# Sowon Hahn, Ph.D.

Associate Professor

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## **EDUCATION**

| Ph.D. 1997 | University of Illinois, Urbana-Champaign | Cognitive Psychology |
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| M.S. 1994  | University of Illinois, Urbana-Champaign | Cognitive Psychology |
| B.S. 1991  | Seoul National University                | Psychology           |

## PROFESSIONAL APPOINTMENTS

| 2015 - present | Associate Professor of Psychology, Seoul National University         |  |
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| 2007 - 2014    | Associate Professor of Psychology, University of Oklahoma            |  |
| 2001 - 2007    | Assistant Professor of Psychology, University of Oklahoma            |  |
| 1999 - 2001    | Post-Doctoral Researcher, University of California at Riverside      |  |
| 1998 - 1999    | Post-Doctoral Researcher, University of Illinois at Urbana-Champaign |  |
| 1992 - 1997    | Research Assistant, University of Illinois at Urbana-Champaign       |  |

## PROFESSIONAL AFFILIATIONS

American Psychological Association; Psychological Science; Psychonomic Society

## **CURRENT AND PREIOUS CLASSES**

Lecture Courses: Introduction to Psychology (UG), Survey in Information Processing, Perception, & Cognition (UG); Research Methods: Experimental Design (UG); Cognitive Psychology (UG); Adult Development and Aging (UG); Applied Cognition and Human Factors (G); Advanced Tools/Methods in Cognition (G)

Seminar Courses: Advanced Seminar in Cognitive Process (G): Attention and Consciousness (G), Seminar in Affective, Cognitive, and Behavioral Neurosciences (G), Behavioral Economics (UG), Capstone Survey in Major Fields in Psychology: Emotion and Cognition (UG)

## HONORS AND AWARDS

- Assessing Perceptual/Cognitive/Psychomotor Ability of Older Adults to Develop Interface Design (P.I.) Seoul National University (2016-2017)
- Emotion and Information Processing (P.I.) Faculty Research Grant Seoul National University (2015)
- Aging and Technology (P.I.) Faculty Enrichment Grant College of Arts & Sciences, University of Oklahoma (2012)

- Brain Function Reorganization From Tumor Invasion and Radiotherapy: A Pilot fMRI Study. (Co-P.I.) Presbyterian Health Foundation Collaborators Drs. Dee Wu and Frank Boustsen. (2006).
- Emotion and Saccadic Eye Movement Control (P.I.) Faculty Enrichment Grant College of Arts & Sciences, University of Oklahoma. (2006)
- Facial Expression, Emotion, and Attention. (P.I.) Junior Faculty Summer Research Fellowship Office of Vice President for Research, University of Oklahoma. (2004).
- Inhibition of action. (P.I.) Research Council Grant, University of Oklahoma. (2003).
- The role of temperament on attention and eye movement. (P.I.) Junior Faculty Summer Research Fellowship Office of Vice President for Research, University of Oklahoma. (2002).
- Aging and Decision Making (P.I.) Faculty Enrichment Grant College of Arts & Sciences, University of Oklahoma. (2002)

