffitt, D. R. (2000). Updating displays after imagined object- and viewer-rotations. *Journal of Experimental Psychology: Learning, Memory and Cognition, 26*, 151–168.

Wraga, M., Creem, S. H., & Proffitt, D. R. (1999). The influence of spatial reference frames on imagined object- and viewer rotations. *Acta Psychologica, 102*, 247–264.

Creem, S. H. & Proffitt, D. R. (1998). Two memories for geographical slant: Separation and interdependence of action and awareness. *Psychonomic Bulletin & Review, 5*, 22–36.

Book in Press

Thompson, W. B., Fleming, R. W., Creem-Regehr, S. H., & Stefanucci, J. K. (2011). *Visual Perception from a Computer Science Perspective*. CRC Press.

Book Chapters

Creem-Regehr, S. H. (2010). Body mapping and spatial representation (pp. 422-438). In F. Dolins and R. Mitchell (Eds.) *Spatial Cognition, Spatial Perception*. Cambridge University Press.

Creem-Regehr, S. H. (2004). Remembering spatial locations: The role of physical movement in egocentric updating (pp. 163–189). In G. Allen (Ed.). *Human Spatial Memory: Remembering Where*. Lawrence Erlbaum Associates, Inc.

Creem, S. H. & Proffitt, D. R. (1999). Separate memories for visual guidance and explicit awareness: The roles of time and place. In B. H. Challis and B. N. Velichkovsky (Eds.). *Stratification of Consciousness and Cognition* (pp. 73–94). John Benjamins Publishing.

Book Reviews and Encyclopedia Entries

Creem-Regehr, S. H. (2008). Spatial Cognition. In M. D. Binder, N. Hirokawa, and U. Windhorst (Eds.). *Encyclopedia of Neuroscience* (pp.3796-3799). Berlin: Springer

Creem-Regehr, S. H. (2005). Perception by action versus perception for action. Review of Perception in Action by Alva Noë, 2004, MIT press, *Trends in Cognitive Sciences, 510-511*.

Creem-Regehr, S. H. (2004). Out of mind keeps cognition in mind. Review of *Out of Mind: Varieties of unconscious processes*. Edited by Beatrice de Gelder, Edward H. F. de Haan, & Charles A. Heywood. *Cortex*, 40, 739–742.

Published Conference Proceedings (peer-reviewed papers)

Geuss, M.*, Stefanucci, J. K., Creem-Regehr, S. H., & Thompson, W.B. (2010). Can I pass? Using affordances to measure perceived size in virtual environments. In *Proceedings of the 7th SIGGRAPH Symposium on Applied Perception in Graphics and Visualization*.

Ziemek, T. R.*, Creem-Regehr, S. H., & Thompson, W. B. (2008). Using mental rotation as a methodology to evaluate shape perception in computer graphics. In *Proceedings of the 5th SIGGRAPH Symposium on Applied Perception in Graphics and Visualization*.

Mohler, B. J.*, Bulthoff, H. H., Thompson, W. B., & Creem-Regehr, S. H. (2008). A full-body avatar improves distance judgments in virtual environments. In *Proceedings of the 5th SIGGRAPH Symposium on Applied Perception in Graphics and Visualization*.

Kuhl, S. A.*, Thompson, W. B. & Creem-Regehr, S. H. (2008). HMD calibration and its effects on distance judgments. In *Proceedings of the 5th SIGGRAPH Symposium on Applied Perception in Graphics and Visualization*.

Mohler, B. J.*, Creem-Regehr, S. H., & Thompson, W. B. (2006). The influence of feedback on egocentric distance judgments in real and virtual environments. In *Proceedings of the 3rd SIGGRAPH Symposium on Applied Perception in Graphics and Visualization*.

Kuhl, S. A.*, Thompson, W. B. & Creem-Regehr, S. H. (2006). Minification influences spatial judgments in virtual environments. In *Proceedings of the 3rd SIGGRAPH Symposium on Applied Perception in Graphics and Visualization*.

Thompson, W. B., Creem-Regehr, S. H., Mohler, B. J.*, & Willemsen, P. (2005). Investigations on the interactions between vision and locomotion using a treadmill virtual environment. In *Proceedings of the SPIE/IS&T Human Vision & Electronic Imaging Conference*, 481–492.

