

Lace M.K. Padilla

University of Utah
Department of Psychology
Cognitive Neuroscience
Salt Lake City, UT 84102

Phone: (719) 239-4173
Email: lace.m.k.padilla@gmail.com
Homepage: <http://www.LacePadilla.com/>

Education

Ph.D. in Psychology, Cognitive Neuroscience area, In process | University of Utah, Salt Lake City, UT.
Master of Science | University of Utah, Salt Lake City, UT. 2015
2015 Summer Institute in Cognitive Neuroscience, UCSB, CA. 2015
International Spatial Cognition Summer Institute, UCSB, CA. 2013
Master of Fine Art | University of Utah, Salt Lake City, UT. 2013
Bachelor of Fine Art | Pacific Northwest College of Art, Portland, OR. 2009

Academic Positions

Vice President, Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS), University of Utah Chapter 2017 - 2018
NSF STEM Ambassador, Award 1514494, 2017 - 2018
Research Advisory Board, Art Beyond Sight, New York, 2014 - Ongoing
Adjunct Professor, University of Utah, Technology Education, 2011 - 2015
Adjunct Professor, Stevens-Henager College, Graphic Design, 2012 - 2013
Adjunct Professor, Provo College, Web Development, 2010 - 2012
Adjunct Professor, Eagle Gate College, Web Development, 2010 - 2012

Industry Positions

Web Developer | Media Forge, Salt Lake City, UT. 2011 - 2012
Lead Graphic Designer | Salty Peaks, Salt Lake City, UT. 2011 - 2010
Front-end Coder | Dealer Spike, Portland, OR. 2009 - 2010
Web Designer and Product Designer | Pow Gloves, Seattle WA. 2006 - 2009

Diversity Awards

ETS Summer Pre-Doctoral Research Internship, Princeton: \$7,000 2017
Carl Storm Underrepresented Minority Fellowship, Visualization in Science & Education: \$600, 2017
Diversity in Advising ASUU Award, University of Utah: \$800, 2016
Martin Harris Hiatt Memorial Graduate Fellowship, For Underrepresented Populations: \$6,750, 2014
Clayton Award For Excellence In Research with Underrepresented Populations: \$2,000, 2014

Academic Honors & Awards

University of Utah Psychology All-Around Commendation (research, mentorship, and service) \$500, 2017
University of Utah Graduate Research Fellowship: \$24,000, 2017-2018
Martin Harris Hiatt Memorial Graduate Fellowship, For Excellence in Research: \$6,750, 2017
Gordon Conference on Visualization in Science and Education travel award: \$845, 2017
Best Poster Award, CSBS Research Day: \$500, 2017
University of Utah Psychology Professional Development Award: \$500, 2016
Graduate Travel Award, University of Utah: \$800, 2016
Summer Institute in Cognitive Neuroscience Fellowship: \$1,200, 2015
University of Utah Psychology Commendation in Research, 2015

Graduate Travel Award, University of Utah: \$800, 2015
 Graduate Travel Award, University of Utah: \$800, 2014
 Computing Community Consortium (CCC) Travel Award: \$1,500, 2014
 Graduate Travel Award, University of Utah: \$800, 2013
 Teaching Assistant Scholarship, Art and Art History Department University of Utah: \$9,620, 2011
 Multimedia Merit Grant, Pacific Northwest College of Art, OR: \$4,000, 2004

Peer reviewed articles

1. **Padilla, L.**, Ruginski, I. T., & Creem-Regehr, S. H. (in press). Effects of ensemble and summary displays on interpretations of geospatial uncertainty data. *Cognitive Research: Principles and Implications*.
2. Liu, L., Boone, A. P., Ruginski, I. T., **Padilla, Lace**, Hegarty, M., Creem-Regehr, S. H., ... House, D. H. (2017). Uncertainty visualization by representative sampling from prediction ensembles. *IEEE transactions on visualization and computer graphics*, 23(9), 2165–2178.
3. **Padilla, Lace M.**, Creem-Regehr, S. H., Stefanucci, J. K., & Cashdan, E. A. (2017). Sex differences in virtual navigation influenced by scale and navigation experience. *Psychonomic bulletin & review*, 24(2), 582–590.
4. **Padilla, Lace**, 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.
5. Cashdan, E., Kramer, K. L., Davis, H. E., **Padilla, L.**, & Greaves, R. D. (2016). Mobility and navigation among the yucatec maya. *Human Nature*, 27(1), 35–50.
6. Ruginski, I. T., Boone, A. P., **Padilla, Lace M.**, Liu, L., Heydari, N., Kramer, H. S., ... Creem-Regehr, S. H. (2016). Non-expert interpretations of hurricane forecast uncertainty visualizations. *Spatial Cognition & Computation*, 16(2), 154–172.
7. Vashro, L., **Padilla, Lace**, & Cashdan, E. (2016). Sex differences in mobility and spatial cognition. *Human Nature*, 27(1), 16–34.
8. **Padilla, Lace M.**, Hansen, G., Ruginski, I. T., Kramer, H. S., Thompson, W. B., & Creem-Regehr, S. H. (2015). The influence of different graphical displays on nonexpert decision making under uncertainty. *Journal of Experimental Psychology: Applied*, 21(1), 37.

