Ryan Vance Ringer, Ph.D.

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EDUCATION

Kansas State University (KSU), Manhattan, KS   Fall 2018
Doctor of Philosophy in Psychological Sciences
Dissertation Title: The Spatiotemporal Dynamics of Attention During Real-World Event Perception
Advisor: Dr. Lester Loschky

Kansas State University (KSU), Manhattan, KS   Spring, 2016
Master of Science in Psychological Sciences
Thesis Title: Impairing the Useful Field of View in Natural Scenes: Tunnel Vision versus General Interference
Advisor: Dr. Lester Loschky

Kansas State University, Manhattan, KS   Spring 2010
Bachelor of Science in Psychology

RELEVANT QUALIFICATIONS

- Firm understanding of experimental design with ten years of experience in eye-tracking research.
- Extensive experience with linear, generalized linear, and Bayesian mixed modeling using R, with additional experience in MatLab, Python, JMP, and SPSS.
- Strong presentation and technical writing skills.

EMPLOYMENT EXPERIENCE

Department of Psychology, University of Colorado, Denver   Summer 2021 – Present
- Leading research on NEI-funded grant on individual differences in visual perception and attention.
- Mentoring training undergraduate lab assistants.
- Disseminating research findings through conference presentations and publications.

Department of Psychology, Wichita State University   Fall 2018 - Fall 2020
Postdoctoral Fellow
- Guided development, implementation, and analysis of longitudinal experiments with older adults.
- Conducted pilot EEG experiments to study ERD and ERS during real-world event perception.
- Mentored graduate students with experiment design and perceptual and cognitive theory.
- Founded Cognitive Human Factors Reading and Discussion group.
- Conducted summer workshops on basic and advanced techniques in R.

Student Access Center, KSU, Manhattan, KS   Fall 2017 - Spring 2018
Graduate Assistant
- Worked with disabled students and faculty to ensure access to their classes and course materials
- Created databases for monitoring efficacy of students' academic accommodations
- Created reports and presented data used to assess disabled students' accommodation outcomes
- Transcribed and reorganized lecture and reading materials for visually impaired students

Department of Psychological Sciences, KSU, Manhattan, KS   Fall 2015 - Spring 2017
Graduate Teaching Assistant
- Courses:
  - Childhood and Developmental Psychology (Fall 2015)
  - Fundamentals of Perception and Sensation (Spring, 2016)
  - Principles of Learning (Spring, 2016)
  - Drugs and Behavior (Fall, 2016)
  - Psychology of Aging (Fall, 2016)
  - Comparative Cognition (Spring, 2017)
  - Psychology of Organizations (Spring, 2017)
- Wrote, proctored, and graded exams
- Guided students with term paper writing
- Presented lectures and led exam review sessions

Department of Psychological Sciences, KSU, Manhattan, KS   Spring 2016
Instructor (General Psychology)
- Developed course lectures and assignments
- Created exams
- Facilitated in-depth discussion and in-class debates

Dept. of Psychological Sciences, KSU, Manhattan, KS   August 2011 – August 2015
Graduate Research Assistant
- Collaborated with the Office of Naval Research (ONR) on a project entitled **"**A New Measure of the Useful Field of View (UFOV): The Gaze-contingent Peripheral Blur Detection Task"
- Developed a working measure of visual attention, capable of being implemented in simulated real-world environments (e.g. driving simulators, static real-world scenes)
- Designed, pilot tested, and built experiments using Experiment Builder (SR-Research) and Eyelink 1000 desktop eye-tracker
- Created and manipulated visual stimuli using MatLab, Adobe Photoshop, and Adobe AfterEffects
- Analyzed behavioral and eye-movement data
- Trained undergraduate research assistants to follow lab protocols for data collection software, financial record keeping, and researcher/participant interaction during data collection
- Co-authored publications and presented posters at international conferences
- Collaborated and communicated with research labs at the University of Central Florida, University of Illinois, Urbana-Champagne (Beckman Institute), and Concordia University (Montreal, Quebec, CA)

