

CURRICULUM VITAE

Sara C. Mednick, PhD

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Healthcare System, Laboratory of Sleep and Behavioral Neuroscience
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Education

1990-1994	Bard College, Annandale-on-Hudson, NY,	B.A. Drama/Dance
1992-1993	Charles University, Prague, Czech Republic,	19 th cent. Literature
1997-2003	Harvard University, Cambridge, MA Advisors: Ken Nakayama and Robert Stickgold	Ph.D. Psychology
2003-2006	Salk Institute for Biological Studies Advisors: Geoffrey Boynton and Sean Drummond	Post-doc

Positions and Employment

1996 – 1997	Research Assistant, Dr James C.Y. Chou, Department of Psychiatry, New York University, Bellevue Hospital, NY
1996 – 1997	Internship, Dr Mark Serper, New York University Bellevue Hospital, NY
1996 – 1997	Internship, Dr Cynthia Green, Mt Sinai Hospital, NY
1998 – 1999	Research Assistant, Dr Phil Holzman, Department of Psychology, Harvard University, Mclean Hospital, Belmont, MA,
2003 – 2006	Research Fellow: The Salk Institute for Biological Studies, Systems Neurobiology Lab, (Geoffrey M. Boynton: mentor), University of California San Diego and Veterans Affairs San Diego Health Care System, The Laboratory for Sleep and Behavioral Neuroscience (Sean P.A. Drummond: mentor)
2007-2007	Assistant Project Scientist, Department of Psychiatry, UCSD
2007-Present	Assistant Professor, Department of Psychiatry, UCSD

Teaching Experience

Spring 2002	Vision and the Brain, Teaching assistant, Harvard University
Fall 2003	Adaptation: What is it good for?, Seminar organizer, Salk Institute for Biological Studies
Summer 2004	Physiological Psychology, Guest lecturer, UCSD Psychology Department
Spring 2006	Advanced biology of sleep oscillations, Guest lecturer, UCSD Neuroscience Department
Fall 2007	Oasis Adult Education (Lecturer)
Fall 2007	Sleep Lecturer for UCSD Medical School
Fall 2008	Sleep Lecturer for UCSD Medical School
Spring 2009	Sleep Lecture for Circadian Rhythms UCSD
Spring 2010	Sleep Lecture for UCSD Medical School

Awards

- Fall 2004 Society for Research Fellows Speaker Award 2004, Salk Institute of Biological Studies La Jolla, CA
- Summer 2005 APSS conference travel award
- Summer 2006 APSS conference abstract excellence award

Professional Society Memberships

- 2000 - Present Society for Neuroscience
- 2000 - Present Vision Sciences Society
- 2003 – Present Sleep Research Society

Manuscripts

Published

- 1) **Mednick SC**, Nakayama K, Cantero JL, Atienza M, Levin AA, Pathak N, Stickgold R, “The Restorative Benefit of Naps on Perceptual Deterioration,” *Nature Neuroscience*, July 2002.
 - 2) **Mednick SC.**, Nakayama K., Stickgold R. “Sleep-dependent Learning: A Nap is as Good as a Night,” *Nature Neuroscience*, July 2003.
 - 3) **Mednick SC**, Drummond SPA, “Sleep: A Prescription for Insight?” *INSOM*, Summer 2004, Issue 3, 26-29.
 - 4) Schiffman J, Pestle S, **Mednick SC**, Eckstrom M, Sorenson H, Mednick SA, “Childhood laterality and adult schizophrenia spectrum disorders: A prospective study.” *Schizophrenia Research* 2005 Jan 1;72(2-3):151-60.
 - 5) **Mednick SC**, Arman AC, Boynton GM, “The time course and specificity of perceptual deterioration” *Proceedings from the National Academy of Sciences USA* 2005 Mar 8;102(10):3881-5. Epub 2005 Feb 24.
 - 6) Drummond SP, Bischoff-Grethe A, Dinges DF, Ayalon L, **Mednick SC**, Meloy MJ. The neural basis of the psychomotor vigilance task. *Sleep*. 2005 Sep 1;28(9):1059-68.
 - 7) **Mednick SC**, Drummond SPA, Boynton GM, Awh E, Serences J, Sleep-Dependent Learning and Practice-Dependent Deterioration on an Orientation Discrimination Task, *Behavioral Neuroscience*, 2008, Vol. 122, No. 2, 267–272.
 - 8) **Mednick SC**, Drummond SPA, Arman AC, Boynton GM, Perceptual Deterioration is reflected in the neural response: an fMRI study between nappers and non-nappers. *Perception*, 2008, volume 37, pages 1086-1097.
 - 9) **Mednick SC**, Kanady J, Cai D, Drummond SPA, Comparing the benefits of Caffeine, Naps and Placebo on Verbal, Motor, and Perceptual Memory. *Behavioral Brain Research*, 193 (2008) 79–86.
 - 10) **Mednick SC**, Makovski T, Cai D, Jiang Y, Nap-dependent implicit spatial learning in contextual cueing. 2009, *Vision Research* (2009) April 18.
 - 11) Cai D, Mednick SA, Kanady J, Drummond SPA, **Mednick SC**, Priming Associative Networks: REM, Not Incubation, Improves Creativity. *Proceedings from the National Academy of Sciences USA* June (2009).
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- 12) **Mednick SC**, Christakis NA, Fowler JH The Spread of Sleep Loss Influences Drug Use in Adolescent Social Networks. PLoS ONE 5: e9775 (2010).
- 13) Kanady J, Drummond SPA, **Mednick SC**, The Influence of Prior Sleep (Actigraphy) on Sleep Stages (PSG) During a Nap in Healthy Well-Rested Adults. Journal of Sleep Research (2010) (in press)
- 14) **Mednick SC** and Alaynick WA, Comparing models of sleep-dependent memory consolidation, Journal of Experimental and Clinical Medicine (2010) (in press).
- 15) Reith C, Cai D, McDevitt EA, **Mednick SC**, “The role of sleep and practice on explicit and implicit motor memory consolidation. 2010 (in press)

