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### Professional experience

2004 – present    Assistant Professor of Psychology, Columbia University

### Education

1992-1996        Principia College, Elmhurst, IL

B. A. with Highest Honors, Music

1997-1998        Postgraduate Research Assistant, University of Colorado, Boulder

1998-2003        University of Michigan, Ann Arbor

Ph.D. Candidate in Psychology, Cognition and Perception Area

Certificate program in Cognitive Science & Cognitive Neuroscience

2003              Ph. D., Psychology, University of Michigan

### Awards and Fellowships

1992              AP Scholar with Honors

1992 – 1996      Principia College Trustee Scholarship (full tuition)

1992 – 1996      National Merit Scholarship

1996              Marion L. Ackley Music Award (music theory and research)

1998 – 2000      Regents' Fellowship, University of Michigan

1999              Nat'l Defense Science and Engineering Graduate Fellowship, Honorable

## Mention

- 1999 – 2002 National Science Foundation Graduate Research Fellowship
- 2001 Patricia Gurin Distinguished Lecture Award, U of Michigan
- 2002 Trainee Travel Award, Human Brain Mapping
- 2003 Graduate Students' Present lecture, Annual Meeting of the Cognitive Neuroscience Society

## Grants

Mind, Brain, Body, Brain and Health Research Group, *Human Mu-opiate Activity in Thermal Pain and Placebo as Measured by [11-C]carfentini PET*, 2003-current. Edward E. Smith, P.I., Co-Investigator (\$54,000 direct costs).

Mind, Brain, Body, Brain and Health Research Group, *Neural Correlates of Expectancy and Pain in the Placebo Response*, 2002. Edward E. Smith, P.I., Co-Investigator (\$28,000 direct costs).

University of Michigan Internal Research Grant, *The Neural Bases of Reward and Working Memory*, 2000 – 2002. Stephan F. Taylor, P.I., Co-Investigator (\$9,000 direct costs).

## Peer-reviewed Research Publications

1. Miyake, A., Friedman, N. P., Emerson, M. J., Witzki, A. H., Howerter, A., & Wager, T.D. (2000). Fractionating the Central Executive: Evidence for Separability of Executive Functions. *Cognitive Psychology*, 41, 49-100.
2. Phan, K. L., Wager, T. D., Taylor, S. F., & Liberzon, I. (2002). Functional Neuroanatomy of Emotion: A Meta-Analysis of Emotion Activation Studies in PET and fMRI. *Neuroimage*, 16, 331-348.
3. Sylvester, C.-Y. C., Wager, T. D., Lacey, S. C., Jonides, J., Smith, E. E., Hernandez, L., & Nichols, T. E. (2003). Switching attention and resolving interference: fMRI measures of executive functions. *Neuropsychologia*, 41, 357-370.
4. Wager, T. D. & Nichols, T. E. (2003) Optimization of Experimental Design in fMRI: A General Framework Using a Genetic Algorithm. *Neuroimage*, 18, 293-309.

5. Wager, T. D., Phan, K. L., Liberzon, I., & Taylor, S. F. (2003). Valence, gender, and lateralization of functional brain anatomy in emotion: A meta-analysis of findings from neuroimaging. *Neuroimage*, 19, 513-531.
6. Wager, T. D. & Smith, E. E. (2003). Neuroimaging and working memory: A meta-analysis. *Cognitive, Affective, and Behavioral Neuroscience*, in press.
7. Wager, T. D., Rilling, J., Smith, E. E., Sokolik, A., Casey, K., Kosslyn, S. M., Davidson, R.J., Rose, R. M., Cohen, J. D. (2004). Placebo-induced changes in fMRI in the anticipation and experience of pain. *Science*, 303, 1162-1167.
8. Taylor, S. F., Welsh, R. C., Wager, T. D., Phan, K. L., Fitzgerald, K. D., & Gehring, W. J. (2004). A functional neuroimaging study of motivation and executive function. *Neuroimage*, 21(3), 1045-1054.
9. Phan, K. L., Wager, T. D., Taylor, S. F., and Liberzon, I. Functional neuroimaging of emotion. *CNS Spectrums*, in press.