Dept. of Psychological Sciences, Vision Cognition Lab, KSU, Manhattan, KS   January 2009 – January 2011
Undergraduate/Post-Graduate Research Assistant
- Collected data for numerous visual cognition experiments
- Designed and programmed tachistoscopic (rapid presentation) scene categorization experiments
- Co-authored papers investigating scene perception in peripheral versus central vision
- Presented research at the Great Plains Undergraduate Psychology Convention in 2009 and 2010

PEER REVIEWED JOURNAL PUBLICATIONS

Ringer, R.V., Coy, A.M., Larson, A.M., & Loschky, L.C. (2021). Investigating visual crowding of objects in complex real-world scenes. *i-Perception*, *12*(2), 1-24. https://doi.org/10.1177/2041669521994150

Ward, N., Gaspar, J.G., Neider, M.B., Crowell, J., Carbonari, R., Kaczmarski, H., **Ringer, R.V.,** Johnson, A.P., Loschky, L.C., & Kramer, A.F. (2018). Older adult multitasking performance using a gaze-contingent useful field of view. *Human Factors, 60*(2), 236-247.

Gaspar, J.G., Ward, N., Neider, M.B., Crowell, J., Carbonari, R., Kaczmarski, H., **Ringer, R.V.,** Johnson, A.P., Kramer, A.F., & Loschky, L.C. (2016). Measuring the useful field of view during simulated driving with gaze-contingent displays. *Journal of Human Factors and Ergonomics Society*, *58*(4), 630-641.

Ringer, R.V., Throneburg, Z., Johnson, A.P., Kramer, A.F., & Loschky, L.C. (2016). Impairing the useful field of view in natural scenes: Tunnel vision versus general interference. *Journal of Vision*, *16*(2), 1-25.

Loschky, L.C., **Ringer, R.V**., Ellis, K., & Hansen, B.C. (2015). Comparing rapid scene categorization of aerial and terrestrial views: A new perspective on scene gist. *Journal of Vision*, *15*(6):11, 1-29.

Larson, A.M., Freeman, T.E., **Ringer, R.V.,** & Loschky, L.C. (2014). The spatiotemporal dynamics of scene gist recognition. *Journal of Experimental Psychology: Human Perception and Performance, 40*(2), 471-487.

Loschky, L.C., **Ringer, R.V.,** Johnson, A.P., Larson, A.M., Neider, M., & Kramer, A.F. (2014). Blur Detection is unaffected by cognitive load. *Visual Cognition, 22*(3-4), 522-547.

Ringer, R.V., Johnson, A.P., Gaspar, J.G., Neider, M.B., Crowell, J., Kramer, A.F., Loschky, L.C. (2014, March). Creating a new dynamic measure of the useful field of view using gaze-contingent displays. *Proceedings of the Symposium on Eye Tracking Research and Applications,* 59-66.

EDITED BOOK CHAPTERS

Ringer, R.V., & Loschky, L.C. (2018). Head in the clouds, feet on the ground: Applying our terrestrial minds to satellite perspectives. In A. Coltkein & R. Hoffman, Remote Sensing and Cognition: Human Factors in Image Interpretation (63-86). Boca Raton, FL: CRC Press.

PUBLICATIONS UNDER REVIEW OR IN PREPARATION

Ringer, R.V., Zacks, J.M., Bailey, H., Johnson, A.P., Young, M.E., & Loschky, L.C. (in preparation). The spatiotemporal dynamics of visual attention during real-world event perception.

Ringer, R.V., Canare, D., & Ni, R. (in preparation). Evaluation of a common lower-level mechanism of perceptual learning.

Arsal, G., Suss, J., Ta, V., Ward, P., **Ringer, R.V.,** Eccles, D.W. (in preparation). The modified imitation game: A method for measuring cognitive aspects of interactional expertise.