Mohler, B. J.*, Thompson, W. B., Creem-Regehr, S. H., Pick, Jr., H. L., Warren, Jr., W., Rieser, J. J. & Willemsen, P. (2004). Visual Motion Influences Locomotion in a Treadmill Virtual Environment. In *Proceedings of the 1st SIGGRAPH Symposium on Applied Perception in Graphics and Visualization*, 19–22.

Willemsen, P., Colton, M. B., Creem-Regehr, S. H., & Thompson, W. B. (2004). The Effects of Head-Mounted Display Mechanics on Distance Judgments in Virtual Environments. In *Proceedings of the 1st SIGGRAPH Symposium on Applied Perception in Graphics and Visualization*, 35–38.

Kindlmann, G., Reinhard, E., & Creem, S. H. (2002). Face-based luminance matching for perceptual colormap generation. In R. Moorhead, M. Gross and K. I. Joy (Eds.), In *Proceedings of IEEE Visualization*, 299–306.

Creem, S. H., Wraga, M., & Proffitt, D. R. (1997). The relevance of imagined self-rotations. In M. Schmuckler & J. M. Kennedy (Eds.) *Studies in Perception and Action IV* (pp.35-38). Lawrence Erlbaum Associates, Inc.

Submitted manuscripts

Ziemek, T.*, Creem-Regehr, S.H., Thompson, W.B. & Whitaker, R. (2010). Evaluating the effectiveness of orientation indicators with an awareness of individual differences. *Under revision*.

Kesner, R. & Creem-Regehr, S. H. (2010). Parietal contributions to spatial cognition. *Handbook of Spatial Cognition. Under Revision*.

Rand, K. M.*, Tarampi, M. R.*, Thompson, W. B., & Creem-Regehr, S. H. (2011). The influence of object ground contact on perception of distance and size under severely degraded vision. *Submitted*.

In preparation

Geuss, M.*, Stefanucci, J. K., Creem-Regehr, S. H., & Thompson, W. B. (2011). Effect of viewing plane on perceived distances in real and virtual environments. (submit April)

Kunz, B. R.*, Creem-Regehr, S. H., & Thompson, W. B. (2011). The effect of perceptual-motor recalibration on spatial updating. (submit March)

Kunz, B. R.*, Mohler, B. J.*, Creem-Regehr, S. H., & Thompson, W. B. (2011). How does feedback influence perception in virtual environments?

Lessard, D. A.*, Tarampi, M.R.*, Geuss, M.N.*, Creem-Regehr, S. H., Stefanucci, J. K., & Thompson, W.B. (2011). Overestimating action capabilities for passing through vertical and horizontal gaps under severely degraded vision.

Smith, D.*, Creem-Regehr, S.H., & Watson, J. (2011). Individual differences in executive attention and imagined perspective switching.

INVITED TALKS AND SYMPOSIA

Creem-Regehr, S. H. (2011, March). *Body-based perception in virtual environments*. Invited talk presented at GE Healthcare, Salt Lake City, UT.

Creem-Regehr, S. H. (2010, September). *Body-based perception in spaces beyond the body*. Invited talk presented at the Max Planck Institute for Biological Cybernetics, Tübingen, Germany.

