

## SHABNAM HAKIMI, Ph.D.

Curriculum Vita

Center for Cognitive Neuroscience  
Duke University  
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### EDUCATION

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- 2014      **Ph.D.**, Computation and Neural Systems  
California Institute of Technology (Pasadena, CA)
- 2006      **B.A.**, Psychology  
Stanford University (Stanford, CA)

### PROFESSIONAL EXPERIENCE

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- 06/2016 – present      **Postdoctoral Scholar**  
Center for Cognitive Neuroscience  
Duke University (Durham, NC)  
*Mentor:* R. Alison Adcock
- 04/2015 – 05/2016      **Postdoctoral Research Associate**  
Institute of Cognitive Science  
University of Colorado, Boulder (Boulder, CO)  
*Mentor:* R. McKell Carter
- 08/2013 – 01/2015      **Director**  
CaféWell Behavioral Labs  
Welltok (Denver, CO)
- 09/2008 – 08/2013      **Graduate Research and Teaching Fellow**  
Computation and Neural Systems  
California Institute of Technology (Pasadena, CA)  
*Committee:* Ralph Adolphs (Chair), Colin Camerer, John  
O'Doherty, Pietro Perona, & Shinsuke Shimojo
- 08/2006 – 07/2008      **Intramural Research Training Award Fellow**  
Genes, Cognition & Psychosis Program  
National Institute of Mental Health (Bethesda, MD)  
*Mentor:* Andreas Meyer-Lindenberg
- 05/2003 – 06/2006      **Research Assistant**  
Psychology  
Stanford University (Stanford, CA)  
*Mentors:* Philippe Goldin & James Gross

## PUBLICATIONS

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\* denotes equal contributions and shared first authorship

11. Mosner, MG, McLaurin, RE, Kinard, JL, **Hakimi, S**, Parelman, J, Shah, JS, Bizzell, J, Greene, RK, Addicott, MA, Carter, RM, & Dichter, GS. (Submitted). "Neural mechanisms of reward prediction error in Autism Spectrum Disorder."
10. Wang, S, Fan, S, Chen, B, **Hakimi, S**, Paul, LK, Zhao, Q, & Adolphs, R. (2016). "Revealing the world of autism through the lens of a camera." *Current Biology*, 26(20), R909-R910.
9. **Hakimi, S\***, Hare, TA\*. (2015). "Enhanced neural responses to imagined primary rewards predict reduced monetary temporal discounting." *Journal of Neuroscience*, 35(38), 13103-13109.
8. Hare, TA\*, **Hakimi, S\***, & Rangel, A. (2014). "Activity in dlPFC and its effective connectivity to vmPFC are associated with temporal discounting." *Frontiers in Neuroscience*, 8(50).
7. Zink, CF, Kempf, L, **Hakimi, S**, Rainey, CA, Stein, JL, & Meyer-Lindenberg, A. (2011). "Vasopressin modulates social recognition-related activity in the left temporoparietal junction in humans." *Translational Psychiatry*, 1(4), e3-5.
6. Tost, H, Kolachana, B, **Hakimi, S**, Lemaitre, H, Verchinski, BA, Mattay, VS, Weinberger, DR, & Meyer-Lindenberg, A. (2010). "Common alleles in *OXTR* impact prosocial temperament and human hypothalamic-limbic structure and function." *Proceedings of the National Academy of Sciences*, 107(31), 13936-13941.
5. Tost, H, Braus, DF, **Hakimi, S**, Hohn, F, Ruf, M, & Meyer-Lindenberg, A. (2010). "Acute D<sub>2</sub> receptor blockade induces, rapid, reversible remodeling in human cortical-striatal circuits." *Nature Neuroscience*, 13(8), 920-922.
4. Zink, CF, Stein, JL, Kempf, L, **Hakimi, S**, & Meyer-Lindenberg, A. (2010). "Vasopressin modulates medial prefrontal cortex-amygdala circuitry during emotion processing in humans." *Journal of Neuroscience*, 30(20), 7017-7022.
3. Tost, H, **Hakimi, S**, & Meyer-Lindenberg, A. (2009). "Magnetic resonance biomarkers in schizophrenia research." In Ritsner MS (ed.): *Handbook of neuropsychiatric biomarkers, endophenotypes, and genes: Promises, advances, and challenges*. Dordrecht, Springer, Chapter 23, 381-402.
2. Tost, H, **Hakimi, S**, & Meyer-Lindenberg, A. (2009). "Dopamine dysfunction in schizophrenia: From genetic susceptibility to cognitive impairment." In Iversen L, Iversen S (eds.): *Dopamine Handbook*. Oxford University Press, Chapter 10.4, 558-571.
1. Goldin, PR, Manber, T, **Hakimi, S**, Canli, T, & Gross, JJ. (2009). "Neural bases of social anxiety disorder: Emotional reactivity and cognitive regulation during social and physical threat." *Archives of General Psychiatry*, 66(2), 170-180.