CONFERENCE PRESENTATIONS

Poster Presentations
Ringer, R.V., Canare, D., Ellis, J., Sogaard, I., & Ni, R. (2019). Differences in task-relevant perceptual learning for older adults. *Annual Meeting of the Vision Sciences Society, May 18, 2019.* St. Pete Beach, FL.

Ringer, R.V., Throneburger, Z., Belville, B., Craig, A., Albert, S., Bartel, N., Cook, A., Loschky, L.C. (2018) Measuring the effects of event boundaries on visuospatial attention during event perception. *Annual Meeting of the Vision Sciences Society, May 22, 2018*. St. Pete Beach, FL.

Ringer, R.V. (May, 2017). Competition between foveal and peripheral attention reveals evidence in favor of a zoom-lens model of attention. *Annual Meeting of the Vision Sciences Society, May 24, 2017*. St. Pete Beach, FL.

Peterson, J.J., **Ringer, R.V.,** Sisco, E., de la Torre, M., Talkington, H., Shanahan, M., & Loschky, L.C. (May, 2017). The effects of unique blur/clarity contrast on visual selective attention as measured by eye movements: strong clarity capture and weak blur repulsion, *Annual Meeting of the Vision Sciences Society, May 22, 2017*. St. Pete Beach, FL.

Ringer, R.V., Throneburg, Z., Johnson, A.P., Kramer, A.F., & Loschky, L.C. (May, 2016). The effects of foveal versus auditory working memory dual-task loads on covert and overt attention. *Annual Meeting of the Vision Scienes Society*. St. Pete Beach, FL.

Ringer, R.V., Throneburg, Z., Johnson, A.P., Kramer, A.F., & Loschky, L.C. (November, 2015). Tunnel Vision is Produced by Both Auditory and Visual Dual-Task Loads. *Annual Meeting of the Psychonomic Society*. Chicago, IL.

Ringer, R.V., Throneburg, Z., Walton, T., Erickson, G., Coy, A., DeHart, J., Johnson, A.P., Kramer, A.F., & Loschky, L.C. (May, 2015). A novel approach to measuring the useful field of view in simulated real-world environments using gaze-contingent displays: The GC-UFOV. *Annual Meeting of the Vision Sciences Society*, In *Journal of Vision, 15*(12), 878-878.

Fehr, C., Loschky, L., **Ringer, R.,** Kramer, A., & Johnson, A. P. (2014, December). Attention Modulates Colour Perception Across the Visual Field in Natural Scenes. In *Canadian Journal of Experimental Psychology-Revue Canadienne de Psychologie Experimentale* (Vol. 68, No. 4, pp. 292-292)

Ringer, R.V., Johnson, A.P., Neider, M., Kramer, A.F., & Loschky, L.C. (2014, May). Blur detection is unaffected by cognitive load, but eye movements and scene recognition are. *Annual Meeting of the Vision Sciences Society,* In *Journal of Vision, 14*(10), pp. 529.

Coy, A., **Ringer, R.,** Larson, A., Luczak, M., & Loschky, L. (2014, May). Investigating visual crowding of objects in complex scene images. *Annual Meeting of the Vision Sciences Society*, In *Journal of Vision, 14*(10), pp. 779.

Ringer, R.V., Dean, K.E., Larson, A.M., Hughes, G.A., Coy, A.M., Walton, T.B., Spratt, J., Clark-Hargreaves, L., Johnson, A., Neider, M., Kramer, A., & Loschky, L.C. (2013, May). Blur detection in natural scenes is not affected by cognitive load. *Annual Meeting of the Vision Sciences Society,* In *Journal of Vision, 13*(9), pp. 653.

Larson, A., **Ringer, R**., Hutson, J., Peterson, J., Walton, T., O'Dea, C., Akao, K., Strouts, P., & Loschky, L.C. (May, 2013). Do scenes facilitate action categorization? *Annual Meeting of the Vision Sciences Society,* In *Journal of Vision, 13*(9), pp. 1051.

