

**SARAH H. CREEM-REGEHR**[sarah.creem@psych.utah.edu](mailto:sarah.creem@psych.utah.edu)<https://psych.utah.edu/people/faculty/creem-regehr-sarah.php>**OFFICE ADDRESS**

Department of Psychology  
 University of Utah  
 380 S. 1530 E., Room 502  
 Salt Lake City, UT 84112  
 Phone: 801-581-5045

**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**

2013 – present	Professor, Psychology Department, University of Utah
2013 – present	Adjunct Professor, School of Computing, University of Utah
2001 – present	Faculty Participant, Graduate Program in Neuroscience, University of Utah
2006 – 2013	Associate Professor, Psychology Department, University of Utah
2006 – 2013	Adjunct Associate Professor, School of Computing, 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**

2018	College of Social and Behavioral Science Superior Research Award	University of Utah
2011	Irwin Altman Outstanding Psychology Faculty Award	University of Utah
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, embodied cognition, virtual environments, visualization

**FUNDED GRANTS (EXTERNAL), PRESENT**

National Science Foundation CHS: Medium: Collaborative Research: Designing virtual worlds for children: A developmental study of how children act, perceive, and reason spatially, Role: Co-PI with Jeanine Stefanucci (PI) and William Thompson \$539,504, 8/1/18-7/31/22.

Army Research Office, Improving operationalization of temporal aspects of population-centric data through 3D immersive environments, Role: Co-PI with Jeanine Stefanucci (PI) \$119,848, 3/15/18-12/14/19

Office of Naval Research, N00014-18-1-2964 Affordances for Quantitative and Objective Measures of Immersion and Presence, Role: PI with Bobby Bodenheimer (Vanderbilt PI), with co-PI Jeanine Stefanucci, and William Thompson (1/01/18 - 12/31/20) \$269,780 (Utah)

National Institutes of Health/National Eye Institute, BRP 2 R01 EY017835-06A1 Designing Visually Accessible Spaces, Role: Co-PI with William Thompson, Robert Shakespeare, Daniel Kersten, and Gordon Legge (03/01/2014 – 02/28/20), \$1,109,991 (Utah).

National Science Foundation, IBSS: Age Changes and Sex Differences in Spatial Cognition: Testing the Role of Mobility in Three Non-Industrial Societies and the US, Role: Co-PI with Elizabeth Cashdan, Jeanine Stefanucci and Harvey Miller, (9/15/13-2/28/19), \$999,871 (Utah).

#### **FUNDED GRANTS (EXTERNAL), PAST**

National Science Foundation, CGV: Large: Collaborative Research: Modeling, Display, and Understanding Uncertainty in Simulations for Policy Decision Making, Role: Co-PI with Ross Whitaker, Miriah Meyer, Mike Kirby, William Thompson, (10/1/12-6/30/18), \$1,799,124.

National Science Foundation, HCC: Small: Collaborative Research: The Influence of Self-Avatars on Perception and Action in Virtual Worlds, PI: William Thompson, Co-PIs: Sarah Creem-Regehr, Jeanine Stefanucci (9/1/11 – 8/31/16), \$265,927 (\$500,000 total for both institutions).

National Science Foundation, IIS, HCC: Small: A New Method for Evaluating Perceptual Fidelity in Computer Graphics, PI: William Thompson, Co-PIs: Sarah Creem-Regehr, Jeanine Stefanucci (08/01/09-7/31/14), \$498,893.

National Institutes of Health/National Eye Institute, 1 R01 EY017835-01, Designing Visually Accessible Space, Role: Co-PI with William Thompson, Robert Shakespeare, Daniel Kersten, and Gordon Legge, (03/01/2007 - 02/29/2013), \$1,192,829 Utah (\$2,575,146 total for all institutions).

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, 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, (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, (10/01/00 – 9/01/04), \$378,881.

**FUNDED GRANTS (INTERNAL), PAST**

University Funding Incentive Seed Grant, University of Utah, "The role of the body in space perception: cognitive and neural mechanisms," awarded July 2011, \$28,500. PI: Jeanine Stefanucci, Co-PI: Sarah Creem-Regehr.

University of Utah Pilot Program in Imaging Research, "Individual Differences in Spatial Cognition", awarded April 2009, \$5000. PI: Sarah Creem-Regehr, Co-PI: Jason Watson.

University of Utah Magnetic Source Imaging Pilot Grant, "Defining neural networks for real and imagined grasping: An MEG Study," awarded December 2004. PI: Sarah Creem-Regehr

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. PI: Sarah Creem-Regehr.

University Research Committee Faculty Grant, University of Utah, "Investigations into the Interactions between Perception and Action," awarded February 2001, \$5955. PI: Sarah Creem-Regehr.

**PUBLICATIONS, \*student co-authors, h-index 36, i10-index 65*****Journal Articles***

69. Barhorst-Cates, E. M.\*, Rand, K. M., & Creem-Regehr, S. H. (in press). Navigating with peripheral field loss in a museum: Learning impairments due to environmental complexity. *Cognitive Research: Principles and Implications*.
68. Padilla, L.M.\*, Creem-Regehr, S.H., & Thompson, W.B. (in press). The powerful influence of marks: Visual and knowledge-driven processing in hurricane track displays. *Journal of Experimental Psychology: Applied*.
67. Padilla, L.M.\*, Castro, S.\*, Ruginski, I.\*, & Creem-Regehr, S. H. (in press). Toward objective evaluation of working memory in visualizations: A case study using pupillometry and a dual-task paradigm. *IEEE Transactions on Visualization and Computer Graphics*.
66. Ruginski, I.\*, Creem-Regehr, S. H., Stefanucci, J. K., & Cashdan, E. (2019). GPS use negatively affects visual environmental learning through spatial transformation abilities. *Journal of Environmental Psychology*.
65. Quinan, P.S.\*, Padilla, L.M.\*, Creem-Regehr, S. H. & Meyer, M. (2019). Examining implicit discretization in spectral schemes. *Computer Graphics Forum*.
64. Thomas, B.\*, Pointon, G.\*, Gill, D.\* & Creem-Regehr, S. H. (2019). What perceivers know about their own affordance perception: Post-hoc evaluations of perceptual process do not relate to accuracy. *American Journal of Psychology*.
63. Lui, L.\*, Padilla, L. M.\*, Creem-Regehr, S. H., & House, D. (2018). Visualizing uncertain tropical cyclone predictions using representative samples from ensembles of forecast tracks. *IEEE Transactions on Visualization and Computer Graphics*, 25 (1), 882-891.
62. Gagnon, K. T.\*, Thomas, B., Munion, A.\*, Creem-Regehr, S. H., & Cashdan, E., & Stefanucci, J. K. (2018). Not all who wander are lost: Characterizing sex differences in spatial exploration and their relationship to navigation ability. *Cognition*, 108-117.