## GRANTS & AWARDS

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- 2017 – present      **Ruth Kirchstein National Research Service Award (F32 NRSA)**  
National Institute of Mental Health  
*Project:* “Modeling the neurobehavioral basis of extrinsic and volitional motivation in ADHD”
- 2016 – 2017      **SciComm Fellow**  
Duke Initiative for Science and Society  
Duke University (Durham, NC)
- 2016      **Neurohackweek Fellow**  
University of Washington eScience Institute (Seattle, WA)
- 2016      **Application of Science Award Runner-Up**  
NeuroLeadership Institute (New York, NY)
- 2008 – 2013      **NSF Integrative Graduate Education and Research Traineeship (IGERT) Fellow**  
California Institute of Technology (Pasadena, CA)
- 2009      **Summer Institute in Cognitive Neuroscience Fellow**  
University of California, Santa Barbara (Santa Barbara, CA)
- 2009      **NSF/Caltech IGERT fMRI Award**  
California Institute of Technology (Pasadena, CA)
- 2008      **HealthEmotions Research Institute Symposium Scholar**  
University of Wisconsin Symposium on Emotion (Madison, WI)
- 2007      **HealthEmotions Research Institute Symposium Fellow**  
University of Wisconsin Symposium on Emotion (Madison, WI)
- 2006 – 2008      **Intramural Research Training Award**  
National Institute of Mental Health, NIH (Bethesda, MD)
- 2006      **HealthEmotions Research Institute Symposium Scholar**  
University of Wisconsin Symposium on Emotion (Madison, WI)
- 2006      **Undergraduate Research Programs Conference Travel Grant**  
Stanford University (Stanford, CA)
- 2005      **Vice Provost for Undergraduate Education Summer Research Grant**  
Stanford University (Stanford, CA)
- 2005      **HealthEmotions Research Institute Symposium Scholar**  
University of Wisconsin Symposium on Emotion (Madison, WI)
- 2004      **Vice Provost for Undergraduate Education Summer Research Grant**  
Stanford University (Stanford, CA)

## INVITED TALKS

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**Hakimi, S.** “Modeling the neural basis of individual differences in intertemporal choice.” (August 2016). Presented at the Central Institute of Mental Health (ZI), Mannheim, Germany.