## Book Chapters

1. Hernandez, L., Wager, T.D., & Jonides, J. (2002). Introduction to Functional Brain Imaging. In John Wixted and Hal Pashler (Eds.), *Stevens Handbook of Experimental Psychology, Third Edition, Volume 4: Methodology in Experimental Psychology*. New York: John Wiley and Sons, Inc.
2. Jonides, J., Wager, T.D., & Badre, D.T. (2002). Neuroimaging Studies of Memory. In *Encyclopedia of the Human Brain*. San Diego: Academic Press.
3. Jonides, J., Sylvester, C.-Y. C., Lacey, S .C., Wager, T. D., Nichols, T.E. and Awh, E. (in press). Modules of Working Memory. In R. H. Kluwe, G. Luer, and F. Rosler (Eds.). *Principles of Working Memory*. Boston: Birkhaeuser Publishing Ltd.

## Manuscripts under review

1. Wager, T. D., Jonides, J., Reading, S. Neuroimaging studies of shifting attention: A meta-analysis. (submitted).
2. Wager, T. D., Sylvester, C. C., Lacey, S., Nee, D. E., Franklin, M. S. Neural mechanisms of response inhibition revealed by fMRI. (submitted).

4. Keller, M. C., Fredrickson, B. L., Ybarra, O., Cote, S., Johnson, K., Mikels, J., and Wager, T. A warm heart and a clear head: The effects of weather on human mood and cognition (submitted).

## Manuscripts in preparation

1. Wager, T. D., Hernandez, L., Vasquez, A., Nichols, T., and Noll, D. C. Accounting for nonlinear BOLD effects in fMRI: Parameter estimates and model for accurate prediction in variable-duration blocked and rapid event-related studies. (in preparation).
2. Wager, T. D., Smith, E. E., and Jonides, J. Spatial and non-spatial attention shifting: A factorial event-related fMRI study. (in preparation).
3. Wager, T. D., Jonides, J., Smith, E. E., Hernandez, L., and Noll, D. C. Response conflict and cognitive control: Item and set-related processes in a Stroop-like event-related fMRI task. (in preparation).
4. Wager, T. D., Gehring, W., Smith, E. E., Jonides, J., & Bryck, R. Training and Cognitive Control: Evidence for a Two-Factor Theory of Inhibition. (in preparation)

## Posters and Presentations at Scientific Meetings

1. Wager, T. D., Greenberg, A., & Healy, A.F. Training, imageability, and contextual interference in a free recall task. Poster presented at the annual convention of the American Psychological Society, 1999.
2. Wager, T. D. & O'Reilly, R.C. A computational simulation of the thalamic reticular nucleus in perceptual selection. Poster presented at the annual meeting of the Cognitive Neuroscience Society, San Francisco, CA, 1999.
3. Wager, T. D., Smith, E. E., Jonides, J., & Bryck, R. Training and Cognitive Control: Evidence for a Two-Factor Theory of Inhibition. Poster presented at the Annual Meeting of the Psychonomic Society, November, 2000.
4. Wager, T. D., Phan, K. L., Taylor, S. F., & Liberzon, I. Functional Neuroanatomy of Emotion: A Meta-Analysis of Emotion Activation Studies in PET and fMRI. Poster presented at the 1<sup>st</sup> Annual Social Cognitive Neuroscience Conference, Los Angeles, CA, May 2001.