- Creem-Regehr, S.H. (2010, May). *Embodiment in perception: What have we learned from virtual reality?* Invited talk presented at the Association for Psychological Science 22nd Annual Convention, Boston, MA.
- Creem-Regehr, S.H. (2010, January). *Embodiment in perception: What have we learned from virtual reality?* Invited talk presented at Cognition and Cognitive Neuroscience colloquium, Vanderbilt University.
- Creem-Regehr, S.H. (2009, November). *Improving distance judgments in virtual environments: What have we learned about perception?* Invited talk presented at keynote symposium, Society for Computers in Psychology, Boston, MA.
- Creem-Regehr, S.H. (2009, September). *Dissociated where and how knowledge in object grasping.* Invited talk presented at the Neural Correlates of Object Recognition and Action Workshop, Atlanta, GA.
- Creem-Regehr, S.H. & Gugerty, L. (2008, August). *Applying spatial cognition to complex tasks and tools.* Invited Symposium co-chair, American Psychological Association Annual Meeting, Boston MA.
- Creem-Regehr, S. H. (2006, July). *Representing objects and actions: What is special about tools?* Talk presented for the Neuro-Cognitive Rehabilitation Research Network, Philadelphia, PA.
- Creem-Regehr, S. H. (2005, June). *Representing graspable objects: Investigations of “what” and “how” for real and imagined actions.* Talk presented at TENNET, Theoretical and Experimental Neuropsychology, Montreal, Quebec.
- Creem-Regehr, S. H. & Thompson, W. B. (2005, May). *Perception and action in immersive virtual environments.* Satellite Workshop Organizer, Vision Sciences Society Annual Conference, Sarasota, FL.
- Creem-Regehr, S. H. (2005, April). *Perceiving and acting in real and virtual environments.* Talk presented at University of Arizona, Cognitive Science Brown Bag.
- Creem-Regehr, S. H. (2004, March). *Spatial perception and action in real and virtual environments.* Talk presented at University of Minnesota, Cognitive Science Retreat Keynote Speaker.
- Creem-Regehr, S. H. & Browd, S. (2004, March). *Use of fMRI in brain research.* Talk presented at the Brain Imaging Conference, NAMI Cache Valley, Utah State University.
- Creem-Regehr, S. H. (2003). *Action-relevant representations of space and objects.* Talk presented at Carnegie Mellon University, Emory University, University of Iowa, Pennsylvania State University, Purdue University, and University of California, Irvine.

- Creem-Regehr, S. H. (2001, July). *Perceiving and grasping hand tools: Interactions between the “two visual systems.”* Talk presented at the Cognitive Science Association for Interdisciplinary Learning (CSAIL) Symposium: Beyond the Perception/Action Dissociation, Hood River, OR.
- Creem, S. H. (2001, March). *Examining the advantage for self-transformations in spatial updating tasks.* Talk presented at University of California, Santa Barbara, CA.
- Creem, S. H. (2000, August). *The two visual systems and their interactions.* Symposium co-presented at the 22nd Annual Meeting of the Cognitive Science Society with B. Bridgeman and J. Philbeck, Philadelphia, PA.
- Creem, S. H. (2000). *Perceiving hand tools: Investigations into the interactions between vision, semantics, and action.* Talk presented at Gettysburg College, Smith College, University of Arizona, University of Utah, University of Western Ontario, Western Washington University.
- Creem, S. H. (1999, August). *Doing two things at once: Independence and interaction of cognitive and motor systems.* Talk presented at Microsoft Research, Redmond, WA.
- Creem, S. H. (1999, July). *Grasping Hand Tools: New evidence for interactive cognitive and motor systems.* Talk presented the Center for the Neural Basis of Cognition, Carnegie Mellon University, Pittsburgh, PA.

CONFERENCE PRESENTATIONS AND ABSTRACTS

- Lessard, D. A.*, Tarampi, M.*, Geuss, M. N.*, Creem-Regehr, S. H., Stefanucci, J. K., & Thompson, W. B. (2011). *Overestimating action capabilities for passing through vertical and horizontal gaps under severely degraded vision.* Poster to be presented at the 11th Annual Meeting of the Vision Sciences Society, Naples, FL.
- Geuss, M. N.*, Stefanucci, J. K., Creem-Regehr, S. H., & Thompson, W. B. (2011). *The role of depth and frontal planes in perceiving distances in a virtual environment.* Poster to be presented at the 11th Annual Meeting of the Vision Sciences Society, Naples, FL.
- Gagnon, K.*, Tarampi, M.*, Peyton, M.*, & Creem-Regehr, S. H. (2011). *Manipulating embodiment in imagined spatial perspective taking.* Poster to be presented at the 11th Annual Meeting of the Vision Sciences Society, Naples, FL.
- Rand, K. M.*, Tarampi, M. R.*, Thompson, W. B., & Creem-Regehr, S. H. (2011). *The influence of object-ground contact on perception of distance and size under severely degraded vision.* Poster to be presented at the 11th Annual Meeting of the Vision Sciences Society, Naples, FL.
- Tarampi, M.*, Geuss, M. N.*, Stefanucci, J. K., & Creem-Regehr, S. H. (2010). *Dancers are overconfident in their affordance judgments.* Poster presented at the 51th annual meeting of the Psychonomics Society, St Louis, MO.