# **PUBLICATIONS**

- **Hahn, S.,** & Chung, Y. (2016). Neuroticism, attention, and eye movements. In A. Di Fabio (Ed.), *Neuroticism: Characteristics, Impact on Job Performance and Health Outcomes* (pp. 103-112). New York: Nova Publishers.
- **Hahn, S.**, Buttaccio, D., Hahn, J., & Lee, T. (2015). Personality and attention: Levels of neuroticism and extraversion can predict attentional performance during a change detection task. *Quarterly Journal of Experimental Psychology*, 68(6), 1041–1048. http://dx.doi.org/10.1080/17470218.2015.1032986
- Huffman, W. B., & **Hahn, S.** (2015). Cognitive principles in mobile learning. *Psychology* 6, 456-463. http://dx.doi.org/10.4236/psych.2015.64043
- Buttaccio, D. R., Lange, N. L., **Hahn, S.**, Thomas, R. P. (2014). Explicit awareness supports conditional visual search in the retrieval guidance paradigm. *Acta Psychologica*, *145*, 44-53. doi:10.1016/j.actpsy.2013.10.014
- Buttaccio, D. R., Lange, N. D., **Hahn, S.**, Thomas, R. P., & Davelaar, E. J. (2013). Explicit awareness supports conditional visual search in the retrieval guidance paradigm. *Proceedings of the 35<sup>th</sup> Annual Meeting of the Cognitive Science Society*. Cognitive Science Society.
- Buttaccio, D. R., & **Hahn, S.** (2011). The influence of action on visual search: Behavioral response toward stimuli modifies the selection process. *Attention, Perception, & Psychophysics*, 73(5), 1453-1466.
- Buttaccio, D. R., & **Hahn, S.** (2010). The effect of behavioral response on affective evaluation. *Acta Psychologica*, *135*, 343-348.

- Thomas, R. P., **Hahn, S.**, Lange, N.D., Buttaccio, D., Alberts, T., Dougherty, M.R., & Rose, L. (2010). Target identification and assessment in visual intelligence, surveillance, & reconnaissance. *Proceedings of the Missile Defense Sensors, Environments and Algorithms;* published by the Military Sensing Information Analysis Center (SENSIAC), a Department of Defense chartered Information Analysis Center.
- **Hahn, S.**, & Gronlund, S.D. (2007). Top-down guidance in visual search for facial expressions. *Psychonomic Bulletin & Review, 14*, 159-165.
- **Hahn, S.**, Carlson, C., Singer, S., & Gronlund, S. D. (2006). Aging and visual search: Automatic and controlled attentional bias to threat faces. *Acta Psychologica*, *123*, 312-336.
- **Hahn, S.**, Andersen, G. J., & Kramer, A. F. (2004). Age influences on multi-dimensional set switching. *Aging, Neuropsychology, and Cognition*, 11, 25-36.
- **Hahn, S.**, Andersen, G. J., & Saidpour, A. (2003). Static scene analysis for the perception of heading. *Psychological Science*, *14*, 543-548.
- **Hahn, S.**, Andersen, G. J., & Kramer, A. F. (2003). Multi-dimensional set switching. *Psychonomic Bulletin and Review, 10,* 503-509.
- Colcombe, A., Kramer, A.F., Irwin, D. E., Peterson, M., Colcombe, S., & **Hahn, S.** (2003). Agerelated effects of attentional and oculomotor capture by onsets and color singletons as a function of experience. *Acta Psychologica*, 113, 205-225.
- Peterson, M., Kramer, A. F., Irwin, D. E., & **Hahn, S.** (2002). Modulating of oculomotor capture by abrupt onsets during attentionally demanding visual search. *Visual Cognition*, *9*, 755-791.
- Kramer, A. F., **Hahn, S.**, McAuley, E., Cohen, N., Banich, M., Harrison, C., Chason, J., Boileau, R.A., Bardell, L., Colcombe, A., & Vakil, E. (2001). Exercise, Aging and Cognition: Healthy body, healthy mind? In W. A. Rogers & A. D. Fisk (Eds.), *Human factors interventions for the health care of older adults* (pp. 91-120). NJ: Erlbaum.
- Kramer, A. F., Cassavaugh, N. D., Irwin, D. E., Peterson, M. S., & **Hahn, S.** (2001). Influence of Single and Multiple Onset Distractors on Visual Search for Singleton Targets. *Perception and Psychophysics*, 63, 952-968.
- Kramer, A. F., **Hahn, S.**, Irwin, D. E., & Theeuwes, J. (2000). Age differences in the control of looking behavior: Do you know where your eyes have been? *Psychological Science*, *3*, 210-217.
- Irwin, D., Colcombe, A., Kramer, A. F., & **Hahn, S.** (2000). Capture of eyes by color and onset singletons. *Vision Research*, 40, 1443-1458.

