

# SWAPNAA JAYARAMAN

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## EDUCATION & TRAINING

- Postdoctoral Researcher**, Psychological and Brain Sciences Apr 2011  
Indiana University, Bloomington, IN  
Faculty Supervisors: Dr. Linda Smith and Dr. Aina Puce
- PhD**, Industrial and Operations Engineering (Cognitive Ergonomics) Apr 2011  
University of Michigan, Ann Arbor, MI  
*Dissertation: Supporting Monitoring and Interruption Management In Complex Domains Through Graded Multimodal Notifications*  
Faculty Advisor: Dr. Nadine Sarter
- MS**, Industrial and Operations Engineering (Cognitive Ergonomics) May 2006  
University of Michigan, Ann Arbor, MI
- MS**, Information (Human-Computer Interaction) May 2006  
University of Michigan, Ann Arbor, MI
- PGDCS**, Computer Science May 2003  
University of Madras, Chennai, India
- BA**, Economics May 2002  
University of Madras, Chennai, India
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## ACADEMIC RESEARCH

- Assistant Scientist**  
**(Cognitive Development, Developmental Neuroscience)** Jan 2011 – present  
Cognitive Development Lab and Social Neuroscience Lab, Indiana University  
Faculty Supervisors: Dr. Linda Smith, Dr. Aina Puce
- Graduate Student Research Assistant (Ergonomics)** February 2006 – Dec 2006  
The Human-automation Interaction and Cognition (THInC) Lab, University of Michigan  
Faculty Supervisor: Dr. Nadine Sarter

**Graduate Student Research Assistant (Information)**

May 2004 – June 2006

Collaboratory for Research on Electronic Work (CREW), University of Michigan  
Faculty Supervisor: Dr. Thomas Finholt

**Graduate Student Research Assistant (Business)**

Feb 2006 – Sep 2006

Business Information Technology, University of Michigan  
Faculty Supervisor: Dr. Michael Gordon

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**PUBLICATIONS****Peer Reviewed Journal Articles and Conference Proceedings**

1. **Jayaraman, S.**, Smith, L. B. (in preparation). Temporal characteristics of faces and objects in early visual environments.
2. **Jayaraman, S.**, Smith, L. B. (in preparation). Low-level visual characteristics of infant experiences in nature.
3. Fausey, C. M., **Jayaraman, S.**, Smith, L. B. (under review). From faces to hands: Changing visual input in the first two years.
4. **Jayaraman, S.**, Fausey, C.M., & Smith, L.B. (under review). The faces in infant-perspective scenes change over the first year of life.
5. Smith, L. B., & **Jayaraman, S.** (2014). Redundant constraints on human face perception?. *Developmental Science*, 17: 826–827. doi: 10.1111/desc.12200
6. **Jayaraman, S.**, Fausey, C.M., & Smith, L.B. (2013). Developmental see-saws: Ordered visual input in the first two years of life. *Proceedings of the 35th annual meeting of the Cognitive Science Society*, Berlin.
7. Hameed, S., Ferris, T., **Jayaraman, S.**, and Sarter, N. (2009). Using informative peripheral visual and tactile cues to support task and interruption management. *Human Factors*, 51 (2), 126-135.
8. Hameed, S., **Jayaraman, S.**, Ballard, M., Sarter, N. B. (2007) Guiding visual attention by exploiting crossmodal spatial links: An application in air traffic control. *Proceedings of the Human Factors and Ergonomics Society 51st Annual Meeting*. Baltimore, MD. October.
9. Hameed, S., Ferris, T., **Jayaraman, S.**, and Sarter, N. (2006). Supporting interruption management through informative tactile and peripheral visual cues. *Proceedings of the Human Factors and Ergonomics Society 50th Annual Meeting*. San Francisco, CA. October.

10. Horn, D. B., Finholt, T. A., Birnholtz, J. P., Motwani, D., and **Jayaraman, S.** (2004). Six degrees of Jonathan Grudin: a social network analysis of the evolution and impact of CSCW research. *Proceedings of the 2004 ACM conference on Computer supported cooperative work*. New York, NY.