61. Padilla, L. M.\*, Creem-Regehr, S. H., Hegarty, M., & Stefanucci, J. K. (2018). Decision Making with Visualizations: A Selective Review. *Cognitive Research: Principles and Implications*, 3:29.
60. Rand, K.M., Barhorst-Cates, E.M.\*, Kiris, E.\*, Thompson, W.B., & Creem-Regehr, S.H. (2018). Going the distance and beyond: Simulated low vision increases perception of distance traveled during locomotion. *Psychological Research*, 1-14.
59. Adams, A.\*, Narasimham, G., Rieser, J., Creem-Regehr, S. H., Stefanucci, J. K, Bodenheimer, R. E. (2018). Locomotive Recalibration and Prism Adaptation of Children and Teens in Immersive Virtual Environments. *IEEE Transactions on Visualization and Computer Graphics*, 24 (4), 1408-1417.
58. Padilla, L. M.\*, Ruginski, I. T.\* & Creem-Regehr, S. H. (2017). Effects of Ensemble and Summary Displays on Interpretations of Geospatial Uncertainty Data. *Cognitive Research: Principles and Implications*, 2: 40.
57. Barhorst-Cates, E.\*, Rand, K. M., Creem-Regehr, S. H. (2017). Let me be your guide: Physical guidance Improves spatial learning for older adults with simulated low vision. *Experimental Brain Research*, 235 (11), 3307-3317.
56. Lui, L.\* Boone, A.\*, Ruginski, I.\*, Padilla, L.\*, Hegarty, M., Creem-Regehr, S., Thompson, W., Yuksel, C. & House, D. H. (2017). Uncertainty visualization by representative sampling from prediction ensembles. *IEEE Transactions on Visualization and Computer Graphics*, 23 (9), 2165-2178.
55. Padilla, L.M.\*, Quinan, P.S.\*, Meyer, M. & Creem-Regehr, S. H. (2017). Evaluating the impact of binning 2D scalar fields. *IEEE Transactions on Visualization and Computer Graphics*, 23(1), 431-440.
54. Padilla, L. M.\*, Creem-Regehr, S. H., Stefanucci, J. K., & Cashdan, E. (2017). Sex differences in virtual navigation influenced by scale and navigation experience. *Psychonomic Bulletin & Review*, 1-9.
53. Barhorst-Cates, E.\*, Rand, K.M., & Creem-Regehr, S. H. (2016). The effects of restricted peripheral field of view on spatial learning while navigating. *PLoS One* (10), e0163785
52. Ruginski, I. T.\*, Boone, A. P.\*, Padilla, L. M.\*, Liu, L.\*, Hedari, N.\*, Kramer, H. S., Hegarty, M. House, D. Thompson, W. B., & Creem-Regehr, S. H. (2016). Non-expert interpretations of hurricane forecast uncertainty visualizations. *Spatial Cognition & Computation: An Interdisciplinary Journal*. Special Issue: Visually-supported spatial reasoning with uncertainty, 16(2), 154-172.
51. Gagnon, K.T.\*, Cashdan, E., Stefanucci, J. K., & Creem-Regehr, S. H. (2016). Sex differences in exploration and the relationship to harm avoidance. *Human Nature*, 27(1), 82-97.
50. Jun, E.\*, Stefanucci, J. K., Creem-Regehr, S. H., Geuss, M. N., & Thompson, W. B. (2015). Big Foot: Using the size of a virtual foot to scale gap width. *ACM Transactions on Applied Perception*, 12(4), Article 16. DOI=<http://dx.doi.org/10.1145/2811266>
49. Gagnon, K. T.\*, Geuss, M. N.\*, Stefanucci, J. K., Baucom, B., & Creem-Regehr, S. H. (2015). The influence of body size and social context on action judgments for self and others. *Journal of Experimental Psychology: Human Perception and Performance*, 41, 1385-1395.
48. Geuss, M. N., Stefanucci, J. K., Creem-Regehr, S. H., Thompson, W. B., & Mohler, B. J. (2015). Effect of display technology on perceived scale of space. *Human Factors*, 57, 1235-1247.
47. Stefanucci, J. K., Creem-Regehr, S. H., Thompson, W. B., Lessard, D. A.\* , Geuss, M. N. (2015). Evaluating the accuracy of size perception on screen-based displays: Displayed objects appear smaller than real objects. *Journal of Experimental Psychology: Applied*, 21(3), 215-223.
46. Kunz, B. R., Creem-Regehr, S. H., & Thompson, W. B. (2015). Evidence for visual-motor recalibration as a mechanism for improved distance judgments in virtual environments. *Perception*, 44, 446-453.