- Kramer, A. F., **Hahn, S.**, McAuley, E. (2000). Influence of Aerobic Fitness on the Neurocognitive Function of Older Adults. *Journal of Aging and Physical Activity*, 8, 379-385.
- Kramer, A. F., **Hahn, S.**, Banich, M., Cohen, N., Colcombe, A., Bardell, L., Vakil, E., Chason, J., Harrison, C., & McAuley, E. (1999). Aging, fitness, and neurocognitive function. *Nature*, 400, 418-419.
- Kramer, A. F., **Hahn, S.**, Irwin, D. E., & Theeuwes, J. (1999). Attentional capture and aging: Implications for visual search performance and oculomotor control. *Psychology and Aging*, *14*, 135-154.
- Theeuwes, J., Kramer, A. F., **Hahn, S.**, Irwin, D. E., & Zelinsky, G. (1999). Influence of attentional capture on oculomotor control. *Journal of Experimental Psychology: Human Perception and Performance*, 25, 1595–1608.
- Kramer, A. F., **Hahn, S.**, & Gopher, D. (1999). Coordinative executive processes during task switching. *Acta Psychologica*. *101*, 339-378.
- **Hahn, S.**, & Kramer, A. F. (1998). Further evidence of division of attention over noncontiguous visual field. *Visual Cognition*, *5*, 217-256.
- Theeuwes, J., Kramer, A. F., **Hahn, S.**, & Irwin, D. E. (1998). Our eyes do not always go where we want them to go: capture of the eyes by new objects. *Psychological Science*, *9*, 379-385.
- **Hahn, S.**, Kramer, A. F., & Gopher, D. (1997). Aging and executive control. Proceedings of the 41<sup>st</sup> Annual Meeting on Human Factors and Ergonomics Society, Albuquerque, New Mexico.
- **Hahn, S.**, & Kramer, A. F. (1995). Attentional flexibility and aging: You don't need to be 20 years of age to split the beam. *Psychology and Aging, 10,* 597-609.
- Kramer, A. F., & **Hahn, S.** (1995). Splitting the beam: Division of attention over noncontiguous locations of the visual field. *Psychological Science*, *6*, 381-386.

# CONFERENCE PRESENTATIONS AND INVITED TALKS

- Kwon, D., & Hahn, S. (2016). The Effect of Cross-Modal Emotional Priming. *Poster presented for the 57<sup>th</sup> Annual Meeting of the Psychonomic Society*. November 17-20. Boston, MA.
- Kim, T., & Hahn, S. (2016). The Role of Perceptual Salience in Affective Conditioning. *Poster presented for the 57<sup>th</sup> Annual Meeting of the Psychonomic Society*. November 17-20. Boston, MA.