In Review

- 16) Harrison L., **Mednick SC.**, and Gorman M. The Influence of Light on Sleep Quality and Architecture during Daytime Sleep.
- 17) **Mednick SC**, Cai D, Wixted J, A multidisciplinary approach to understanding cellular and systems consolidation.
- 18) McDevitt EA, Alaynick WA, and **Mednick SC**, Differences in Sleep in Habitual and Non-Habitual Nappers.

In Preparation

- 19) Jung Y, Huber D, Cai DJ and **Mednick SC**, REM sleep enhances salience of hits, not misses, in a creativity task.
- 20) Gupta N, **Mednick SC**, Jung Y and Huber D, The road less traveled: The detrimental role of fluency in creativity.
- 21) **Mednick SC**, Kanady JC, McDevitt EA, Drummond SPA. Pharmacological enhancement of sleep stages in a nap: A dose-dependent study
- 22) **Mednick SC** & Brady MJ, Novel object learning depends on rapid eye movement sleep.
- 23) **Mednick SC**, REM sleep prevents interference in the texture discrimination task.

Chapters

1. Mednick SC, Drummond SPA, “Sleep Function: Napping” in *The New Encyclopedia of Neuroscience* eds. Squire L, Albright T, Elsevier London, 2006.
2. Mednick SC, “Sleep and Dreams” in *Encyclopedia of Perception* E. Bruce Goldstein, Editor, Sage Publications, 2009.

Books

Take a Nap! Change Your Life. Workman Publishers, December 2006

Research Support

Grants/Fellowships

2003 – 2006 Recipient: National Research Service Award, (NIH/NEI # F32 EY015564-01)

2006 – 2007 Defense Advanced Research Projects Agency (DARPA) one-year seedling grant “Comparing the effects of Modafinil, Napping and Caffeine on perceptual learning and deterioration.”

2007-2012 Principal Investigator: K01 Career Development Award (K01MH080992 – 01)

2008-2009 Academic Senate Award

Review Contributions

Grants

2004 Reviewer for Austrian Science Fund
2004 Reviewer for Israeli Science Foundation
2008-2010 National Science Foundation

Manuscripts

Proceedings from the National Academy of Science
Sleep Journal
Psychological Science
Vision Research
Journal of Vision
Journal of Sleep Research
PLOS
Journal of Neuroscience
Neuroscience Research
Frontiers of Neuroscience