45. Rand, K. M.\* , Creem-Regehr, S. H., & Thompson, W. B. (2015). Spatial learning while navigating with severely degraded vision: The role of attention and mobility monitoring. *Journal of Experimental Psychology: Human Perception and Performance*, *41*, 649-664.
44. Padilla, L. M.\* , Hansen, G.\* , Ruginski, I. T.\* , Kramer, H. S.\* , Thompson, W. B., & Creem-Regehr, S. H. (2015). The influence of different graphical displays on non-expert decision making under uncertainty. *Journal of Experimental Psychology: Applied*, *21*, 37-46.
43. Creem-Regehr, S. H., Payne, B.\* , & Rand, K. M.\* & Hansen, G.\* (2014). Scaling space with the mirror illusion: The influence of body plasticity on perceived affordances. *Psychonomic Bulletin & Review*, *21* (2), 398-405.
42. Creem-Regehr, S. H., Gagnon, K. T.\* , Geuss, M. N.\* , & Stefanucci, J. K. (2013). Relating spatial perspective taking to the perception of others' affordances: Providing a foundation for predicting the future behavior of others. *Frontiers in Human Neuroscience*. 7:596. Doi: 10.3389/fnhum.2013.00596
41. Kunz, B. R.\* , Creem-Regehr, S. H., & Thompson, W. B. (2013). Does perceptual-motor calibration generalize across two forms of locomotion? Investigations of walking and wheelchairs. *PLoS One*. 8(2): e54446. doi:10.1371/journal.pone.0054446
40. Johnson, C. L., Semple, I. L.\* , Creem-Regehr, S. H. (2013). The effects of scaling cues and interactivity on a viewer's ability to estimate the size of features. *Journal of Geoscience Education*, *61*, 68-80.
39. Geuss, M.\* , Stefanucci, J. K., Creem-Regehr, S. H., & Thompson, W. B. (2012). Effect of viewing plane on perceived distances in real and virtual environments. *Journal of Experimental Psychology: Human Perception and Performance*, *38*(5), 1242-1253.
38. Ziemek, T.\* , Creem-Regehr, S.H., Thompson, W.B. & Whitaker, R. (2012). Evaluating the effectiveness of orientation indicators with an awareness of individual differences. *ACM Transactions on Applied Perception*, *9*(2):7:1-7:23.
37. Rand, K. M.\* , Tarampi, M. R.\* , Creem-Regehr, S. H. & Thompson, W. B. (2012). The influence of object ground contact on perception of distance and size under severely degraded vision. *Seeing and Perceiving*, *5*(5), 425-447.
36. Rand, K. M.\* , Tarampi, M. R.\* , Creem-Regehr, S. H., & Thompson, W. B. (2011). The importance of a visual horizon for distance judgments under severely degraded vision. *Perception*, *40*, 143-154.
35. 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.
34. Creem-Regehr, S. H. & Kunz, B. R.\* (2010). Perception and Action. *Wiley Interdisciplinary Reviews: Cognitive Science*, *1*(6), 800-810.
33. 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.
32. Tarampi, M.\* , Creem-Regehr, S.H., & Thompson, W.B. (2010). Intact spatial updating with severely degraded vision. *Attention, Perception & Psychophysics*, *72*, 23-27.
31. 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.
30. 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.

29. 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.
28. 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.
27. 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.
26. 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.
25. 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.
24. Creem-Regehr, S. H., Dilda, V.\* , Vicchirilli, 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.
23. Creem-Regehr, S. H., Neil, J. A.\* , & Yeh, H. J.\* (2007). Neural correlates of two imagined egocentric spatial transformations. *Neuroimage*, *35*, 916-927.
22. Thompson, W. B., Dilda, V.\* , & Creem-Regehr, S. H. (2007). Absolute distance perception to locations off the ground plane. *Perception*, *36*, 1559-1571.
21. 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.
20. 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.
19. 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.
18. 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.
17. 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.
16. Creem-Regehr, S. H. & Lee, J. N. (2005). Neural representations of graspable objects: Are tools special? *Cognitive Brain Research*, *22*, 457–469.
15. 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.

14. 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.
13. 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.
12. 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.
11. Creem-Regehr, S. H. (2003). Updating space during imagined self- and object-translations. *Memory & Cognition*, *31*, 941–952.
10. 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.
9. 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.
8. Creem, S. H., Wraga, M., & Proffitt, D. R. (2001). Imagining physically impossible transformations: Geometry is more important than gravity. *Cognition*, *81*, 41–64.
7. Creem, S. H., & Proffitt, D. R. (2001). Defining the cortical visual systems: What, where, and how. *Acta Psychologica*, *107*, 43–63.
6. 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.
5. Proffitt, D. R., Creem, S. H., & Zosh, W. D. (2001). Seeing mountains in molehills: Geographical slant perception. *Psychological Science*, *12*, 418–423.
4. Wraga, M., Creem, S. H., & Proffitt, D. R. (2000). Perception-action dissociations of a walkable Muller-Lyer configuration. *Psychological Science*, *11*, 239–243.
3. 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.
2. 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.
1. 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**

1. 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**

6. Creem-Regehr, S. H., Stefanucci, J. K., & Thompson, W. B. (2015). Perceiving Scale in Virtual Environments: How theory and application have mutually informed the role of body-based perception. (pp. 195-224). In B. Ross (Ed.). *The Psychology of Learning and Motivation*, Vol 63. Elsevier.

5. Wright, W. G., Creem-Regehr, S. H., Warren, W. H., Anson, E., Jeka, J., Keshner, E. A. (2014). Sensorimotor Recalibration in Virtual Environments (pp. 71-94). In P. L. Weiss, E. A. Keshner, and M. Levin, (Eds.). *Virtual Reality for Physical and Motor Rehabilitation*. New York: Springer.
4. Kesner, R. & Creem-Regehr, S. H. (2012). Parietal contributions to spatial cognition. In D. Waller and L. Nadel (Eds.). *Handbook of Spatial Cognition*. Washington DC: APA.
3. 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.
2. 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.
1. 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, Encyclopedia Entries, and Editorials**

6. Enns, J. T., Becker, S. I., Brockmole, J., Castelhana, M., Creem-Regehr, S., Gray, R., ... & Woodman, G. (2017). Linking contemporary research to the classics: Celebrating 125 years at APA. *Journal of Experimental Psychology. Human Perception and Performance*, 43(10), 1695-1700.
5. Hamilton, A. F. C., Kessler, K., & Creem-Regehr, S. H. (2014). Perspective taking: Building a neurocognitive framework for integrating the “social” and the “spatial”. *Frontiers in Neuroscience*, 8, 403.
4. Creem-Regehr, S.H. & Myszkowski, K. (2009). Guest Editorial. *ACM Transactions on Applied Perception*, 6(3), 13: 1-2.
3. 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
2. 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.
1. 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)**

20. Salas Rosales, C. Pointon, G., Adams, H. Stefanucci, J., Creem-Regehr, S., Thompson, W. B., & Bodenheimer, B. (2019). Distance judgments to on- and off-ground objects in Augmented Reality. In *Proceedings of the 26<sup>th</sup> IEEE Conference on Virtual Reality and 3D User Interfaces*.
19. Pointon, G., Thompson, C., Creem-Regehr, S. H., Stefanucci, J., Joshi, M., Paris, R., & Bodenheimer, B. (2018). Judging action capabilities in augmented reality. In *Proceedings of the 15<sup>th</sup> ACM SIGGRAPH Symposium on Applied Perception*.
18. Ruginski, I., Stefanucci, J. K., & Creem-Regehr, S. H. (2018). State anxiety influences sex differences in survey spatial learning. In Creem-Regehr, Schoning, Klippel (Eds.) *Spatial Cognition XI. Proceedings of the 11<sup>th</sup> International Conference, Spatial Cognition 2018, Tuebingen, Germany*.