- Hahn, S., & Buttaccio, D. R. (2015). Age Differences in Associative Learning to Guide Conditional Visual Search. *Poster presented for the 56<sup>th</sup> Annual Meeting of the Psychonomic Society*, November 19-22. Chicago, IL.
- Huffman, W. B., & Hahn, S. (2014). The effect of modality and retrieval practice in foreign language learning. *Poster presented for the 55<sup>th</sup> Annual Meeting of the Psychonomic Society*, November 20-23. Long Beach, CA.
- Hahn, S., Buttaccio, D. R., & Hahn, J. (2013). Personality predicts attentional performance during a change detection task. *Poster presented for the 52<sup>nd</sup> Annual Meeting of the Psychonomic Society*, November 14-17. Toronto, Canada.
- Buttaccio, D. R., Hahn, S., Brand, E., & Huffman, W. (2013). Aging and Probabilistic Visual Search. *Poster presented for the 52<sup>nd</sup> Annual Meeting of the Psychonomic Society*, November 14-17. Toronto, Canada.
- Hahn, S. (2013). The effect of behavioral response of affective evaluation. *Mind, Brain, and Cognitive Psychology. Korea University*. August 1-8. Seoul, Korea.
- Hahn, S. (2013). Emotion and action. *Invited Colloquium for the Psychology Department of Yeonsei University*. August 9. Seoul, Korea.
- Hahn, S., & Buttaccio, D. R. (2012). After effects of action on selection: Attentional bias towards an acted upon object. *Paper presented for the 53<sup>rd</sup> Annual Meeting for the Psychonomic Society*, November. 15-18. Minneapolis, MN.
- Buttaccio, D. R., Lange, N., Thomas, R., Hahn, S., & Dougherty, M. R. (2012). Hypothesis generation supports visual search: The influence of alternative outcomes and working memory capacity. *Poster presented for the 53<sup>rd</sup> Annual Meeting for the Psychonomic Society*, November. 15-18. Minneapolis, MN.
- Buttaccio, D. R., Hahn, S., & Lange, N. D. (2011). Hypothesis Generation in a Probabilistic Visual Search Task. *Poster presented for the 52<sup>nd</sup> Annual Meeting for the Psychonomic Society*, November 3-6. Seattle, WA.
- Buttaccio, D. R., & Hahn, S. (2011). Visual search in a probabilistic context. *Paper presented at the annual meeting of the Oklahoma Judgment and Decision Making Conference*, Oklahoma City, OK.
- Hahn, S. & Buttaccio, D. R. (2010). Top-down influence of action on visual search. *Paper presented for the 51<sup>st</sup> Annual Meeting for the Psychonomic Society*, November 18-21. St. Louis, MO.
- Buttaccio, D. R., & Hahn, S. (2010). The effect of behavioral response on affective evaluation. *Poster presented for the 51st Annual Meeting for the Psychonomic Society,* November 18-21.

- St. Louis, MO.
- Thomas, R. P., Hahn, S., Lange, N.D., Buttaccio, D., Alberts, T., Dougherty, M.R., & Rose, L. (2010). Target identification and assessment in visual intelligence, surveillance, & reconnaissance. *Paper presented as the MSS Missile Defense Sensors, Environment and Algorithms*, Oct. Orlando, FL.
- Buttaccio, D. R., & Hahn, S. (2009). Influence of Attention and Action on Affective evaluation of novel stimuli. *Poster presented for the 50<sup>th</sup> Annual Meeting of the Psychonomic Society*, November 19-22. Boston, MA.
- Lorat, T., & Hahn, S. (2008). Working memory and attention. *Poster presented for the 49<sup>th</sup> Annual Meeting of the Psychonomic Society*, November 13-16. Chicago, IL.
- Buttaccio, D., & Hahn, S. (2008). Attention, preference, and action. *Poster presented for the Southwestern Cognition Conference*, October 24-25. El Paso, TX,
- Lorat, T., & Hahn, S. (2008). Working memory and attention. *Poster presented for the Southwestern Cognition Conference*, October 24-25. El Paso, TX,
- Hahn, S. (2008). Action-based attention: Angry faces are detected faster but not more approachable. *Paper presented for the Interdisciplinary Conference on Human Performance*, March 28-29, Orlando, Florida.
- Hahn, S., Nguyen, E., Lorat, T., & Jeon, A. (2006). Angry face is detected faster but not approachable. *Paper presented for the 47<sup>th</sup> Annual Meeting of the Psychonomic Society. Houston*, TX. November 16-19.
- Hahn, S., Nguyen, E., Lorat, T., & Jeon, A. (2006). Visual search for facial expressions. *Paper presented for the Southwest Conference on Cognition*. Lubbock, TX. October 20-21.
- Lorat, T., Nguyen, E., & Hahn, S. (2006). Age influences on covert and overt attentional control to facial expressions. *Poster presented for the Cognitive Aging Conference*, Atlanta, GA. April 20-23.
- Hahn, S. (2004). Attentional guidance by emotionally valenced stimuli. *Invited Talk for the Psychology Department, University of Virginia*, July 23.
- Hahn, S. (2004). Facial Expression, Attention and Aging. *Poster presented for the Vision Science Society Meeting*, Sarasota, FL. April 29-May 5.
- Hahn, S., & Andersen, G. J. (2002). Aging and multi-dimensional set switching. *Paper presented for the Cognitive Aging Conference*, Atlanta, GA. April 19-22.
- Hahn, S. (2002). Effects of sequence on task switching. Poster presented for the 43<sup>rd</sup> Annual