- Thompson, W. B., Rand, K. M.*, Tarampi, M. R.*, & Creem-Regehr, S. H. (2010). *The importance of a visual horizon for distance judgments under severely degraded vision*. Talk presented at the European Conference on Visual Perception, Lausanne.
- Creem-Regehr, S. H., Geuss, M. N.*, Ziemek, T. R.*, Allen, G. C.*, Stefanucci, J. K., & Thompson, W. B. (2010). *Comparing different measures of space perception across real and virtual environments*. Poster presented at the 10th annual meeting of the Vision Sciences Society, Naples FL.
- Rand, K. M.*, Creem-Regehr, S. H. & Thompson, W. B. (2010, May). *The importance of a visual horizon for distance judgments under severely degraded vision*. Poster presented at the 10th annual meeting of the Vision Sciences Society, Naples FL.
- Kunz, B. R.*, Creem-Regehr, S. H. & Thompson, W. B. (2010, May). *Testing the generalizability of perceptual-motor calibration on spatial judgments*. Talk presented at the 10th annual meeting of the Vision Sciences Society, Naples FL.
- Kunz, B. R.*, Creem-Regehr, S. H. & Thompson, W. B. (2009, November). *Visual body representations influence judgments of object extent*. Talk presented at the 50th annual meeting of the Psychonomics Society, Boston, MA.
- Tarampi, M.*, Creem-Regehr, S. H., & Thompson, W. B. (2009, May). Evidence for intact spatial updating in observers with severely degraded vision. . Poster presented at the 9th annual meeting of the Vision Sciences Society, Naples, FL.
- Kunz, B. R.*, Lauritzen, S.*, Thompson, W. B., & Creem-Regehr, S. H. (2009, May). Visual capture may influence body-based judgments of object extent. Poster presented at the 9th annual meeting of the Vision Sciences Society, Naples, FL.
- Smith, D.*, Creem-Regehr, S.H., & Watson, J. (2008, November). *The influence of individual differences in working memory capacity on spatial updating tasks*. Poster presented at the 49th annual meeting of the Psychonomics Society, Chicago, IL.
- Creem-Regehr, S.H., Kunz, B.* & Thompson, W.B. (2008, May). Comparing perceived affordances to size and distance estimates in a virtual environment. Poster presented at the 8th annual meeting of the Vision Sciences Society, Naples, FL.
- Kunz, B.R.*, Creem-Regehr, S.H., & Thompson, W.B. (2008, May). The influence of relevant action on spatial updating during imagined locomotion. Poster presented at the 8th annual meeting of the Vision Sciences Society, Naples, FL.
- Tarampi, M.*, Creem-Regehr, S.H. & Thompson, W.B. (2008, May). Visually directed walking to targets with severely graded vision is surprisingly accurate. Poster presented at the 8th annual meeting of the Vision Sciences Society, Naples, FL.

Kuhl, S.A.*, Thompson, W. B. & Creem-Regehr, S.H. (2008, May). Angle of declination manipulations and their effects on distance judgments in virtual environments. Poster presented at the 8th annual meeting of the Vision Sciences Society, Naples, FL.

Kunz, B.R.*, Creem-Regehr, S. H., & Thompson, W. B. (2007, May). *Investigations of real and imagined walking*. Poster presented at the 7th annual meeting of the Vision Sciences Society, Sarasota, FL.

Mohler, B. J.*, Creem-Regehr, S. H., & Thompson, W. B. (2007, May). *Visually mismatched feedback within a head-mounted display affects a perceptual-motor but not a cognitive real world egocentric distance response*. Poster presented at the 7th annual meeting of the Vision Sciences Society, Sarasota, FL.

Creem-Regehr, S. H. (2006, August). *Perception and action in virtual environments*. Talk presented at the 2006 American Psychological Association Convention, New Orleans, LA.

Dilda, V.*, Creem-Regehr, S. H., & Thompson, W. B. (2006, May). *Angle of elevation influences distance perception to targets on the ceiling*. Talk presented at the 6th annual meeting of the Vision Sciences Society, Sarasota, FL.

Kunz, B.*, Creem-Regehr, B., & Thompson, W. B. (2006, May). *Perceptual-Motor Recalibration of Imagined Walking*. Talk presented at the 6th annual meeting of the Vision Sciences Society, Sarasota, FL.

Mohler, B.*, Thompson, W. B., & Creem-Regehr, S. H. (2006, May). *Absolute egocentric distance judgments are improved after motor and cognitive adaptation within HMD*. Poster presented at the 6th annual meeting of the Vision Sciences Society, Sarasota, FL.