17. Bodenheimer, R. E., Creem-Regehr, S. H., Stefanucci, J. K., Shemetova, E., & Thompson, W. B. (2017). Prism Aftereffects for Throwing with a Self-Avatar in an Immersive Virtual Environment. In *Proceedings of the 24<sup>th</sup> IEEE Virtual Reality Conference, Los Angeles, CA*.
16. Creem-Regehr, S. H., Stefanucci, J.K., Thompson, W. B., Nash, N. \*, McCardell, M.\*(2015). Egocentric distance perception in the Oculus Rift (DK2). In *Proceedings of the 12<sup>th</sup> ACM SIGGRAPH Symposium on Applied Perception*.
15. Tarampi, M. R., Geuss, M. N., Stefanucci, J. K., & Creem-Regehr, S. H. (2014). A preliminary study on the role of movement imagery in spatial perception. In *Spatial Cognition IX (pp. 383-395)*. Springer International Publishing.
14. Satyavolu, S. K.\*, Creem-Regehr, S. H., Stefanucci, J. K., & Thompson, W. B. (2014). Pointing from a third person avatar location: Does dynamic feedback help? In *Proceedings of the 11<sup>th</sup> ACM SIGGRAPH Symposium on Applied Perception*.
13. Raj, M.\*, Creem-Regehr, S. H., Rand, K. M.\*, Stefanucci, J. K., & Thompson, W. B. (2012). Kinect based 3D object manipulation on a desktop display. In *Proceedings of the 9<sup>th</sup> SIGGRAPH Symposium on Applied Perception*.
12. Stefanucci, J. K., Lessard, D.\*, Geuss, M. \*, Creem-Regehr, S. H., & Thompson, W. B. (2012). Evaluating the accuracy of size perception in real and virtual environments. In *Proceedings of the 9<sup>th</sup> SIGGRAPH Symposium on Applied Perception*.
11. 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 7<sup>th</sup> SIGGRAPH Symposium on Applied Perception in Graphics and Visualization*.
10. 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 5<sup>th</sup> SIGGRAPH Symposium on Applied Perception in Graphics and Visualization*.
9. 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 5<sup>th</sup> SIGGRAPH Symposium on Applied Perception in Graphics and Visualization*.
8. Kuhl, S. A. \*, Thompson, W. B. & Creem-Regehr, S. H. (2008). HMD calibration and its effects on distance judgments. In *Proceedings of the 5<sup>th</sup> SIGGRAPH Symposium on Applied Perception in Graphics and Visualization*.
7. 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 3<sup>rd</sup> SIGGRAPH Symposium on Applied Perception in Graphics and Visualization*.
6. Kuhl, S. A. \*, Thompson, W. B. & Creem-Regehr, S. H. (2006). Minification influences spatial judgments in virtual environments. In *Proceedings of the 3<sup>rd</sup> SIGGRAPH Symposium on Applied Perception in Graphics and Visualization*.
5. 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.
4. 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 1<sup>st</sup> SIGGRAPH Symposium on Applied Perception in Graphics and Visualization*, 19–22.

3. 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 1<sup>st</sup> SIGGRAPH Symposium on Applied Perception in Graphics and Visualization*, 35–38.
2. 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.
1. 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.

### **Popular Press**

Young, E. (2018). Get lost!. *New Scientist*, 240(3208), 38-42.

### **Submitted manuscripts**

- Ruginski, I.T., Creem-Regehr, S.H., Stefanucci, J.K., Barhorst-Cates, E.M., Davis, H., Sugiyama, L.S., Herlosky, K.N., Crittenden, A.N., Kramer, K., Cashdan, E. (2019). The MRTX: A chronometric mental rotation task accessible across age and culture. *Submitted*.
- Creem-Regehr, S. H., Gill, D., Pointon, G. D., Bodenheimer, R.E., & Stefanucci, J. K.(2019) Mind the Gap: Gap Affordance Judgments of Children, Teens, and Adults in an Immersive Virtual Environment. *Submitted*.

### **In preparation**

- Barhorst-Cates, E. M., Stefanucci, J. K., & Creem-Regehr, S. H. (2019). Dance training as a method for improving spatial skills: A review.
- Barhorst-Cates, E., Meneghetti, C., & Creem-Regehr, S. H. (2019). How does home city structure influence navigation preference and performance?
- Cashdan, E., Gagnon, K.T., Stefanucci, J.K., Butner, J. & Creem-Regehr, S. H. (2019). Sex differences in navigation are predicted by range size and attitudes toward risk.
- Creem-Regehr, S. H., Rand, K. M., Tarampi, M. R., Barhorst-Cates & Legge, G. (2019). How Design of Visually Accessible Spaces (DEVA) is informed by the basic science of low vision perception and spatial cognition.
- Gagnon, K. T., Tarampi, M., & Creem-Regehr, S. H. (2019). When do agents influence spatial perspective taking?
- Schug, M., Barhorst-Cates, E.M., Stefanucci, J.K., Creem-Regehr, S.H., Olsen, A.P.L., & Cashdan, E. (2019). Childhood Navigational Experience Predicts Performance on a Spatial Task in Two Societies.
- Stefanucci, J.K., Creem-Regehr, S.H., Geuss, M.N., & Bodenheimer, R. (2019). The use of affordances in virtual reality.
- Tarampi, M. R. & Creem-Regehr, S. H. (2019). Do egocentric transformations of bodies and body-parts share embodied processing mechanisms? An individual differences approach.
- Tarampi, M. R. & Creem-Regehr, S. H. (2019). The role of spatial expertise in imagined spatial transformations of bodies and body-parts: A study of dancers.