Manuscripts in Preparation

1. **Padilla, L.**, Creem-Regehr, S. H., Hegarty, M., Stefanucci, J. K., & Drews, F. A. (2017). Visual decision making selective review.
2. Quinan, S., **Padilla, L.**, Creem-Regehr, S., & Meyer, M. (2017). Predicting rainbow color map perceptual categories.

Other Publications

1. **Padilla, L.** (2016). Sex differences in virtual navigation influenced by visual factors and individual differences. *ProQuest Dissertations Theses Global*.
2. Quinan, S., **Padilla, L.**, Creem-Regehr, S., & Meyer, M. (2015). Towards ecological validity in evaluating uncertainty. *Proceedings of Workshop on Visualization for Decision Making Under Uncertainty, at VIS '15*.
3. **Padilla, L.** (2013). The art of maps. *Western Humanities Review*, 67(1), 18.

Talks

1. **Padilla, L.** (2017b, April). Visualization decision making for ux designers. Adobe Systems. Lehi, UT.
2. Bartholomew, B., **Padilla, L.**, & Cashdan, E. (2016, April). Mobility, risk-preference, and genetics. Undergraduate research symposium. Salt Lake City, UT.

3. Dixon, L., **Padilla, L.**, Stefanucci, J., Johnstone, A., Creem-Regehr, S., & Cashdan, E. (2016b, April). A comparison of female gamers and non-gamers on spatial cognitive abilities. Undergraduate research symposium. Salt Lake City, UT.
4. **Padilla, L. M.**, Quinan, P. S., Meyer, M., & Creem-Regehr, S. (2016, April). Evaluating the Impact of Binning 2d Scalar Fields. Scientific Computing and Imaging Institute Visualization Group Meeting. Salt Lake City, UT.
5. **Padilla, L.**, Quinan, S., Meyer, M., & Creem-Regehr, S. (2016, October). Evaluating the impact of binning 2d scalar fields. IEEE InfoVis. Washington, DC.
6. Cashdan, E., Barhorst, E., **Padilla, L. M.**, Stefanucci, J., & Creem-Regehr, S. (2015, May). Sex differences in range size: When is travel worth the risk? Human Behavior and Evolution Society annual meeting. Columbia.
7. Creem-Regehr, S., **Padilla, L.**, Stefanucci, J., & Cashdan, E. (2015, September). Effects of Spatial Abilities, Cue-Types, and Scale on Spatial Memory in Virtual Natural Landscape. 6th International Conference on Spatial Cognition. Rome, ITA.
8. Quinan, P. S., **Padilla, L. M.**, Creem-Regehr, S., & Meyer, M. (2015, October). Towards Ecological Validity in Evaluating Uncertainty. Workshop on Visualization for Decision Making Under Uncertainty, VIS '15. Chicago, IL.
9. Ruginski, I., Boone, A., **Padilla, L. M.**, Kramer, H., Hegarty, M., Thompson, W., ... Creem-Regehr, S. (2015, April). Non-expert interpretations of hurricane forecast uncertainty visualizations. Annual Meeting of the Rocky Mountain Psychological Association. Boise, Idaho.
10. **Padilla, L.** (2014, October). Uncertainty computation workshop. Computing Community Consortium (CCC). Baltimore, MD.

Diversity Outreach Talks

1. **Padilla, L.** (2017a, April). The art of science. Latinos in Action | Youth Leadership Conferences. Salt Lake City, UT.
2. **Padilla, L. M.** (2014, March). Spatial Abilities Training for Girls. Expanding Your Horizons Conference. Orem, UT.

Poster Presentations

1. Barhorst-Cates, E., Schug, M., **Padilla, L.**, Creem-Regehr, S., Stefanucci, J., & Cashdan, E. (2017, April). Navigation and mental rotation: examining effects of childhood and life-long mobility experience in the u.s. and faroe islands. rocky mountain psychological association. Salt Lake City, UT.
2. Dixon, L., Pointon, G., **Padilla, L.**, Stefanucci, J., Creem-Regehr, S., & 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. rocky mountain psychological association. Salt Lake City, UT.
3. **Padilla, L.**, Creem-Regehr, S., Stefanucci, J., Drews, F., & Hegarty, M. (2017, August). Decision making with visualizations: a selective review. Visualization in Science Education. Lewiston, ME.
4. **Padilla, L.** and Ruginski, I. & Creem-Regehr, S. (2017, November). Exploring decision biases with ensemble display visualizations. Poster Presentation. Annual Meeting - Psychonomic Society. Vancouver, BC.
5. Creem-Regehr, S., **Padilla, L.**, Stefanucci, J., & Cashdan, E. (2016, August). The influence of realistic textures and shading on mental rotation of 3d objects. Poster Presentation. Spatial Cognition 2016. Philadelphia, PA.
6. Dixon, L., **Padilla, L.**, Stefanucci, J., Creem-Regehr, S., & Johnstone, A. (2016, November). Relating video gaming and spatial cognition in women. Poster Presentation. Psychonomic Society. Boston, MA.