Kuhl, S.*, Creem-Regehr, S. H., & Thompson, W. B. (2006, May). *Individual differences in accuracy of blind walking to targets on the floor*. Poster presented at the 6th annual meeting of the Vision Sciences Society, Sarasota, FL.

Dilda, V.* & Creem-Regehr, S. H. (2006, April). *The role of the cerebellum in the representation of tools*. Poster presented at the 13th annual Cognitive Neuroscience Society Meeting, San Francisco, CA.

Dilda, V.*, Creem-Regehr, S. H., & Thompson, W. B. (2005, May). *Perceiving distances to targets on the floor and ceiling: A comparison of walking and matching measures*. Poster presented at the 5th annual meeting of the Vision Sciences Society, Sarasota, FL.

Mohler, B.*, Creem-Regehr, S. H., & Thompson, W.B. (2005, May). *Speed of visual flow affects comfortable walking speed*. Poster presented at the 5th annual meeting of the Vision Sciences Society, Sarasota, FL.

- Willemsen, P., Creem-Regehr, S. H., Colton, M. B., & Thompson, W. B. (2005, May). *The effect of HMD mass and inertia on visually directed walking in virtual environments*. Poster presented at the 5th annual meeting of the Vision Sciences Society, Sarasota, FL.
- Thompson, W. B., Mohler, B.*, & Creem-Regehr, S. H. (2005, May). *Does perceptual-motor recalibration of locomotion depend on perceived self motion or the magnitude of optical flow?* Paper presented at the 5th annual meeting of the Vision Sciences Society, Sarasota, FL.
- Dilda, V.*, Lee, J., & Creem-Regehr, S. H. (2005, April). *The influence of hand-dominance on brain lateralization in motor imagery*. Poster presented at the 12th Cognitive Neuroscience Society Meeting, New York, NY.
- Neil, J. A.*, Yeh, H. J.*, & Creem-Regehr, S. H. (2005, April). *Neural correlates of two imagined egocentric transformations*. Poster presented at the 12th Cognitive Neuroscience Society Meeting, New York, NY.
- Sahm, C. S.*, Creem-Regehr, S. H., Thompson, W. B., & Willemsen, P. (2004, November). *Visually directed actions as indicators of distance perception in real and virtual environments*. Talk presented at the 45th Annual Meeting of the Psychonomic Society, Minneapolis, MN.
- Sahm, C. S.*, Creem-Regehr, S. H., Thompson, W. B., & Willemsen, P. (2004, August). *Throwing vs. walking as indicators of distance perception in real and virtual environments*. In Proceedings of the 1st SIGGRAPH Symposium on Applied Perception in Graphics and Visualization, 178.
- Creem-Regehr, S. H., Mohler, B.*, & Thompson, W. B. (2004, May). *Perceived slant is greater from far versus near distances*. Journal of Vision, 4(8), 374a (VSS 04).
- Mohler, B.*, Thompson, W. B., Creem-Regehr, S. H., Willemsen, P., Rieser, J. J., and Pick, Jr., H. L. (2004, May). *Perceptual-motor recalibration on a virtual reality treadmill*. Journal of Vision, 4(8), 794a (VSS 04).
- Willemsen, P., Colten, M. B., Creem-Regehr, S. H., and Thompson, W. B. (2004, May). *Examining distance compression in virtual environments: Hi-Tech versus no-tech displays*. Journal of Vision, 4(8), 20a (VSS 04).
- Gooch, B., Creem-Regehr, S. H., Reinhard, E., & Lee, J. N. (2004, May). *Learning and recognition task performance using computer generated facial illustrations and caricatures*. Journal of Vision, 4(8), 430a (VSS 04).
- Creem-Regehr, S. H., Dilda, V.*, Gold, A. E.*, Lee, B.*, & Lee, J. N. (2004, April). *Grasping novel objects: Functional identity influences representations for real and imagined actions*. Poster presented at the 11th Cognitive Neuroscience Society Meeting, San Francisco, CA.