**INVITED TALKS AND SYMPOSIA (2009-2019)**

- Creem-Regehr, S. H. (2019). *Perception of space in Augmented and Virtual Reality*. Invited keynote talk at COSIT 2019, Regensburg, Germany.
- Creem-Regehr, S. H. (2019). *Perception and Action in Virtual Spaces: When and why children and adults may differ*. Invited colloquium presented at University of Iowa.
- Creem-Regehr, S. H. (2019). *Perception of space and affordances in Augmented and Virtual Reality*. Invited talk presented at NSF Workshop on the Dynamic Interaction of Embodied Human and Machine Intelligence, University of Southern California.
- Creem-Regehr, S. H., Barhorst-Cates, E., Meneghetti, C. (2018). *How does home city structure influence navigation preference and performance?* Invited talk presented at iNAV, Montreal, Canada.
- Creem-Regehr, S. H., Stefanucci, J.K., Bodenheimer, B. (2018). *Through the children's looking glass: A comparison of children and adult perception and action in virtual environments*. Invited talk presented at Center for Vision Science symposium on AR and VR, Rochester, NY.
- Creem-Regehr, S. H. (2017). *Perceiving absolute scale: How theory and application mutually inform each other*. Panel talk presented at the 25<sup>th</sup> Conference on Object Perception and Memory, Vancouver, Canada.
- Creem-Regehr, S. H. (2016). *The influence of body size and social context on perception and action*. Invited talk presented at [Université Paris Sud, Orsay, France](#) and the [Max Planck Institute for Biological Cybernetics, Tuebingen, Germany](#).
- Creem-Regehr, S. H. (2015). *Embodiment in spatial cognition: How and why visual body representations might influence perception of the spaces around us*. Invited talk presented at [Laboratoire Psychologie de la Perception, Université Paris Descartes, Paris, France](#).
- Creem-Regehr, S. H., Padilla, L. M., Stefanucci, J. K., & Cashdan, E. (2015). *Effects of spatial abilities, cue types, and scale on spatial memory in virtual natural landscapes*. Invited talk to be presented at the International Conference on Spatial Cognition (ICSC), Rome, Italy.
- Creem-Regehr, S. H. (2014). *Embodiment in spatial cognition: How and why visual body representations might influence perception of the spaces around us*. Invited talk presented at University of Cincinnati CAP seminar series and University of Kansas Mind Lecture Series.
- Creem-Regehr, S. H., Gagnon, K. T., Tarampi, M. R., & Stefanucci, J. K. (2012, September). *The influence of spatial cues on instructed and spontaneous spatial perspective taking*. Invited talk presented at the International Conference on Spatial Cognition (ICSC), Rome, Italy.
- 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, Tubingen, 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 22<sup>nd</sup> 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.

## PROFESSIONAL ACTIVITIES

### ***Editorial Service***

#### Associate Editor

*Journal of Experimental Psychology: Human Perception and Performance*, 2014 – 2017

*Psychonomic Bulletin & Review*, Jan 2010 – Dec 2013

#### Consulting Editor

*Cognitive Research: Principles and Implications*, 2018-present

*Perspectives on Psychological Science*, 2017-present

*Journal of Experimental Psychology: Human Perception and Performance*, 2011-2013, 2017-present

*Frontiers in Cognition*, 2010-present

*Memory & Cognition*, 2009-present

#### Guest Editor

*Perspective Taking: building a neurocognitive framework for integrating the “social” and the “spatial”*, Research Topic in *Frontiers in Human Neuroscience* (2013), Topic Editor with Klaus Kessler and Antonia Hamilton

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

#### Program Co-Chair

Spatial Cognition 2018, September 2018, Tuebingen, Germany

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

#### Program Committees

ACM Symposium on Applied Perception in Graphics and Visualization (APGV and SAP), 2007-2018

#### National Science Foundation

National Science Foundation panelist, *Perception, Action, & Cognition, CISE: Cyber-Human Computing*

National Science Foundation Site Visit Team member

National Science Foundation ad hoc grant reviewer

Ad-hoc reviewer for the following journals:

*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*

**Professional Memberships**

Association for Psychological Science  
Psychonomic Society  
IEEE Computer Society  
Vision Science Society

**Departmental Service**

Associate Chair, Department of Psychology, 2018-present  
Neuroscience Liason, 2016-2018  
Director of Graduate Studies and Chair, Graduate Committee, 2011-2015  
Area Coordinator, Cognition and Neural Sciences, 2005-2011 (except 2006-2007), 2017-present  
Member, Executive Committee, 2008-2011, 2013-2015, 2016-present  
Member, Graduate Committee, 2002-2006, 2010-2015  
Member, Personnel Committee, 2007-2008  
Chair or Co-Chair, Cognition and Neural Sciences Search Committee, 2004-2005, 2008-2009, 2016-2017  
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, Taskforce on Educational Futures and Student Success, Graduate Student Success working group, 2019-present  
Member, Cognitive Neuro search committee, Dept. of Health, Kinesiology, and Recreation, 2017-present  
Member, Interdisciplinary Teaching Seed Grant review committee, 2008-2010  
Co-Organizer, Utah Functional Neuroimaging Core, 2003-2006  
Member, MEG/MSI Steering Committee, 2003-2010  
Reviewer, Graduate Research Fellowship Committee, 2003-2004, 2013  
Internal Site Reviewer, Graduate Council Review, Dept. of Physical Therapy, 2013

**COURSES TAUGHT**

Advanced Human Cognition, *graduate core course*  
Cognitive Psychology, *undergraduate lecture*  
Cognitive Neuropsychology, *graduate core course*  
CNS Approaches to Research, *graduate methods course*  
Introduction to Psychology (*perception and cognition sections*)  
Neuropsychology of Vision, *undergraduate seminar*  
Sensation and Perception, *undergraduate lecture*  
Spatial Cognition, *graduate seminar*  
Functional Neuroimaging of Cognition, *graduate seminar*  
Embodied Cognition, *graduate seminar*  
First-year practicum, *graduate seminar*

**STUDENT SUPERVISION**

**Present Advise or Co-advise**

Grant Pointon, 4<sup>th</sup> year psychology PhD student

Molly Gagnon, 2<sup>nd</sup> year psychology PhD student  
Morgan Saxon, 2<sup>nd</sup> year psychology PhD student  
Mirinda Whitaker, 1<sup>st</sup> year psychology PhD student

**Past Advise or Co-advise**

Erica Barhorst-Cates, PhD 2019

*Dissertation: Motor Dependence in Spatial Updating: Individual Differences in Age and Movement Experience*

Lace Padilla, psychology PhD 2018

*Dissertation: Visual-spatial biases in ensemble cognition*

Ian Ruginski, psychology PhD 2018

*Dissertation: Mobility for Spatial Cognition and Navigation: Establishing construct validity and testing novel model of individual differences in spatial cognition*

