

Curriculum Vitae

Joshua M. Susskind

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Date of Birth: 20 Oct 1976

Citizenship: United States of America

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HIGHER EDUCATION AND QUALIFICATIONS

1995 – 2003 University of California, San Diego, B.S. Cognitive Science
2004 – 2005 University of Toronto, M.A., Psychology, Collaborative Program in Neuroscience
2005 – 2011 University of Toronto, Ph.D., Psychology

PROFESSIONAL EXPERIENCE

Research Assistantships

2001 – 2004 Research Associate, UC San Diego Institute for Neural Computation
2003 – 2004 Faculty Mentor Program, UC San Diego Cognitive Science
2010 Visiting Graduate Student, UC San Diego Institute for Neural Computation

Industry

2008 – 2009 Software Developer, Machine Perception Tech. <http://mpt4u.com>
2008 – 2009 Mathematical Algorithm Programmer, Flux, Inc. <http://fluxinc.ca>
1999 – 2001 Senior Programmer, Luth Research, Inc. <http://www.luthresearch.com>
1999 Software Developer, OTVnet, Inc. <http://www.otvnet.com>
1997 – 1999 Technical Support Staff, Salepoint, Inc. <http://www.salepoint.com>

TEACHING EXPERIENCE

2007 Instructor, Honours Statistics, University of Toronto, Department of Psychology

AWARDS

2009 Ontario Graduate Scholarship
2009 Elsevier/Vision Research Travel Award (VSS Student Travel Award)
2007 E.F. Burton and F.W. Burton Graduate Scholarship
2007 University of Toronto, Department of Psychology Travel Grant Award
2006 National Science Foundation Graduate Research Fellowship Competition, Honourable Mention
2004 Computer Vision and Pattern Recognition Travel Grant Award
2003 Instructional Assistant Excellence Award, UC San Diego, Cognitive Science

PUBLICATIONS

Refereed Journal Papers

1. West, G.L., Al-Aidroos, N., Susskind, J.M., and Pratt, J. (2010). Emotion and Action: The Effect of Fear on Saccadic Performance. *Experimental Brain Research*.
2. Chapman, H.A., Kim, D.A., Susskind, J.M, and Anderson, A.K. (2009). In Bad Taste: Evidence for the Oral Origins of Moral Disgust. *Science* 323(5918), p. 1222-1226.
3. Susskind, J.M., Lee, D.H., Cusi, A., Feiman, R., Grabski, W., and Anderson, A.K. (2008). Expressing fear enhances sensory acquisition. *Nature Neuroscience* 11, p. 843-850.
4. Ellamil, M., Susskind, J.M., and Anderson, A.K. (2008). Examinations of identity invariance in facial expression adaptation. *Cognitive, Affective, and Behavioral Neuroscience* 8(3), p.273-281.
5. Aviezer, H., Ran, H., Ryan, J., Grady, C., Susskind, J.M., Anderson, A.K., and Moscovitch, M. (2008). Angry, Disgusted or Afraid? Studies on the Malleability of Facial Expression Perception. *Psychological Science* 19(1), p. 724-732.
6. Susskind, J.M., Littlewort, G., Bartlett, M.S., Movellan, J.R., and Anderson, A.K. (2007). Human and computer recognition of facial expressions of emotion. *Neuropsychologia* 45(1), p. 152-162.

Refereed Conference Papers

7. Susskind, J.M., Memisevic, R., Hinton, G.E., & Pollefeys, M. (2011). Modeling the joint density of two images under a variety of transformations. *Proc. of Computer Vision and Pattern Recognition Conference (CVPR 2011)*, Colorado Springs, 2011.
8. Ranzato, M., Susskind, J.M., Mnih, V., & Hinton, G.E. (2011). On Deep Generative Models with Applications to Recognition. *Proc. of Computer Vision and Pattern Recognition Conference (CVPR 2011)*, Colorado Springs, 2011.
9. Nair, V., Susskind, J.M., and Hinton, G.E. (2008). Analysis-by-synthesis by Learning to Invert Generative Black Boxes. *Artificial Neural Networks – ICANN 2008*.
10. Littlewort, G., Bartlett, M., Fasel, I., Susskind, J.M., and Movellan, J.R. (2006). An automatic system for measuring facial expression in video. *Image and Vision Computing* 24(6), p. 615-625.
11. Movellan, J.R, Hershey, J., and Susskind, J.M. (2004). Large Scale Convolutional HMMs for Real Time Video Tracking. *Conference Proceedings: Computer Vision and Pattern Recognition*. 2004.
12. Littlewort, G., Bartlett, M. S., Fasel, I., Susskind, J.M., and Movellan, J.R. (2004). Dynamics of Facial Expression Extracted Automatically from Video. *Computer Vision and Pattern Recognition*. 2004.

Invited Journal Papers

13. Susskind, J.M., and Anderson, A.K. (2008). Facial expression form and function. *Communicative and Integrative Biology* 1(2).