Ringer, R.V., Hansen, B.C., Byrne, K.B., Larson, A.M., Zuercher, J., & Loschky, L.C. (2012, May). Amplitude spectrum slope is more important than orientation in rapid scene categorization. *Annual Meeting of the Vision Sciences Society,* In *Journal of Vision, 12*(9), pp. 844.

Loschky, L., **Ringer, R.,** Larson, A., Hughes, G., Dean, K., Weisner, J., Flippo, J., Johnson, A., Neider, M., & Kramer, A. (2012, May). Developing a new measure of the useful field of view for use in dynamic real-world scene viewing. *Annual Meeting of the Vision Sciences Society, 12*(9), pp. 564.

Freeman, T., Loschky, L., **Ringer, R.,** & Kridner, C. (2010, May). Black, white, neutral gray blank screens have differential effects on scene gist masking. *Annual Meeting of the Vision Sciences Society,* In *Journal of Vision, 10*(7), pp. 1251.

Larson, A., Loschky, L., Ringer, R., Kridner, C. (2010, May). Attention modulates gist performance between central and peripheral vision. *Annual Meeting of the Vision Sciences Society,* In *Journal of Vision, 10*(7), pp. 1250.

Loschky, L., Ellis, K., Sears, T., **Ringer, R**., & Davis, J. (2010, May). Broadening the horizons of scene gist recognition: aerial and ground-based views. *Annual Meetings of the Vision Sciences Society,* In *Journal of Vision*, *10*(7), pp. 1238.

Oral Presentations/Invited Talks
Ringer, R. V., Johnson, A. P., Gaspar, J. G., Neider, M. B., Crowell, J., Kramer, A. F., & Loschky, L. C. (2014, March). Creating a new dynamic measure of the useful field of view using gaze-contingent displays. Talk presented at the *2014 Symposium on Eye Tracking Research and Applications*, Safety Harbor, FL.

TECHNICAL SKILLS

Statistical Software	Media Processing Software	Programming Languages
• R	• Adobe Photoshop	• MatLab
• JMP	• Adobe Aftereffects	• Python
• SPSS		• Unreal Engine

HONORS/AWARDS

Outstanding Graduate Researcher of the Year Award, a departmental award for graduate students who have shown an outstanding track-record for research, publications, and presentations (Spring, 2018)

Paper "Blur Detection is Unaffected by Cognitive Load" was included in a special online article collection of most downloaded papers in Routledge Behavioral Sciences journals in 2014 (February, 2015)

Article feature in the American Psychological Association's PEEPS (Particularly Exciting Experiments in Psychology) for "The Spatiotemporal Dynamics of Scene Gist Recognition" (February 2014, Issue 15)

Award for **Best Long Paper** and **Best Student Paper** for "Creating a New Dynamic Measure of the Useful Field of View Using Gaze-Contingent Displays." Prize included a free Eyetribe© eye-tracker (March, 2014)

Awarded a **$1000 undergraduate research grant by the Kansas Space Grant Consortium** for research in human perception of satellite imagery (Spring, 2010)

RESEARCH INTERESTS

- Visual Perception and Attention
- Eye-Movement Research
- Human/Machine Interaction
- Behavior Ecology
- Event Perception and Memory
- Image Statistics

TRAINING AND PROFESSIONAL DEVELOPMENT (Participant)

- UX Certification, Nielsen-Norman Group (ID# 1045191, March, 2021)
- Seminar in EEG Methods and Theory, Kansas State University (Spring, 2019)
- Python Software Carpentry Workshop, Kansas City, MO (June 3-4, 2016)
- Electroencephalography (EEG) training workshop at the Center for Brain, Biology, and Behavior, University of Nebraska at Lincoln, January 6-10, 2014

TRAINING AND PROFESSIONAL DEVELOPMENT (Leader)

- R Workshop with Applications in Linear and Generalized Linear Mixed Modeling (Summer, 2020)
- Cognitive/HF Reading Group (WSU; Fall 2019 – Spring 2020)
- Eye-Tracking Bootcamp, Kansas State University (Spring and Fall, 2014-2018)