Kyle Gagnon, psychology PhD 2015

*Dissertation: Not all those who wander are lost: Characterizing sex differences in spatial exploration and their relationship to navigation ability*

Kristina Rand, psychology PhD 2014

*Dissertation: Spatial learning while navigating with severely degraded vision: the role of attention and risk monitoring*

Margaret Tarampi, psychology PhD 2013

*Dissertation: Use of spatial transformations and reference frames: Individual differences in spatial ability*

Benjamin Kunz, psychology PhD 2010

*Dissertation: The Influence of recalibration of locomotion on spatial orientation*

Tina Ziemek, computer science PhD 2010

*Dissertation: Evaluating the effectiveness of orientation indicators with an awareness of individual differences*

Scott Kuhl, computer science PhD 2009

*Dissertation: The effects of geometric distortions on distance judgments in virtual environments.*

Betty Mohler, computer science PhD 2007

*Dissertation: The effect of feedback within a virtual environment on human distance perception and adaptation*

Valentina Dilda, psychology PhD 2007

*Dissertation: The role of the cerebellum on motor imagery tasks involving tools*

**Postdoctoral Mentorship**

Brandon Thomas, 2016-2018

**Select Graduate Student Committee Participation**

Erica Barhorst-Cates (psychology)

Maryam Bijanzedah (neuroscience)

James Coleman (psychology)

Joel Cooper (psychology)

Daniel Epstein (neuroscience)

Fred Federer (neuroscience)

Kyle Gagnon (psychology)

Michael Geuss (psychology)

Devin Gill (psychology)

Heidi Kramer (psychology)

Ben Kunz (psychology)  
Ann Lambert (psychology)  
David Lessard (psychology)  
Nate Madeiros-Ward (psychology)  
Andrea Morris (psychology)  
Lace Padilla (psychology)  
Grant Pointon (psychology)  
Sam Quinan (computer science)  
Kristina Rand (psychology)  
Ian Ruginski (psychology)  
Kaushik Sayovolu (computer science)  
Janelle Seegmiller (psychology)  
Ian Semple, (geology)  
Shushruth (neuroscience)  
Margaret Tarampi (psychology)  
Christy Weeden (psychology)  
Jeff Yarch (neuroscience)  
Tina Ziemek (computer science)

***Recent Undergraduate Research Supervision***

Daniel Smith, Senior Thesis 2008-2009  
Eduardo Rubio, SROP 2009  
Brook Shell, Senior Thesis 2009-2010  
Alda Rivas, Bioscience Summer Undergraduate 2010  
Brandon Payne, Senior Thesis 2011-2012  
Piper Meisinger, Honors Thesis 2015-2017  
Kimberly Sholler, Human Factors 2016-2017  
Madalyn Dailey, Human Factors 2016-2017  
Mark Lee, Human Factors 2016-2017  
Jeremy Donaldson, Human Factors 2017-2018  
Serena Yang, UROP, Human Factors 2018-2019  
Bradley Keyes, Human Factors, 2018-2019  
Jessica Stoker, UROP, 2018-2019

**CONFERENCE PRESENTATIONS AND ABSTRACTS**

Barhorst-Cates, E.M., Creem-Regehr, S.H., Stefanucci, J. K. (2019). Developmental differences in optimal locomotion methods for spatial updating in virtual reality. Talk to be presented at Neuroscience 2019, Chicago, IL.

Grant Pointon, Carlos Salas, Haley Adams, Sarah Creem-Regehr, Jeanine Stefanucci, Bobby Bodenheimer, William B Thompson (2019). Perceived distance to augmented reality images is influenced by ground-contact, Talk presented at Vision Sciences Society Annual Meeting. Journal of Vision.

Holly C Gagnon, Erica M. Barhorst-Cates, Sarah H. Creem-Regehr (2019). Effects of degraded vision on the use of landmarks in spatial learning. Talk presented at Vision Sciences Society Annual Meeting. Journal of Vision.

Morgan A Saxon, Brandon J Thomas, Jeanine K Stefanucci, Sarah H Creem-Regehr (2019). Does Avatar Presence Facilitate Affordance Judgments from Different Perspectives? Talk presented at Vision Sciences Society Annual Meeting. Journal of Vision.

- Pointon, G., Thompson, C., Creem-Regehr, S. H., Stefanucci, J.K., Joshi, M., Paris, R., Bodenheimer, B. (2018, November). Investigating space perception with affordance judgments in augmented reality. Poster presented at the *58<sup>th</sup> Annual Meeting of the Psychonomics Society, New Orleans, LA*.
- Barhorst-Cates, E.M., Creem-Regehr, S.H., & Stefanucci, J.K. (2018, November). Real and imagined spatial updating in dancers and non-dancers. Poster presented at the *58<sup>th</sup> Annual Meeting of the Psychonomics Society, New Orleans, LA*.
- Gill, D., Geuss, M., Creem-Regehr, S.H., Stefanucci, J.K. (2018, September). Visualization of sociocultural data: Opportunities and challenges with 3D Immersive Virtual Reality. Talk presented at the *SC2018 Workshop: Virtual Environments as Geospatial Labs*. Tuebingen, Germany.
- Creem-Regehr, S. H., Stefanucci, J.K., Bodenheimer, B. (2018, September). How Augmented Reality can change research in spatial cognition. Talk presented at *the SC2018 Workshop: Virtual Environments as Geospatial Labs*. Tuebingen, Germany.
- Padilla, L.M., Castro, S., Ruginski, I., Quinan, P.S. & Creem-Regehr, S. H. (2018, September). Evaluating Working Memory Demands in Visualization Decision Making. Poster presented at *Spatial Cognition 2018*, Tuebingen, Germany.
- Barhorst-Cates, E.M., Wright, C., Creem-Regehr, S. H., Stefanucci, J.K., & Cashdan, E. (2018, September). Movement and art experience, spatial abilities, and familiar environment representations in 9-10 year olds. Poster presented at *Spatial Cognition 2018*, Tuebingen, Germany.
- Barhorst-Cates, E.M., Meneghetti, C., & Creem-Regehr, S. H. (2018, September). Individual differences in navigation style: Effects of home environment structure. Talk presented at *the International Conference on Spatial Cognition, Rome, Italy*.
- Nicora, G., Alonso, D., Rand, K., Creem-Regehr, S., & Drew, T. (2018). Exploring the utility of incidental fixations in dynamic real-world visual search through mobile eye tracking. *Journal of Vision*, *18*(10), 650-650.
- Ruginski, I. T., Barhorst-Cates, E., Cashdan, E., Creem-Regehr, S. H. & Stefanucci, J. K. (2017, November). Mobility for Spatial Cognition and Navigation: Developing and Validating a Self-Report Scale to Characterize Travel Patterns. Poster presented at the *57<sup>th</sup> Annual Meeting of the Psychonomics Society, Vancouver, Canada*.
- Gill, D. M., Pointon, G., Creem-Regehr, S. H. & Stefanucci, J. K. (2017, November). A Comparison of Children's and Adults' Judgments of Action Capabilities in Virtual Environments. Poster presented at the *57<sup>th</sup> Annual Meeting of the Psychonomics Society, Vancouver, Canada*
- Pointon, G., Creem-Regehr, S. H. & Stefanucci, J. K. (2017, November). Actor Specific Kinematics and Affordance Judgments for Others. Poster presented at the *57<sup>th</sup> Annual Meeting of the Psychonomics Society, Vancouver, Canada*
- Padilla, L., Ruginski, I. T., Creem-Regehr, S. H., Liu, Le, House, D. H., & Thompson, W. B. (2017, November). Exploring Decision Biases With Ensemble Display Visualizations. Poster presented at the *57<sup>th</sup> Annual Meeting of the Psychonomics Society, Vancouver, Canada*.
- Barhorst-Cates, E., Wright, C., Stefanucci, J. K. , Creem-Regehr, S. H. & Cashdan, E. (2017, November). Examining the Impact of Dance Training on Spatial Abilities in 9-10 Year Olds. Poster presented at the *57<sup>th</sup> Annual Meeting of the Psychonomics Society, Vancouver, Canada*.
- Barhorst-Cates, E., Padilla, L., Schug, M., Creem-Regehr, S. H. & Cashdan, E. , & Stefanucci, J. K. (2017, April). Navigation and Mental Rotation: Examining Effects of Childhood and Life-Long Mobility