- Creem-Regehr, S. H. & Lee, J. N. (2003, September). *Neural representations of graspable objects*. Talk presented at the 15th Annual UCAIR (Utah Center for Advanced Imaging Research) Symposium, Park City, UT.
- Creem-Regehr, S. H., Willemsen, P., Gooch, A. A., & Thompson, W. (2003, May). *The effects of restricted viewing conditions on egocentric distance judgments*. *Journal of Vision*, 3(9), 16a (VSS 03).
- Thompson, W. B., Gooch, A. A., Willemsen, P., Creem-Regehr, S. H., Loomis, J., & Beall, A. (2003, May) *Compression of distance judgments when viewing virtual environments using a head mounted display*. *Journal of Vision*, 3(9), 18a (VSS 03).
- Creem-Regehr, S. H. & Lee, J. N. (2003, April). *The influence of meaning on neural representations of graspable objects*. Poster presented at the 10th Cognitive Neuroscience Society Meeting, New York, NY.
- Creem-Regehr, S. H., Sargent, N. M.*, & Neil, J. A.* (2002, November). *Egocentric spatial transformations of bodies and body-parts*. Poster presented at the 43rd Annual Meeting of the Psychonomic Society, Kansas City, MO.
- Creem-Regehr, S. H., Gooch, A. A., & Thompson, W. B. (2002, May). *Perceiving virtual geographical slant: Action influences perception*. *Journal of Vision*, 2(7), 57a (VSS 02).
- Creem-Regehr, S. H. (2001, November). *Spatial updating after object and viewer translation: Real versus imagined movement*. Poster presented at the 42nd Annual Meeting of the Psychonomic Society, Orlando, FL.
- Creem, S. H. (2001, May). *Integration of visual and biomechanical perception*. Talk presented at ACM SIGGRAPH/Eurographics Campfire, Snowbird, UT.
- Creem, S. H. (2001, May). *Spatial Updating after imagined self and object movement: Translation is similar to rotation*. *Journal of Vision*, 1(3), 141a (VSS 01).
- Creem, S. H., Downs, T. H., Snyder, A. P., Downs, J. H., & Proffitt, D. R. (2001, March). *Egocentric versus object-relative spatial judgment tasks elicit differences in brain activity*. Poster presented at the Cognitive Neuroscience Society Annual Meeting, New York, NY.
- Creem, S. H. & Proffitt, D. R. (2000, November). *Egocentric measures of spatial updating: Is there an advantage for action?* Poster presented at the 41st Annual Meeting of the Psychonomic Society, New Orleans, LA.
- Creem, S. H., Downs, T. H., Harrington, G. S., Proffitt, & D. R., Downs, J. H. (2000, June). *Motor representations involved in perceiving tools and graspable non-tools*. Poster presented at the 6th International Conference on Functional Mapping of the Human Brain, San Antonio, TX.

- Creem, S. H. & Proffitt, D. R. (1999, November). *Grasping tools: Interactions between object identity and appropriate action*. Talk presented at the 7th Annual Workshop on Object Perception and Memory, Los Angeles, CA.
- Creem, S. H., Wraga, M. & Proffitt, D. R. (1999, November). *Imagining physically impossible transformations: Geometry is more important than gravity*. Poster presented at the 40th Meeting of the Psychonomic Society, Los Angeles, CA.
- Creem, S. H., Wraga, M. & Proffitt, D. R. (1999, June). *An advantage for self- vs. object-rotations given physically impossible positions*. Poster presented at the 3rd Annual Meeting of the Association for the Scientific Study of Consciousness, London, Canada.
- Downs, T. H., Creem, S. H., Wraga, M., Harrington, G. S. Fox, K. V., Proffitt, D. R., Downs, J.H. (1999, June). *Imagined rotations of the self: An fMRI study*. Poster presented at the 5th International Conference on Functional Mapping of the Human Brain, Düsseldorf, Germany.
- Creem, S. H. & Proffitt, D. R. (1999). *Grasping objects with handles: Evidence for interactive visual systems*. Investigative Ophthalmology & Visual Science Abstracts (ARVO), 40, B50.
- Wraga, M., Creem, S. H., & Proffitt, D. R. (1999). *Spatial updating of an irregularly shaped virtual array during self- and display rotations*. Investigative Ophthalmology & Visual Science Abstracts (ARVO), 40, B20.
- Wraga, M., Creem, S. H. & Proffitt, D. R. (1999, April). *Spatial updating of a virtual scene after self- and display rotations*. Paper presented at the EPA Vision/Attention Mini-conference, Providence, RI.
- Creem, S. H., Hirsch, T. B., Wraga, M., Harrington, G., Fox, K. V., Proffitt, D. R., Downs, J. H. (1999, April). *fMRI investigations of imagined viewer rotations*. Poster presented at the Cognitive Neuroscience Society Annual Meeting, Washington, D.C.
- Creem, S. H. & Proffitt, D. R. (1998, November). *Grasping meaningful objects: Interdependence between the two visual systems*. Paper presented at the 39th Meeting of the Psychonomic Society, Dallas, TX.
- Creem, S. H., Wraga, M. & Proffitt, D. R. (1998). *Perception-action dissociations in a large-scale Muller-Lyer figure*. Investigative Ophthalmology & Visual Science Abstracts (ARVO), 39, S1095.
- Creem, S. H., Wade, M. M. & Proffitt, D. R. (1997). *Visual perception of egocentric distance*. Investigative Ophthalmology & Visual Science Abstracts (ARVO), 38, S902.
- Smit, D. J., Creem, S. H., & Kubovy, M. (1997). *Distance and luminance heterogeneity have additive effects on perceptual grouping*. Investigative Ophthalmology & Visual Science Abstracts, 38, S642.