Book Chapters

14. Susskind, J.M., Hinton, G.E., Movellan, J.R., and Anderson, A.K. (2008). Generating Facial Expressions with Deep Belief Nets. To appear in J. Or (ed.) *Affective Computing, Focus on Emotion Expression, Synthesis and Recognition*. ARS / I-tech Publishers.

Conference Posters and Demonstrations

1. Susskind, J.M., Anderson, A.K. (2009). An opponent-process model of facial expression perception. *Society for Neuroscience, Chicago, IL*.
2. Susskind, J.M., Hinton, G.E., and Anderson, A.K. (2008). Facial expression representation in deep belief networks. *Society for Neuroscience, Washington, D.C*.

3. Susskind, J.M., Ellamil, M., and Anderson, A.K. (2008). Emotional anti-faces: Recognition of facial expressions and their statistical opposites. *2008 Annual CNS Meeting, San Francisco, CA.*
4. West, G.L., Susskind, J.M., Anderson, A.K., & Pratt, J. (2007). Differential Prior Entry Effects are Produced by Schematic and Photographic Faces. *48th Annual Meeting of the Psychonomic Society, Long Beach, CA.*
5. Susskind, J.M., Lee, D., Cusi, A., & Anderson, A.K. (2007). Facing danger: Opposition in facial expression form reflects opposing sensory function. *Society for Neuroscience, San Diego, CA.*
6. Nair, V., Susskind, J.M., and Hinton, G.E. (2007). Inverting generative black boxes with breeder learning. *CVR Conference 2007, York University, Toronto, Ontario, Canada.*
7. Susskind, J.M., Movellan, J.R., Bartlett, M.S., Littlewort, G., and Anderson, A.K. (2007). Primary and secondary emotions: a computational analysis of facial expression structure and meaning. *2007 Annual CNS Meeting, New York, NY.*
8. Susskind, J.M., and Anderson, A.K. (2006). Structural similarity and antithesis in facial expressions. *Collaborative Program in Neuroscience, University of Toronto, 2006 Poster Day.*
9. Susskind, J.M., and Anderson, A.K. (2006). Evidence for structural similarity and antithesis in facial expressions. *2006 Annual CNS Meeting, San Francisco, CA.*
10. Susskind, J.M., Movellan, J.R., Bartlett, M.S., Littlewort, G., and Anderson, A.K. (2005). Comparison of Human and Computer Recognition of Facial Emotion. *2005 Annual CNS Meeting, New York, NY.*
11. Susskind, J.M., Hershey, J., and Movellan, J.R. (2004). Exact Inference in Robots Using Topographic Uncertainty Maps. *Third International Conference on Development and Learning.*
12. Susskind, J.M., Hershey, J., Fasel, I., Movellan, J.R. (2003). Real-time, Adaptive, Color-based Object Tracking Using Generative Models. *Joint Symposium on Neural Computation, Irvine, CA.*
13. Susskind, J.M., Movellan, J.R., and Hershey J. (2003). Real-time Object Recognition Demonstration. *Neural Information Processing Systems, Vancouver, Canada.*
14. Littlewort, G., Fasel, I., Susskind, J.M., Carlson, E., Cole, R., and Movellan, J.R. (2002). Emotion Mirror Demonstration. *Neural Information Processing Systems, Vancouver, Canada.*

PATENTS

Javier R. Movellan, Marian Stewart Bartlett, Gwen Ford Littlewort, Ian Fasel, John Hershey, Josh Susskind and Eric Carlson, *A method for Automatic Face Detection and Expression Recognition*, US Patent Application 10/871,494, Japan Application, 2004

TALKS AND INVITED LECTURES

- Susskind, J. M., & Anderson, A.K. (2010). Opponent coding of emotional facial categories. *Talk presented at the Cognitive Neuroscience Society Annual Meeting in April 2010.*
- Susskind, J. M., Ellamil, M., & Anderson, A. K. (2009). Emotional anti-faces reveal contrastive coding of facial expressions. *Talk presented at the Vision Science Society Annual Meeting in May 2009. Travel award.*
- Emotional anti-faces reveal contrastive coding of facial expressions. *Ebbinghaus Empire, Department of Psychology, University of Toronto, October 2008.*
- A triptych on facial expression analysis. *Guest lecture for undergraduate course in Visual Neuroscience, Department of Psychology, University of Toronto, March 2008.*
- Evidence for structural similarity and antithesis in facial expressions. *Master's Thesis Presentations, Department of Psychology, University of Toronto, March 2006.*
- Artefacts of Discrimination: Emergent Similarity Between Facial Expressions. *Ebbinghaus Empire Data Blitz, Department of Psychology, University of Toronto, March 2006.*
- Facing your anti-face: Synthesis and antithesis in facial emotion. *Social Personality Abnormal Meeting, Department of Psychology, University of Toronto, March 2006.*

Communication of emotion. *Guest lecture for undergraduate course in Neuroscience of Emotions, Department of Psychology, University of Toronto, November 2005, 2006, 2008.*

INTERDISCIPLINARY INITIATIVES

Co-founder of the “Synaesthetes Cognitive Science Discussion Group” in 2005