5. Wager, T. D., Noll, D. C., Hernandez, L., Nichols, T. E., Bryck, R., Smith, E. E., & Jonides, J. Characterizing Nonlinear Bold Responses in Human Visual Cortex. Poster presented at the Annual Meeting of the Organization for Human Brain Mapping, Brighton, U.K., June 2001.
6. Taylor S. F., Welsh R., Wager, T. D., Decker, L. R., Phan, K. L., Fitzgerald, K. D., Gehring, W. Neural substrates of motivation for working memory. Poster presented at the Annual Meeting of the Society for Neuroscience, San Diego, CA, November 2001.
7. Phan, K. L., Wager, T. D., Taylor, S. F., & Liberzon, I. Functional Neuroanatomy of Emotion: A Meta-Analysis of Emotion Activation Studies in PET and fMRI. Poster presented at the Annual Meeting of the Society for Neuroscience, San Diego, CA, November 2001.
8. Sylvester, C. C., Wager, T. D., Jonides, J., Lacey, S. C., Cheshin, A., & Nichols, T. E. Processes of Interference Resolution as Revealed by Functional Magnetic Resonance Imaging. Poster presented at the Annual Meeting of the Cognitive Neuroscience Society, April, 2002.
9. Wager, T. D., Jonides, J., Smith, E. E., Hernandez, L., Bryck, R., Nichols, T. E., Sylvester, C. C., Lacey, S. C., and Noll, D. C. Response conflict and cognitive control: Item and set-related processes in a Stroop-like task. Poster presented at the Annual Meeting of the Cognitive Neuroscience Society, April, 2002.
10. Wager, T. D. and Nichols, T. Optimization of Experimental Design in fMRI: A General Framework Using a Genetic Algorithm. Platform Presentation given at the Annual Meeting of the International Society for Magnetic Resonance in Medicine, May 2002.
11. Wager, T. D. and Nichols, T. Optimization of Experimental Design in fMRI: A General Framework Using a Genetic Algorithm. Poster and Platform Presentation given at the Annual Meeting of the Organization for Human Brain Mapping, May 2002.
12. J.Jonides, C.C.Sylvester, J.C.Christensen, A.A.Thomas, T.D.Wager, J.K.Kroger, T.A.Salthouse, D.Badre, E.E.Smith. Brain activations in the trail making test measured by fMRI. Program No. 222.4. 2002 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2002. CD-ROM.

13. T.D.Wager, K.L. Phan, I. Liberzon, S.F. Taylor. Valence, gender, and lateralization of functional brain anatomy in emotion: A meta-analysis of findings from neuroimaging. Program No. 381.10. 2002 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, November 2002. CD-ROM.
14. T. D. Wager, E. E. Smith, J. Jonides. Tracking relevant information in the brain: An fMRI study of multiple subtypes of attention switching. Paper presented at the Annual Meeting of the Cognitive Neuroscience Society, March 2003.
15. Nelson, James K., Reuter-Lorenz, P., Sylvester, C. C., Jonides, J., Smith, E. E., Wager, T. D. Dissociating response-based and familiarity-based mechanisms of conflict. Poster presented at the Annual Meeting of the Cognitive Neuroscience Society, March 2003.
16. Wager, T. D., Smith, E. E., Casey, K., Sokolik, A., Granovsky, Y., Cohen, J. D., Rilling, J., Davidson, R.J., and Rose, R. Placebo reduces the BOLD fMRI response in the anticipation and experience of thermal pain. Poster presented at the Annual Meeting of the Organization for Human Brain Mapping, June 2003.

## Memberships in Professional Societies

Cognitive Neuroscience Society  
International Society for Magnetic Resonance in Medicine  
Organization for Human Brain Mapping

## Professional Service

Ad-Hoc Reviewer:

*Brain Research*  
*Cerebral Cortex*  
*Emotion*  
*Journal of Cognitive, Affective, & Behavioral Neuroscience*  
*Neuroimage*  
*Psychiatry Research: Neuroimaging*  
*Psychological Science*

Committees:

- 2002 Admissions committee, Cognition and Perception, University of Michigan
- 2001-2004 fMRI Center operations committee, University of Michigan
- 2004 Institutional review board (IRB), Columbia University

## Teaching Activities

- Fall 2001 Advanced Cognitive Lab. Taught experimental design and statistics. *Graduate Student Instructor*.
- Winter 2001 Human Neuroanatomy. Core requirement for University of Michigan Neuroscience Ph.D. students. Lecturer and lab instructor. *Graduate Student Instructor*.
- Winter 2001 Mind and Brain. Introductory course for undergraduates. *Consultant*.
- July 2001 Neuroanatomy for Cognitive Scientists. A two-week workshop for students and faculty co-instructed with Dr. Jeffrey Hutsler. *Co-instructor*.
- 2001 - 2002 Functional Neuroimaging Methods. *Lecturer*: experimental design for fMRI; *Lab instructor*: experimental design and programming lab.
- Winter 2002 Human Neuroanatomy. *Guest lecturer*: Higher Cognitive Functions.
- Winter 2003 Multivariate Statistics. Core requirement for University of Michigan Psychology Ph. D. students. *Graduate Student Instructor*.
- Winter 2004 The Neuroscience of Cognitive and Emotional Control. Columbia University seminar. *Instructor*.
- Methods and Issues in Cognitive Neuroscience: fMRI Methods. Columbia University seminar. *Co-instructor with Dr. Kevin Ochsner*