Creem, S. H. & Proffitt, D. R. (1996, November). *Memory for geographical slant*. Poster presented at The 37th Meeting of the Psychonomic Society, Chicago, IL.

TEACHING EXPERIENCE

Advanced Human Cognition, <i>graduate core course</i> , 2003, 2004	University of Utah
Cognitive Psychology, <i>undergraduate lecture</i> , 2001	University of Utah
Cognitive Neuropsychology, <i>graduate core course</i> , 2001	University of Utah
CNS Approaches to Research, <i>graduate methods course</i> , 2006, 2008	University of Utah
Introduction to Psychology (<i>perception and cognition sections</i>), 2001-2009	University of Utah
Neuropsychology of Vision, <i>undergraduate seminar</i> , 2002	University of Utah
Sensation and Perception, <i>undergraduate lecture</i> , 2001-2011	University of Utah
Spatial Cognition, <i>graduate seminar</i> , 2004	University of Utah
Functional Neuroimaging of Cognition, <i>graduate seminar</i> , 2009	University of Utah
Embodied Cognition, <i>graduate seminar</i> , 2009	University of Utah
First-year Practicum, <i>graduate seminar</i> , 2010, 2011	University of Utah
Clinical Studies and the Visual Brain, <i>undergraduate seminar</i> , 2000	University of Virginia

STUDENT SUPERVISION

Present Advise or Co-advise

Kyle Gagnon, 1st year psychology PhD student
 David Lessard, 1st year psychology PhD student
 Kristina Rand, 2nd year psychology PhD student
 Margaret Tarampi, 4th year psychology PhD student

Past Advise or Co-advise

Benjamin Kunz, psychology PhD 2010
 Tina Ziemek, computer science PhD 2010
 Scott Kuhl, computer science PhD 2009
 Betty Mohler, computer science PhD 2007
 Valentina Dilda, psychology PhD 2007

Recent Committee Participation

Michael Geuss (psychology), Masters completed 2011
 Janelle Seegmiller (psychology), Masters completed 2010, Prelim
 Margaret Tarampi (psychology), Masters completed 2010, Prelim
 Heidi Kramer (psychology), Masters completed 2010
 Nate Madeiros-Ward (psychology), Masters completed 2010, Prelim
 Ian Semple, (geology) Masters
 Adrian Musters (psychology) Prelim
 Ann Lambert (psychology), Prelim completed 2010
 Kristina Rand (psychology), Prelim

Andrea Morris (psychology), Prelim completed 2010, Dissertation
Kian Torab (bioengineering), Dissertation
Shushruth (neuroscience), Dissertation completed 2010
Joel Cooper (psychology), Dissertation, completed 2010
Ben Kunz (psychology), Dissertation, completed 2010
Tina Ziemek (computer science), Dissertation, completed 2010
Fred Federer (neuroscience), Dissertation, completed 2010

Recent Undergraduate Research Supervision

Daniel Smith, Senior Thesis 2008-2009
Edwardo Rubio, SROP 2009
Brook Shell, Senior Thesis 2009-2010
Alda Rivas, Bioscience Summer Undergraduate 2010