## CONFERENCE PRESENTATIONS

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‡ denotes talk

32. **Hakimi, S.** MacInnes, J, Dickerson, K, & Adcock, RA. (November 2017). “Modeling learning from real-time fMRI neurofeedback.” Presented at the Third International Meeting on Real-Time Functional Imaging and Neurofeedback, Nara, Japan.
31. **Hakimi, S.** “Neural correlates of cognitive control as a function of emergent automaticity.” (October 2017). Presented at the Annual Meeting of the Society for Neuroeconomics, Toronto, Canada.
30. **Hakimi, S.** “Neural correlates of cognitive control as a function of emergent automaticity.” (June 2017). Presented at the 3<sup>rd</sup> Multidisciplinary Meeting on Reinforcement Learning and Decision Making, Ann Arbor, MI.
29. ‡ **Mozer, MC, Sukumar, S, Elliott-Williams, C, Hakimi, S, & Ward AF.** “Overcoming temptation: Incentive design for intertemporal choice.” (June 2017). Presented at the 3<sup>rd</sup> Multidisciplinary Meeting on Reinforcement Learning and Decision Making, Ann Arbor, MI.
28. **Hakimi, S,** Clithero, JA, Mullette-Gillman, OA, Smith, DV, McLaurin, RE, Taren, A, Venkatraman, V, Huettel, SA, & Carter, RM. (April 2017). “Decomposing risk representation in parietal cortex.” Presented at the 3<sup>rd</sup> Annual Meeting of the Triangle Chapter of the Society for Neuroscience, Cary, NC.
27. Carter, RM, **Hakimi, S,** Parelman, JM, Law, JR, Skene, JAG, Vidmar, N, Beskind, DH, Pearson, JM, & Skene, JHP. (November 2016). “Theory of mind regions of the brain track evidence of guilt in mock criminal scenarios.” Presented at the Annual Meeting of the Society for Neuroscience, San Diego, CA.
26. **Hakimi, S,** Clithero, JA, Mullette-Gillman, OA, Smith, DV, McLaurin, RE, Taren, A, Venkatraman, V, Huettel, SA, & Carter, RM. (August 2016). “Decomposing risk representation in parietal cortex.” Presented at the Annual Meeting of the Society for Neuroeconomics, Berlin, Germany.
25. **Hakimi, S,** Ward, AF, Sukumar, S, Elliott-Williams, C, & Mozer, MC. (August 2016). “Optimizing incentive design for intertemporal choice.” Presented at the Annual Meeting of the Society for Neuroeconomics, Berlin, Germany.
24. Jung, H, Mosner, MG, McLaurin, RE, **Hakimi, S,** Parelman, JM, Kinard, J, Chakraborty, P, Dicther, GS, & Carter, RM. (May 2016). “Co-opted social cognitive neural substrates in autism during strategic gameplay.” Presented at the Annual Meeting of the Society of Biological Psychiatry, Atlanta, GA.

23. ‡ Jung, H, Mosner, MG, McLaurin, RE, **Hakimi, S**, Parelman, JM, Kinard, J, Chakraborty, P, Dichter, GS, & Carter, RM. (April 2016). "Testing for co-opted higher-order social cognition in autism." Presented at the Annual Convention of the Rocky Mountain Psychological Association, Denver, CO.
22. Parelman, JM, Foster, JM, Fairley, K, **Hakimi, S**, Jones, M, & Carter, RM. (October 2015). "Social balloon analog risk task: Competitive and cooperative rule effects on decision making." Presented at the Annual Meeting of the Society for Neuroeconomics, Miami, FL.
21. ‡ Israelsen, B, Ward, AF, Smith, I, Sukumar, S, **Hakimi, S**, Lynch, J, Mozer, M. "Overcoming temptation: Theory and practice." (April 2015). Presented at the Institute of Cognitive Science Colloquium, Boulder, CO.
20. **Hakimi, S**, Hare, TA, & Rangel, A. (October 2011). "Variations in discount rates are associated with differences in the ability to imagine future rewards." Presented at the Annual Meeting of the Society for Neuroeconomics, Evanston, IL.
19. **Hakimi, S**, Hare, TA, & Rangel, A. (March 2011). "Variations in discount rates are associated with differences in the ability to imagine future rewards." Presented at the NYAS Meeting discussing the Critical Contributions of the Orbitofrontal Cortex to Behavior, New York, NY.
18. **Hakimi, S**, Hare, TA, & Rangel, A. (April 2011). "Variations in discount rates are associated with differences in the ability to imagine future rewards." Presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.
17. Zink, CF, Kempf, LK, **Hakimi, S**, Stein, JS, & Meyer-Lindenberg, A. (November 2010). "Vasopressin effects on the neural correlates of social recognition." Presented at the Annual Meeting of the Society for Neuroscience, San Diego, CA.
16. Tost, H, Braus, DF, **Hakimi, S**, Hohn, F, Ruf, M, & Meyer-Lindenberg, A. (June 2010). "Acute D<sub>2</sub> receptor blockade induces, rapid, reversible remodeling in human cortical-striatal circuits." Presented at the Annual Meeting of the Organization for Human Brain Mapping, Barcelona, Spain.
15. Tost, H, Braus, DF, **Hakimi, S**, Hohn, F, & Meyer-Lindenberg, A. (December 2009). "A rapid, reversible neuroplasticity mechanism in humans reflects acute extrapyramidal side effects." Presented at the Annual Meeting of the American College of Neuropsychopharmacology, Hollywood, FL.
14. Zink, CF, Kempf, LK, Stein, JS, **Hakimi, S**, & Meyer-Lindenberg, A. (October 2009). "Effects of vasopressin on mPFC-amygdala circuitry during fearful face processing in humans." Presented at the Annual Meeting of the Society for Neuroscience, Chicago, IL.
13. Zink, CF, Kempf, LK, **Hakimi, S**, Rainey, CA, Stein, JS, & Meyer-Lindenberg, A. (June 2009). "Effects of vasopressin on mPFC-amygdala circuitry during fearful face processing in humans." Presented at the Annual Meeting of the Organization for Human Brain Mapping, San Francisco, CA.