- Meeting for Psychonomic Society, Kansas City, MO, November 21-24.
- Hahn, S. (2002). Executive control of the task set preparation. *Paper presented for the Southwest Conference on Cognition*, San Antonio, Texas. October 25-26.
- Sauer, C., Andersen, G. J., Saidpour, A. & Hahn, S. (2001). Dual-task performance in driving: Steering and collision detection. *Paper presented for the 9<sup>th</sup> International Conference on Vision in Vehicles*, Brisbane, Australia.
- Hahn, S., & Andersen, G. J. (2000). Response modality switching and aging. *Paper presented for the 8<sup>th</sup> Cognitive Aging Conference*, Atlanta, GA.
- Andersen, G. J. & Hahn, S. (2000). Priming of Action-based visual pathway. *Poster presented* for the Annual Meeting on Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida.
- Hahn, S., & Andersen, G. J. (1999). High-level processing constraints in perception and action streams. *Poster presented for the 40<sup>th</sup> Annual Meeting of the Psychonomics Society*, Los Angeles, California.
- Kramer, A. F., Hahn, S., & Irwin, D. (1999). Oculomotor capture and aging. *Paper presented for the 40<sup>th</sup> Annual Meeting of the Psychonomics Society*, Los Angeles, California.
- Peterson, M. S., Kramer, A. F., Irwin, D., & Hahn, S. (1999). Oculomotor capture by sudden onsets during visual search. *Poster presented for the 40<sup>th</sup> Annual Meeting of the Psychonomics Society*, Los Angeles, California.
- Hahn, S., Kramer, A. F., De Jong, R., Gopher, D., Minear, M., & Glass, A. (1998). Aging and executive control in task switching. *Poster presented for the 7th Cognitive Aging Conference*, Atlanta, Georgia.
- Kramer, A. F., Hahn, S., Banich, M., Cohen, N., McAuley, E., Bardell, L., Harrison, C., Chason, J., Vakil, Prioux, H., Glass, A., Minear, M., & Nash, C. (1998). Influence of aerobic fitness on the neurocognitive function of sedentary older adults. *Poster presented for the 7th Cognitive Aging Conference*, Atlanta, Georgia.
- Kramer, A. F., Irwin, D., Hahn, S., Theeuwes, J., Glass, A. & Minear, M. (1998). Oculomotor control and attention: Inhibiting eye movements to task irrelevant objects. *Poster presented for the 7<sup>th</sup> Cognitive Aging Conference*, Atlanta, Georgia.
- Kramer, A. F., Hahn, S., Irwin, D., & Theeuwes, J. (1998). Attentional capture and oculomotor control. Advanced Displays and Interactive Displays. *Paper presented for the 2<sup>nd</sup> Annual ARL Federated Laboratory Symposium*, College Park, MD.

- Theeuwes, J., Kramer, A. F., Hahn, S., Irwin, D., & Zelinsky, G. (1997). Influence of attentional capture on oculomotor control. *Paper presented for the 38<sup>th</sup> Annual Meeting of the Psychonomics Society*, Philadelphia, Pennsylvania.
- Theeuwes, J., Kramer, A. F., Hahn, S., Irwin, D., & Zelinsky, G. (1997). Effect of the appearance of a new object on oculomotor control. *Poster presented for the Annual Meeting on Association for Research in Vision and Ophthalmology*, Fort Lauderdale, Florida.
- Kramer, A. F., & Hahn, S. (1994). Distribution of attention in noncontiguous space. *Paper presented for the 35<sup>th</sup> Annual Meeting of the Psychonomics Society*, St. Louis, MO.
- Hahn, S., & Kramer, A. F. (1994). Attention to noncontiguous locations. *Poster presented for the Converging Operations in the Study of Visual Selective Attention*, Urbana-Champaign, Illinois.