Abstracts

- 1) "The Emotional Stroop and Schizophrenia, comparing positive and negative symptoms," Society for Research in Psychopathology, Atlanta, GA, 1997.
 - 2) "Schizophrenia, Laterality, and the Anti-saccade Task," Society for Research in Psychopathology, Palm Springs, CA, 1998.
 - 3) "Sustained Fixation as a Measure of Vigilance in Schizophrenia," International Congress on Schizophrenia Research, Santa Fe, New Mexico, 1999.
 - 4) "Rapid Learning and Unlearning of Context in Priming of Pop-out," Association for Research in Vision and Ophthalmology, Ft. Lauderdale, Florida, 2000.
 - 5) "Implicit Memory for Spatial-context in Schizophrenic Patients," Society for Neuroscience, New Orleans, LA, 2000.
 - 6) "From Features to Spatial Maps: Implicit Memory Investigated in Schizophrenia," International Congress on Schizophrenia Research, Whistler, British Columbia, Canada, 2001.
 - 7) "From Features to Spatial Maps: Implicit Memory Investigated in Schizophrenia," International Congress on Schizophrenia Research, Whistler, British Columbia, Canada, 2001.
 - 8) "Benefit of Nap is Retinotopically Specific," Vision Sciences Society, Sarasota, FLA., 2001.
 - 9) "Restorative Effect of Naps on Perceptual Deterioration," Society for Neuroscience, San Diego, CA., 2001.
 - 10) "Perceptual Deterioration Predicts Performance Today," Vision Sciences Society, Sarasota, FLA., 2002.
 - 11) "Perceptual Learning After a Nap: The Mini-Me of Sleep," Vision Sciences Society, Sarasota, FLA., 2003.
 - 12) "Sleep-dependent Learning: A Nap is as Good as a Night," American Professional Sleep Society, Chicago, Ill., 2003.
 - 13) "Perceptual Deterioration is Specific to Target Orientation," Vision Sciences Society, Sarasota, FLA., 2004.
 - 14) "The time course and specificity of perceptual deterioration" Society for Neuroscience, San Diego, CA 2004
 - 15) "The neural correlates of sleep-dependent perceptual learning and deterioration: a role for attention?" Vision Sciences Society, 2005, Sarasota, FLA,
 - 16) The neural correlates of sleep-dependent perceptual learning and deterioration: a role for attention? Associated Professional Sleep Societies in Denver, CO 2005. (published in Sleep 2005 28(Suppl 1):A345).
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- 17) "The Neural Basis of the Psychomotor Vigilance Task", SPA Drummond, A Bischoff-Grethe, DF Dinges, L Ayalon, SC Mednick, MJ Meloy. SLEEP, Vol.28, No.9, pp.1059-1068, 2005.
- 18) "Naps are Better Than Caffeine for Improving Performance" Vision Sciences Society, 2006, Sarasota, FLA,
- 19) "Comparing Naps, Caffeine, Modafinil and Placebo on a Variety of Memory Tasks." APSS, 2006.
- 20) "Sleep-Dependent Learning and Practice-Dependent Deterioration on an Orientation Discrimination Task." VSS, 2007.
- 21) Kanady J, Drummond SPA, Mednick SC, The Influence of Prior Sleep (Actigraphy) on Sleep Stages (PSG) During a Nap in Healthy Well-Rested Adults APSS, 2008.
- 22) Mednick SC, Reith C, Cai D, Huber D, Kanady J, Horowitz T, Separating specific from general learning in a napping paradigm on a Rotary Pursuit task. VSS 2008.
- 23) Mednick SC, Cai D, Kanady J, Drummond SPA, Mednick SA, Napping enhances associative strength in creative problem solving task, APSS 2008.
- 24) Kanady JC, Reed M, Drummond SP, Cai DJ, Leung A, McDevitt EA, Harrison EM, Mednick SC The Actiwatch Assessment of a PSG-recorded Afternoon Nap: A Validation Study APSS 2009
- 25) Elizabeth A. McDevitt, Jennifer C. Kanady, Denise J. Cai, Elizabeth M. Harrison, Sara C. Mednick, Differences in Daytime Sleep Architecture in Habitual and Non-Habitual Nappers APSS 2009
- 26) Mednick SC, Makovski T, Cai DJ, Kanady J, Jiang YV. Sleep and rest facilitate implicit memory in a visual search task. APSS 2009
- 27) Harrison L, Mednick SC, Gorman M, The Influence of Light on Sleep Quality and Architecture during Daytime Naps. APSS 2009
- 28) Mednick SC, Makovski T, Cai DJ, Kanady J, Jiang YV. Sleep and rest facilitate implicit memory in a visual search task. VSS 2009
- 29) Mednick SC, "REM sleep prevents interference in the texture discrimination task.", VSS 2010
- 30) Mednick SC, Jen Kanady, Lizzie McDevitt, James Walsh, Martin Paulus, and Sean P.A. Drummond "Pharmacological enhancement of specific sleep stages in 90-minute naps." APSS 2010

Oral Presentation Chair Session Moderator

APSS "O22: Sleep and Memory Consolidation" June 11, 2009
 VSS "Perceptual learning: Plasticity and adaptation" May 11, 2010
 APSS "O03: Memory Consolidation, Sleep Staging and Naps," APSS 2010

Selection of Invited Talks

Sep 2000	Circadian Rhythm Group, Harvard Medical School, Boston, Massachusetts.
Aug 2002	Princeton University, Princeton, New Jersey.
Sep 2002	Charles University, Prague, Czech Republic.
Oct 2002	Center for Human Information Processing, University of San Diego, San Diego California.
Oct 2002	University of Southern California, Los Angeles, California.
Oct 2002	The Salk Institute, San Diego, California.
May 2003	Dartmouth College, Hanover, New Hampshire.
Jul 2003	Sleep and Chronobiology Research Group, VA University of San Diego.
Mar 2004	J. Christian Gillin Sleep/Chronobiology seminar, UCSD San Diego, CA.
Mar 2004	Sleep Research Laboratory Brown University.
Mar 2004	New York University, Psychology Department.