12. Jansma, JM, **Hakimi, S**, Tong, Y, Zink, CF, & Meyer-Lindenberg, A. (May 2008). "Trial by trial interaction effects in visual cortex and amygdala: Application of an fMRI method sensitive for non-linear effects." Presented at the Annual Meeting of the Society of Biological Psychiatry, Washington, DC.
11. ‡ Jansma, M, **Hakimi, S**, Fukunaga, M, Duyn, J, & Meyer-Lindenberg, A. (November 2007). "An fMRI study of trial-by-trial interaction effects in fusiform gyrus and amygdala." Presented at the Annual Meeting of the Society for Neuroscience, San Diego, CA.
10. **Hakimi, S**, Kempf, LP, Kolachana, B, Verchinski, BA, Tong, Y, Mattay, VS, Weinberger, DR, & Meyer-Lindenberg, A. (November 2007). "fMRI investigation of the impact of genetic variation in *Pten* on the neural correlates of face emotion processing." Presented at the Annual Meeting of the Society for Neuroscience, San Diego, CA.
9. Zink, CF, Tong, Y, Chen, Q, **Hakimi, S**, Rainey, C, Stein J, Laumann, T, Kempf, L, & Meyer-Lindenberg, A. (November 2007). "A comparison of the neural representation of social and non-social hierarchies in humans." Presented at the Annual Meeting of the Society for Neuroscience, San Diego, CA.
8. **Hakimi, S**, Kempf, LP, Kolachana, B, Stein, JL, Verchinski, BA, Mattay, VS, Weinberger, DR, & Meyer-Lindenberg, A. (June 2007). "Voxel-based morphometry investigation of the impact of genetic variation in *Pten*." Presented at the Annual Meeting of the Organization for Human Brain Mapping, Chicago, IL.
7. **Hakimi, S**, Kempf, LP, Kolachana, B, Stein, JL, Verchinski, BA, Mattay, VS, Weinberger, DR, & Meyer-Lindenberg, A. (May 2007). "Voxel-based morphometry investigation of the impact of genetic variation in *Pten*." Presented at the Posbaccalaureate IRTA Research Festival, Bethesda, MD.
6. Rainey, CA, Zink, CF, Draper, CK, Chen, Q, Stein, JL, Kempf, L, Tong, Y, Swaddle, JP, **Hakimi, S**, Laumann, T, & Meyer-Lindenberg, A. (October 2006). "Neural processing of facial cues of gonadal steroid status in humans." Presented at the Annual Meeting of the Society for Neuroscience, Atlanta, GA.
5. ‡ **Hakimi, S**, Goldin, PR, & Gross, JJ. (October 2006). "fMRI investigation of extraversion and self-referential processing in social phobia." Presented at the Annual Meeting of the Society for Neuroscience, Atlanta, GA.
4. ‡ **Hakimi, S**, Goldin, PR, Ramel, WE, & Gross, JJ. (May 2006). "Neural mechanisms of emotion regulation in social anxiety disorder." Presented at the Annual Meeting of the Society of Biological Psychiatry, Toronto, Canada.
3. **Hakimi, S**, Goldin PR, & Gross, JJ. (April 2006). "MRI investigation of positive self-referential processing in social anxiety disorder." Presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.
2. **Hakimi, S**, Goldin PR, & Gross, JJ. (January 2006). "fMRI investigation of neuroticism and self-referential processing." Presented at the Annual Meeting of the Society for Personality and Social Psychology, Palm Springs, CA.