### **Invited Talks, Conference Presentations and Posters**

1. **Jayaraman, S.** & Smith, L.B. (2014). Early Visual Foundations for Acquiring Object Knowledge. Invited talk at Special Session: Dynamic Interactions Between Visual Experiences, Actions and Word Learning. IEEE International Conference on Development and Learning and on Epigenetics Robotics (ICDL\_EpiRob). Genova, Italy.
2. **Jayaraman, S.** & Smith, L.B. (2014). Early Visual Environments in an Indian Community. Poster presentation at Vision Sciences Society (VSS). St. Pete's Beach, Florida, USA.
3. **Jayaraman, S.**, Fausey, C. M., & Smith, L.B. (2013). Statistical regularities in infants' natural environments. Presentation at Cognitive Development Society (CDS). Memphis, TN, USA.
4. **Jayaraman, S.**, Fausey, C. M., & Smith, L.B. (2013). Changing Statistics of Visual Environments in the first two years. Presentation at Cognitive Science Society (CogSci). Berlin, Germany.
5. Fausey, C. M., **Jayaraman, S.**, & Smith, L. B. (2013). Big data for big questions: The structure of visual input in infants' early experience. Presentation at Society for Research in Child Development (SRCD). Seattle, WA, USA.
6. **Jayaraman, S.**, Fausey, C. M., & Smith, L.B. (2013). How do infants become face experts? Poster presentation at Visual Sciences Society (VSS). Naples, FL, USA.
7. Fausey, C. M., **Jayaraman, S.**, & Smith, L. B. (2012). What's in a scene? Everyday visual statistics in the first two years of life. Presentation at the International Society on Infant Studies (ISIS). Minneapolis, MN, USA.
8. **Jayaraman, S.**, Fausey, C. M., & Smith, L.B. (2012). Capturing the changing statistics in infant visual experience. Presentation at IEEE conference on Computer Vision and Pattern Recognition (CVPR). Boston, MA, USA.
9. **Jayaraman, S.** (2008). Taking science to underprivileged children around the world. Invited talk to the Society of Women Engineers. Ann Arbor, MI, USA.

### **Technical Reports and Published Documentation**

1. Sarter, N., Hameed, S., Jayaraman, S. and Ferris, T. (2006). Supporting preattentive reference and interruption management through multimodal notifications. Report prepared for NASA Johnson Research Center (under ESR&T (Exploration Systems Research and Technology) SISM (Software, Intelligent Systems, and Modeling) Project "Liaison Agents for Distributed Crew Interaction with Autonomous Control" (PI: Debra Schreckenghost). June.
2. Jayaraman, S., Severance, C., Finholt, T. (2004). CHEF Administration Guide. Document prepared for NEES (Network of Earthquake Engineering Simulation). September.

3. Horn, D. B., Finholt, T., Birnholtz, J., and Jayaraman, S. (2004). NEESgrid End User Quick-start Guide. Document prepared for NEES (Network of Earthquake Engineering Simulation). September.
  4. Jayaraman, S., Weymouth, T. (2004). Using Data Turbine Viewers. Document prepared for NEES (Network of Earthquake Engineering Simulation). September.
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## TEACHING

- Adjunct Lecturer, Indiana University** Jan 2011 - present  
Developmental Neuroscience  
(P457, Fall 2013, Spring 2014; Upper-level undergrad course)  
Human Factors and Ergonomics  
(P350, Spring and Fall 2011, Fall 2012, Spring 2013, Fall 2014; Upper-level undergrad course)
- Graduate Student Instructor, University of Michigan** Jan 2010 – Apr 2010  
Human Error & Complex System Failures (IOE 434, Winter 2010; Grad /Upper-level undergrad course)
- Graduate Teaching Assistant, University of Michigan** Sep 2009 – Dec 2009  
Cognitive Ergonomics (IOE 536, Fall 2009; Grad /Upper-level undergrad course)
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## FELLOWSHIPS AND AWARDS

- EUCog Coordination Council Award** (European Network for the Advancement of Artificial Cognitive Systems, Interaction and Robotics) 2014
- Indiana University Provost Travel Award** (Indiana University David E Clemmer) 2013
- Rackham Barbour Scholarship** (U of Michigan Levi. L. Barbour Endowment) 2010
- Raoul Wallenberg International Fellowship** (U of Michigan Wallenberg Endowment) 2007
- Dwight F. Benton Departmental Fellowship** (U of Michigan IOE Department) 2006 - 2007
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## REFERENCES

Available upon request: [swapnaa@indiana.edu](mailto:swapnaa@indiana.edu)