7. Dixon, L., **Padilla, L.**, Stefanucci, J., Johnstone, A., Creem-Regehr, S., & Cashdan, E. (2016a, May). A comparison of female gamers and non-gamers on spatial cognitive abilities. College of Social & Behavioral Science Student Research Day 2016. Salt Lake City, UT.
8. **Padilla, L.**, Bergmann, T., & Creem-Regehr, S. (2016, May). Uncertainty in Weather Forecast Phrasing. International Meeting of the Psychonomics Society. Granda, Spain.
9. **Padilla, L.**, Ruginski, I., & Creem-Regehr, S. (2016, August). Interpretations of ensemble versus summary displays of uncertainty in hurricane forecasts: size and intensity judgments. Poster Presentation. Spatial Cognition 2016. Philadelphia, PA.
10. Ruginski, I., Gill, D., **Padilla, L.**, & Cashdan, E. (2016a, April). The effects of sex and parenthood on perceived distances to objects. Poster Presentation. CSBS Research Day. Salt Lake City, UT.
11. Ruginski, I., Gill, D., **Padilla, L.**, & Cashdan, E. (2016b, November). The effects of sex and parenthood on perceived distances to objects. Poster Presentation. Psychonomic Society. Boston, MA.
12. **Padilla, L.**, Creem-Regehr, S., Stefanucci, J., & Cashdan, E. (2015, November). Influence of instructions on female performance on a virtual Morris Water Maze. Poster Presentation. Psychonomics 2015. Philadelphia, PA.
13. **Padilla, L.**, Creem-Regehr, S., Stefanucci, J., & Cashdan, E. (2015, April). Effects of spatial abilities cue types, and scale on spatial memory in virtual natural landscape. Long Beach, CA.
14. **Padilla, L.**, Stefanucci, J., & Cashdan, E. (2015, July). Sex Differences in Virtual Navigation Influenced by Scale, Visual Cue-Types, Spatial Memory and Lifetime Mobility. Annual Conference of the Cognitive Science Society. Long Beach, CA.
15. Ruginski, I., Boone, A., **Padilla, L.**, Kramer, H., Hegarty, M., Thompson, W., ... Creem-Regehr, S. (2015, July). Understanding the Cone of Uncertainty: Non-expert interpretations of hurricane forecast uncertainty visualizations. Annual Conference of the Cognitive Science Society. Pasadena, CA.
16. **Padilla, L.** (2014, November). Enhancing Your Spatial Abilities and Performance in STEM. Orem, UT.
17. **Padilla, L.**, Creem-Regehr, S., & Thompson, W. (2013a, June). Uncertainty Cognition of Glyphs. Poster Presentation. Center for Spatial Studies. Santa Barbra, CA.
18. **Padilla, L.**, Creem-Regehr, S., & Thompson, W. (2013b, August). Understanding Uncertainty Visualizations. Poster Presentation. International Spatial Cognition Summer Institute. Santa Barbra, CA.

Teaching Experience in Psychology

Guest Lecturer:

Orientation to Psychology as a Science and Profession, University of Utah, *October 2016*

Sensation and Perception, University of Utah, *January 2015*

Sensation and Perception, University of Utah, *November 2014*

Explorations through Psychology and the Arts, University of Utah, *March 2013*

Teaching Experience in Graphic Design

Courses Developed:

Content Management Systems, University of Utah

Digital Photography, Steven Henager College

Design Studio, Provo College

Marketing and Branding for Designers, Provo College

Web Design 1 and 2, Provo College

Typography, Provo College

Courses Taught:

Over 15 courses at four universities over a six year period

Mentorship

Reuben Ryan Cano. SACNAS Kaplan Scholarship \$2,299, 2017.

Brianna Bartholomew. The Undergraduate Research Opportunities Program Award \$1,200, 2016.

Dixon Lanie. The Undergraduate Research Opportunities Program Award \$1,200, 2016.

Professional Activity

- Vice President, SACNAS University of Utah Chapter 2017 - *On going*
- Founder: University of Utah Diversity Scholars Award, 2017 - *On going*
- The National Science Foundation 2017/2018 STEM Ambassador 2017 - 2018
- Women Tech Council, Member 2017 - *On going*
- Founder and President: University of Utah Diversity Graduate School Application Advisory, 2016 - *On going*
- Outreach Coordinator: Utah Women and Education Initiative, 2014 - *On going*
- Conference Workshop Leader: Expanding Your Horizons, Inspiring 6th - 10th grade girls to love STEM!, Women's Success Center, 2014
- Volunteer Conference Workshop Leader: Empowering Your Tomorrow, The Equity in Education Center at Utah Valley University, 2014
- AWIS (Association for Women in the Sciences) active member, Utah Chapter, 2013 - *On going*
- Editorial services: Peters CRC Press Computer Graphics, Vision and Visualization, 2013
- Golden Key International Honor Society | University of Utah Chapter, 2010 - *On going*

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