1. Goldin, PR, Anderson, BA, **Hakimi, S**, Hutcherson, CAC, & Gross, JJ. (April 2005). "Temporal dynamics of emotion responses: Affective chronometry of neural, autonomic and subjective emotion experience in response to sad and amusing films." Presented at the Annual Meeting of the Cognitive Neuroscience Society, New York, NY.

## **TEACHING**

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Fall 2011	<b>Guest Lecturer &amp; Curriculum Designer</b> CNS/Bi/Ph 107: Writing About Scientific Research California Institute of Technology (Pasadena, CA)
Fall 2009	<b>Teaching Assistant</b> Bi/CNS 150: Introduction to Neurobiology California Institute of Technology (Pasadena, CA)
Summer 2009	<b>Teaching Assistant</b> Wellcome Trust School on the Biology of Social Cognition Wellcome Trust Conference Center (Hinxton, Cambridge, UK)

## **PROFESSIONAL SERVICE & OUTREACH**

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01/2017 – present	<b>Communications Committee</b> <b>Student &amp; Postdoc SIG Executive Committee</b> Organization for Human Brain Mapping
06/2016 – present	<b>Co-founder</b> Women in Science and Business Discussion Group Duke Institute for Brain Sciences Duke University (Durham, NC)
03/2017 – 05/2017	<b>Guest Instructor &amp; Curriculum Designer</b> Upper school course, <i>Decision Making</i> Carolina Friends School (Durham, NC)
03/2012 – 04/2013	<b>Presenter</b> Reel Science at Caltech California Institute of Technology (Pasadena, CA)
10/2006 – 07/2007	<b>Clinical Volunteer</b> Behavioral Health & Ortho/Neuro Trauma Units Suburban Hospital (Bethesda, MD)

## REVIEWER

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*Computational Psychiatry*  
*Experimental Brain Research*  
*Journal of Experimental Psychology: Learning, Memory, and Cognition*  
*Memory and Cognition*  
*Psychological Science*  
*Social, Cognitive, and Affective Neuroscience*  
OHBM Conference Abstracts (2010-2011, 2016-2018)

## PROFESSIONAL MEMBERSHIPS

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Association for Psychological Science  
Cognitive Neuroscience Society  
Organization for Human Brain Mapping  
Society for Affective Neuroscience

Society for the Improvement of  
Psychological Science  
Society for Neuroeconomics  
Society for Neuroscience

## REFERENCES

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R. Alison Adcock, M.D., Ph.D.  
Associate Professor  
Psychiatry and Behavioral Sciences  
Duke University  
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Todd Hare, Ph.D.  
Associate Professor  
Economics  
University of Zurich  
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Ralph Adolphs, Ph.D.  
Professor  
Psychology and Neuroscience  
California Institute of Technology  
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Andreas Meyer-Lindenberg, M.D., Ph.D.  
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R. McKell Carter, Ph.D.  
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