- Experience in the U.S. and Faroe Islands. Talk presented at the Rocky Mountain Psychological Association, Salt Lake City, UT.
- Dixon, S., Pointon, G., Padilla, L., Stefanucci, J. K., Creem-Regehr, S. H., Johnstone, A. (2017, April). Development of a New Gaming Questionnaire to Assess the Influence of Game Genre on Spatial Cognitive Abilities in Males and Females. Poster presented at the Rocky Mountain Psychological Association, Salt Lake City, UT.
- Meisinger, P. M., Barhorst-Cates, E., & Creem-Regehr, S. H. (2017, April). How Teaching Egocentric and Allocentric Learning Strategies Affect Spatial Learning. Poster presented at the Rocky Mountain Psychological Association, Salt Lake City, UT.
- Stefanucci, J. K., Creem-Regehr, S. H., & Cashdan, E. A. (2017, March). *Mobility contributes to sex differences in spatial cognition and navigation*. Poster presented at the 2017 International Conference on Psychological Science, Vienna, Austria.
- Geuss, M. N., Creem-Regehr, S. H., & Mohler, B. J. (2016, November). Judging affordances from other viewpoints: A role of perspective taking? Talk presented at the 56<sup>th</sup> Annual Meeting of the Psychonomics Society, Boston, MA.
- Dixon, L., Padilla, L. M., Stefanucci, J. K., Creem-Regehr, S. H., & Johnstone, A. H. (2016, November). Relating video gaming and spatial cognition in women. Poster presented at the 56<sup>th</sup> Annual Meeting of the Psychonomics Society, Boston, MA.
- Meisinger, E., Barhorst-Cates, E. M., & Creem-Regehr, S. H. (2016, November). Search strategies during small-scale spatial layout learning with restricted peripheral field. Poster presented at the 56<sup>th</sup> Annual Meeting of the Psychonomics Society, Boston, MA.
- Creem-Regehr, S. H., Barhorst, E.M., Rand, K.M., & Thompson, W.B. (2016, June). When and why does restricted peripheral field affect spatial learning during navigation? Talk presented at the *European Workshop on Imagery and Cognition (EWIC2016)*, Paris, France.
- Barhorst, E.M., Rand, K.M., & Creem-Regehr, S. H. (2016, May). Navigation and spatial memory for older adults with simulated low vision. Poster presented at the 16<sup>th</sup> Annual Meeting of the Vision Sciences Society Meeting, St. Pete Beach, Florida.
- Rand, K. M., Barhorst, E.M. & Thompson, W. B., Creem-Regehr, S. H., (2016, April). Generalizing effects of types of low vision and age on spatial learning while navigating. Talk presented at the *International Meeting of the Psychonomic Society*, Granada, Spain.
- Barhorst, E. M., Rand, K. M., & Creem-Regehr, S. H. (2016, April). Does slower walking speed reduce cognitive load while navigating? Poster presented at the *International Meeting of the Psychonomic Society*, Granada, Spain.
- Padilla, L., Bergmann, T., & Creem-Regehr (2016, April). Uncertainty in weather forecasting phrasing. Poster presented at the *International Meeting of the Psychonomic Society*, Granada, Spain.
- Ruginski, I., Stefanucci, J. K., Creem-Regehr, S. H. (2015, November). The effect of anxiety on gender differences in survey spatial learning. Talk presented at the 55<sup>th</sup> Annual Meeting of the Psychonomics Society, Chicago, IL.
- Padilla, L., Creem-Regehr, S. H., Stefanucci, J. K., & Cashdan, E. (2015, November). Influence of instructions on female performance on a virtual Morris water maze. Poster presented at the 55<sup>th</sup> Annual Meeting of the Psychonomics Society, Chicago, IL.