Mar 2004 Columbia University, Psychology Department.
 Mar 2004 City College of New York, Biology Colloquium.
 Mar 2004 Massachusetts Institute of Technology, Cognitive Science Colloquium.
 Feb 2006 Office of Naval Research, San Diego, CA
 Aug 2006 UCSD Department of Psychiatry
 Aug 2006 DARPA, Austin, TX
 Feb 2007 Waking up to Sleep La Jolla CA
 May 2007 Biomedical Sciences Library, UCSD
 Aug 2007 DARPA, South Carolina
 Oct 2007 Google, Mountain View, CA, Author Talk series
 Jan 2008 Howell Foundation, La Jolla, CA
 Feb 2008 Francis Parker School, San Diego, CA
 March 2008 National Sleep Foundation Conference: The Role of Sleep in Memory and Learning, Washington D.C.
 April 2008 J. Christian Gillin Sleep Lecture, La Jolla, CA
 May 2008 The Big Sleep Show, Featured Speaker, Chicago, Ill
 Nov 2008 National Academy of Sciences, Irvine CA
 Sept 2008 Insight Meeting of Sloan-Schwartz Foundation, Rancho Santa Fe, CA
 March 2009 Mesa Community College San Diego, 2009
 March 2009 Stanley Middle School San Diego, 2009
 March 2009 UC San Diego Cognitive Neuroscience Brown Bag, La Jolla, CA
 April 2009 UC San Diego Nap-In, La Jolla, CA
 Aug 2009 Harvard University Psychology Department Vision Lab, Cambridge MA
 Aug 2009 Brandeis University Psychology Department Colloquium, Waltham MA
 Sept 2009 UC Berkeley Oxyopia colloquium, Berkeley CA
 Oct 2009 UC Riverside Psychology Department Colloquium, Riverside, CA
 Oct 2009 UC Irvine Psychology Department Colloquium, Irvine, CA
 March 2010 Cardiothoracic Surgery Conference Laguna, CA
 May 2010 Psychology Research Conference, Mission Viejo, CA

My research has been covered by CNN, Reuters TV, NPR, The Economist, The Wall Street Journal, Consumer Reports Health Journal, Reader's Digest, The New York Times and many other major media outlets in the US and internationally. Below is a sample of the over 300 publications.

Television & Radio

1. Science NOVA, August, 2009
2. Interview, *BBC*, Jun 15, 2009
3. How creative are you when you're sleeping? *Voice of America*, Jun 13, 2009
4. UC San Diego Takes a Nap. *KPBS* Mar 9, 2009
5. Talk of The Nation. *National Public Radio* Jun 25, 2007
6. It's time you took a nap! *NPR*, Jun 5, 2007
7. Should we nap at work? *Good Morning America*, Jan 27, 2007

Press

1. Better Performance After a Dreaming Nap, New York Times, June 2009
 2. Problems are solved by sleeping. *Tehran Times* Jun 12, 2009
 3. Dopo un sogno ci svegliamo più creativi. *Corriere della Sera* Jun 9, 2009
 4. Let Me Sleep On It: Creative Problem Solving Enhanced By REM Sleep. *Science Daily* June 9, 2009
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5. Problems are solved by sleeping. *BBC News* Jun 9, 2009
 6. The Consult: Back to Bed. *Newsweek* Jun 9, 2009
 7. Tests find benefit of sleeping on job. *Independent* Jun 8, 2009
 8. The power of naps. *San Diego Union Tribune* (Cover) May 10 2009
 9. Dr James Le Fanu on why Tube strikes are good for you. *Telegraph.co.uk* Feb 20, 2009
 10. 2008 Tuesday Morning Quarterback Person of the Year: Sara Mednick, *ESPN* Jan 6, 2009
 11. A wake-up call for the sleep deprived *MSNBC* Nov 24, 2008
 12. A Daytime Nap Can Boost Memory. *The Washington Post*, Feb 1 2008
 13. Scientists still searching for the secrets of sleep. *The Wall Street Journal*, Jan 18, 2008
 14. An awakening to nap time. *USA TODAY*, Mar 5, 2007
 15. Take five? Researchers say grab an hour. *The Scientist*, Jan 1, 2007
 16. Not getting enough sleep? *The Boston Globe*, