

**Joshua R. de Leeuw**  
Curriculum Vitae • November 2015

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## **Education**

- May 2016, *expected*      Ph.D., Indiana University, Cognitive Science and Psychological & Brain Sciences
- 2008                      B.A., Vassar College, Cognitive Science  
General Honors & Departmental Honors in Cognitive Science

## **Honors & Awards**

- 2013                      Commendation on PhD qualification exam, Department of Psychological & Brain Sciences, Indiana University
- IGERT program representative for national poster contest
- 2012                      Outstanding Instructor Award, Department of Psychological & Brain Sciences, Indiana University
- 2010                      NSF Graduate Research Fellowship
- IGERT Training Program Fellowship in Brain-Body-Environment Systems.
- 2009                      2nd place in Microsoft RoboChamps Challenge, robotics competition (\$10,000 prize)
- 2008                      Jean Slator Edson Prize for best original music composition, Vassar College
- Phi Beta Kappa
- Sigma Xi
- Psi Chi

## Publications & Presentations

### Journals

- 2015 Goldstone, R. L., de Leeuw, J. R., & Landy, D. H. Carving nature at its joints or cutting its effective loops?: On the dangers of trying to disentangle intertwined mental processes. Commentary on "Cognition does not affect perception: Evaluating the evidence for 'top-down' effects." *Behavioral and Brain Sciences*. In press.
- de Leeuw, J. R., & Motz, B. A. (2015). Psychophysics in a web browser? Comparing response times collected with JavaScript and Psychophysics Toolbox in a visual search task. *Behavior Research Methods*. In press.
- Goldstone, R. L., de Leeuw, J. R., & Landy, D. H. (2015). Fitting perception in and to cognition. *Cognition*, 135, 24-29. doi:10.1016/j.cognition.2014.11.027
- de Leeuw, J. R. (2015). jsPsych: A JavaScript library for creating behavioral experiments in a Web browser. *Behavior Research Methods*, 47(1), 1-12. doi:10.3758/s13428-014-0458-y
- 2011 Long, J.H. Jr., Krenitsky, N. M., Roberts, S. F., Hirokawa, J., de Leeuw, J. R., and Porter, M. E. (2011). Testing biomimetic structures in bioinspired robots: how vertebrae control the stiffness of the body and the behavior of fish-like swimmers. *Integrative and Comparative Biology*, 51(1), 158-175.

### Manuscripts Under Revision, Under Review, & In Preparation

- Under Revision de Leeuw, J. R., Andrews, J. K., Livingston, K. R., & Chin, B. M. The Effects of Categorization on Perceptual Judgment Are Robust Across Different Assessment Tasks. Materials available at <https://github.com/jodeleeuw/cp-tasks>.
- Under Review de Leeuw, J. R., & Goldstone, R. L. Memory constraints on statistical learning are affected by statistical learning. Materials available at <https://github.com/jodeleeuw/compressibility>.
- Carvalho, P., Braithwaite, D., de Leeuw, J. R., Motz, B., & Goldstone, R. L. An in-vivo study of self-regulated study sequencing in introductory psychology courses.

In Prep de Leeuw, J. R., Livingston, K. R., Porter, M. E., & Long, J. H., Jr. Common goals coordinate groups of asocial embodied robots.

### Refereed Conference Proceedings

- 2015 de Leeuw, J. R., & Goldstone, R. L. (2015). Memory constraints affect statistical learning; Statistical learning affects memory constraints. In Noelle, D. C., Dale, R., Warlaumont, A. S., Yoshimi, J., Matlock, T., Jennings, C. D., & Maglio, P. P. (Eds.), *Proceedings of the 37th Annual Meeting of the Cognitive Science Society* (pp. 530-535). Austin, TX: Cognitive Science Society.
- de Leeuw, J. R., & Andrews, J. (2015). Using a task-filled delay during discrimination trials to examine different components of learned visual categorical perception. In Noelle, D. C., Dale, R., Warlaumont, A. S., Yoshimi, J., Matlock, T., Jennings, C. D., & Maglio, P. P. (Eds.), *Proceedings of the 37th Annual Meeting of the Cognitive Science Society* (pp. 536-541). Austin, TX: Cognitive Science Society.
- Carvalho, P., Braithwaite, D., de Leeuw, J. R., Motz, B., & Goldstone, R. L. (2015). Effectiveness of learner-regulated study sequence: An in-vivo study in Introductory Psychology courses. In Noelle, D. C., Dale, R., Warlaumont, A. S., Yoshimi, J., Matlock, T., Jennings, C. D., & Maglio, P. P. (Eds.), *Proceedings of the 37th Annual Meeting of the Cognitive Science Society* (pp. 309-314). Austin, TX: Cognitive Science Society.
- de Leeuw, J. R., Motz, B. A., Eastwood, J. L., Maltese, A. V., Goldstone, R. L., Danish, J. A. (2015). Needle in the neural haystack: Electroencephalograph signatures of concept learning while viewing naturalistic educational materials. *Proceedings of the 2015 American Educational Research Association Annual Meeting*.
- 2014 de Leeuw, J. R., Andrews, J., & Livingston, K. (2014). Learned visual categorical perception effects depend on method of assessment and stimulus discriminability. In P. Bello, M. Guarini, M. McShane, & B. Scassellati (Eds.), *Proceedings of the 36th Annual Conference of the Cognitive Science Society* (pp. 391-396). Austin, TX: Cognitive Science Society.
- 2010 Krishnamurthy, P., Khorrami, F., de Leeuw, J. R., Porter, M. E., Livingston, K., & Long, J. H. (2010). An electric ray inspired biomimetic autonomous

underwater vehicle. In *Proceedings of the American Control Conference* (pp. 5224-5229).

- 2009 de Leeuw, J. R., & Livingston, K. (2009). A self-organizing autonomous prediction system for controlling mobile robots. In Chen, K., Moustafa, K. A. F., and Karras, D. A., editors, *Proceedings of the International Conference on Automation, Robotics and Control Systems (ARCS-09)*, pages 123-129. ISRST.
- Krishnamurthy, P., Khorrami, F., de Leeuw, J. R., Porter, M. E., Livingston, K., & Long, J. H. (2009). A multi-body approach for 6dof modeling of biomimetic autonomous underwater vehicles with simulation and experimental results. In *Control Applications, (CCA) & Intelligent Control, (ISIC), 2009 IEEE*, pages 1282-1287.
- 2007 de Leeuw, J. R., & Livingston, K. (2007). When less is more: Sensor resolution and learning. In Berthouze, L., Prince, C. G., Littman, M., Kozima, H., and Balkenius, C., editors, *Proceedings of the Seventh International Conference on Epigenetic Robotics: Modeling Cognitive Development in Robotic Systems*.

### Workshops & Tutorials

- 2015 de Leeuw, J. R. (2015). Using jsPsych to conduct behavioral research alone. *Workshop in Methods Series at Indiana University*.
- de Leeuw, J. R. (2015). Programming online experiments with jsPsych. In Noelle, D. C., Dale, R., Warlaumont, A. S., Yoshimi, J., Matlock, T., Jennings, C. D., & Maglio, P. P. (Eds.), *Proceedings of the 37th Annual Meeting of the Cognitive Science Society* (pp. 13-14). Austin, TX: Cognitive Science Society.
- 2014 de Leeuw, J. R., Coenen, A., Markant, D., Martin, J. B., McDonnell, J., Rich, A., & Gureckis, T. (2014). Online experiments using jsPsych, psiTurk, and Amazon Mechanical Turk. In P. Bello, M. Guarini, M. McShane, & B. Scassellati (Eds.), *Proceedings of the 36th Annual Conference of the Cognitive Science Society* (pp. 42-43). Austin, TX: Cognitive Science Society.
- 2007 Livingston, K., & de Leeuw, J. R. (2007). Virtual bottom-up robotics lab with physical robot component. Workshop on Interactive Computer-Based Activities for Undergraduate Cog Sci Instruction at the 29th Annual Meeting of the Cognitive Science Society.

## Invited Talks

- 2015      Doing Social Science Online: A Research Ethics Discussion with the Creator of jsPsych. Poynter Center for the Study of Ethics and American Institutions, Indiana University. October 14, 2015.

## Conference Presentations

- 2015      de Leeuw, J. R. (2015). A collaborative, open-source collection of browser-based experiments for teaching demonstrations using jsPsych. To be presented at the Annual Meeting of the Society for Computers in Psychology, Chicago, IL.
- de Leeuw, J. R., & Goldstone, R. L. (2015). Statistical learning of regularities reduces memory constraints on statistical learning. To be presented at the Annual Meeting of the Psychonomic Society, Chicago, IL.
- Eastwood, J., Maltese, A., de Leeuw, J. R., Danish, J., Goldstone, R. L., & Motz, B. (2015). Exploring the inner-working of anatomy learning: an interdisciplinary approach. Poster presented at the Annual Meeting of the American Association of Anatomists, Boston, MA.
- 2014      de Leeuw, J. R., & Goldstone, R. L. (2014). Context effects in visual statistical learning. Poster presented at the Annual IGERT in Brain-body-environment Systems Symposium, Bloomington, IN.
- Braithwaite, D. W., Carvalho, P. F., de Leeuw, J. R., & Goldstone, R. L. (2014). Effectiveness of learner-regulated study sequence. Poster presented at the 55th Annual Meeting of the Psychonomic Society, Long Beach, CA.
- Carvalho, P. F., Braithwaite, D. W., de Leeuw, J. R., Motz, B. A., & Goldstone, R. L. (2014). Sequencing examples during concept learning. Poster presented at the 2014 CIRCLE Conference - Integrating cognitive science with innovative teaching in STEM disciplines, St. Louis, MO.
- de Leeuw, J. R., & Goldstone, R. L. (2014). Predictable sequences promote the learning of visual statistical regularities. Presented at the 4th Annual Midwest Cognitive Science Conference, Dayton, OH.
- 2013      de Leeuw, J. R., Andrews, J., & Livingston, K. (2013). Variables influencing the nature of learned categorical perception effects. Poster presented at the 35th Annual Meeting of the Cognitive Science Society, Berlin, Germany.

de Leeuw, J. R., & Todd, P. M. (2013). The influence of hunger on categorical perception of food and non-food items. Presented at the 3rd Annual Midwest Cognitive Science Conference, Columbus, OH.

de Leeuw, J. R. (2013). Common goals coordinate groups of asocial embodied robots. Video and poster presented as part of the 2013 IGERT National Poster & Video Competition, online at <http://posterhall.org/igert2013/>

de Leeuw, J. R., & Todd, P. M. (2013). Meat-O-Vision: Testing a literary trope in the lab. Poster presented at the Annual IGERT in Brain-body-environment Systems Symposium, Bloomington, IN.

de Leeuw, J. R., Livingston, K. R., Porter, M. E., & Long, J. H. Jr. (2013). When swarm intelligence isn't: Common goals alone explain emergence of group coordination in asocial embodied robots. Presented at the Society for Integrative and Comparative Biology, San Francisco, CA.

2012 de Leeuw, J. R., Livingston, K., Porter, M. E., & Long, J.H. Jr. (2012). Common goals coordinate groups of asocial embodied robots. Poster presented at the Annual IGERT in Brain-body-environment Systems Symposium, Bloomington, IN.

2011 de Leeuw, J. R. (2011). Testing selection pressures for small-world neural networks in virtual robots. Poster presented at the Annual IGERT in Brain-body-environment Systems Symposium, Bloomington, IN.

2010 de Leeuw, J. R., Porter, M., Livingston, K., & Long, J.H. Jr. (2010). Evolving intelligence in autonomous, fish-like biorobots: does competition for resources matter? Poster presented at the Society for Integrative and Comparative Biology, Seattle, WA.

Hirokawa, J., Roberts, S., Frias, C., Krenitsky, N., de Leeuw, J. R., Long, J.H., Jr., & Porter, M. E.. (2010). A self-propelled robotic swimmer as a biomechanical testbed: how swimming performance is modulated by the axial length of the intervertebral joints in a biomimetic vertebral column. Poster presented at the Society for Integrative and Comparative Biology, Seattle, WA.

## Teaching Experience

### Instructor of Record

- 2015 Statistical Techniques, Indiana University
- 2012 Methods of Experimental Psychology Lab, Indiana University

### Lab Instructor

- 2014 Prediction, Probability, and Pigskin, Indiana University

### Substitute Instructor

- 2015 Cognitive Psychology, DePauw University (4 class sessions)  
Computational Neuroscience, DePauw University (4 class sessions)

## Research Experience

- 2008-2010 Faculty Research Associate, Interdisciplinary Robotics Research Laboratory, Vassar College.

## Professional Service

- Consulting Editor Behavior Research Methods
- Ad-hoc reviewer Cognitive Psychology, Cognition, PLoS ONE, Cognitive Science Society

## University Service

- 2015 College Graduate Academic Fairness Committee, Indiana University
- 2012-2015 Graduate and Professional Student Organization Awards Officer, Indiana University

## Professional Memberships

Cognitive Science Society, Psychonomic Society, Society for Computers in Psychology,  
American Educational Research Association

## References

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