- Rand, K. M., Barhorst, E. M., Thompspon, W. B., & Creem-Regehr, S. H. (2015, November). Estimates of distance traveled while walking with normal compared to degraded vision. Poster presented at the *55<sup>th</sup> Annual Meeting of the Psychonomics Society, Chicago, IL*.
- Barhorst, E. M., Rand, K. M., Thompson, W. B., & Creem-Regehr, S. H. (2015, November). The effects of restricted peripheral field on spatial learning while navigating. Poster presented at the *55<sup>th</sup> Annual Meeting of the Psychonomics Society, Chicago, IL*.
- Padilla, L., Creem-Regehr, S. H., Stefanucci, J.K., & Cashdan, E. (2015, July). Sex Differences in Virtual Navigation Influenced by Scale, Visual Cue-Types, Spatial Memory and Lifetime Mobility. Poster presented at CogSci 2015, Pasadena, CA.
- Ruginski et al. (2015, July). Understanding the Cone of Uncertainty: Non-expert interpretations of hurricane forecast uncertainty visualizations. Poster presented at CogSci 2015, Pasadena, CA.
- Gill, D., Stefanucci, J. K., Creem-Regehr, S. H., & Cashdan, E. (2015, July). The effects of spatial anxiety on memory for spatio-temporal scale. Poster presented at CogSci 2015, Pasadena, CA.
- Barhorst, E. M., Rand, K. M., Thompson, W. B., & Creem-Regehr, S. H. (2015, April). The effects of restricted field of view on spatial learning while navigating. Talk presented at the Rocky Mountain APA meeting, Boise, ID.
- Schug, M., Stefanucci, J. K., Creem-Regehr, S. H., & Cashdan, E. (2015, March). Wayfinding anxiety and childhood experience. *Poster presented at the Meeting of the Society for Research in Child Development, Philadelphia, PA*.
- Gagnon, K., Stefanucci, J.K., Creem-Regehr, S. H., & Cashdan, E. (2014, November). Characterizing Exploration Behavior in a Large-Scale Desktop Virtual Environment. *Poster at the 54<sup>th</sup> Annual Meeting of the Psychonomics Society, Long Beach, CA*.
- Padilla, L., Creem-Regehr, S. H., Stefanucci, J.K., & Cashdan, E. (2014, November). Effects of Scale on Sex Differences in a Virtual Water Maze. *Poster at the 54<sup>th</sup> Annual Meeting of the Psychonomics Society, Long Beach, CA*.
- Gagnon, K., Stefanucci, J.K., Creem-Regehr, S. H., & Cashdan, E. (2014, July). Sex Differences in Exploration and the Relationship to Harm Avoidance. *Poster presented at the 26<sup>th</sup> Annual Human Behavior and Evolution Society Conference, Natal, Brazil*.
- Rand, K. M., Thompson, W. B. & Creem-Regehr, S. H. (2013, November). Navigation With Severely Degraded Vision Requires Increased Attentional Demands: A Mobility-Related Safety Account. *Poster presented at the 53<sup>rd</sup> Annual Meeting of the Psychonomics Society, Toronto, Canada*.
- Tarampi, M. R. & Creem-Regehr, S. H. (2013, November). Spatial Transformations as a Function of Spatial Ability and Expertise. *Poster presented at the 53<sup>rd</sup> Annual Meeting of the Psychonomics Society, Toronto, Canada*.
- Gagnon, K., Geuss, M. N., Stefanucci, J. K., Creem-Regehr, S. H. (2013, November). The Influence of Body Size and Social Context on Action Judgments for Self and Others. *Talk presented at the 53<sup>rd</sup> Annual Meeting of the Psychonomics Society, Toronto, Canada*.
- Creem-Regehr, S. H., Gagnon, K.\* & Tarampi, M.\*(2012, November). When do agents influence spatial perspective taking? *Talk presented at the 53<sup>rd</sup> Annual Meeting of the Psychonomics Society, Minneapolis, MN*.
- Rand, K.\*, Creem-Regehr, S. H., & Thompson, W. B. (2012, November). Degraded viewing during navigation of novel paths impairs global spatial representation. *Poster presented at the 53<sup>rd</sup> Annual Meeting of the Psychonomics Society, Minneapolis, MN*.

- Rand, K. M.\* , Bakdash, J., Stefanucci, J. K., Creem-Regehr, S. H., & Gustafson, W. (2012). Perceptual dependence of size and distance? A within subjects variability approach. *Poster presented at the 12<sup>th</sup> Annual Meeting of the Vision Sciences Society, Naples, FL.*
- Geuss, M. N.\* , Lessard, D. A., Stefanucci, J. K., Creem-Regehr, S. H. & Thompson, W. B. (2012). A comparison of size perception in real and virtual environments using judgments of action capability. *Poster presented at the 12<sup>th</sup> Annual Meeting of the Vision Sciences Society, Naples, FL.*
- Lessard, D. A.\* , Creem-Regehr, S. H., & Stefanucci, J. K. (2012). Effects of environment constraints and judgments about action on distance judgments. *Poster presented at the 12<sup>th</sup> Annual Meeting of the Vision Sciences Society, Naples, FL.*
- Tarampi, M.\* , Creem-Regehr, S. H., Bakdash, J., & Thompson, W. B. (2011). *Translational spatial updating of multiple targets under normal and severely degraded vision.* Poster presented at the 52<sup>nd</sup> Annual Meeting of the Psychonomic Society, Seattle, WA.
- 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 presented at the 11<sup>th</sup> 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 presented at the 11<sup>th</sup> 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 presented at the 11<sup>th</sup> 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 presented at the 11<sup>th</sup> 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 51<sup>th</sup> 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 10<sup>th</sup> 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 10<sup>th</sup> 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 10<sup>th</sup> 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 50<sup>th</sup> 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 9<sup>th</sup> 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 9<sup>th</sup> 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 49<sup>th</sup> 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 8<sup>th</sup> 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 8<sup>th</sup> 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 8<sup>th</sup> 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 8<sup>th</sup> 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 7<sup>th</sup> 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 7<sup>th</sup> 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 6<sup>th</sup> 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 6<sup>th</sup> 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 6<sup>th</sup> 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 6<sup>th</sup> 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 13<sup>th</sup> 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 5<sup>th</sup> 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 5<sup>th</sup> 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 5<sup>th</sup> 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 5<sup>th</sup> 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 12<sup>th</sup> 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 12<sup>th</sup> 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 45<sup>th</sup> 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 1<sup>st</sup> 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 11<sup>th</sup> 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 15<sup>th</sup> 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 10<sup>th</sup> 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 43<sup>rd</sup> 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 42<sup>nd</sup> 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 41<sup>st</sup> 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 6<sup>th</sup> 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 7<sup>th</sup> 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 40<sup>th</sup> 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 3<sup>rd</sup> 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 5<sup>th</sup> 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 39<sup>th</sup> 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 37<sup>th</sup> Meeting of the Psychonomic Society, Chicago, IL.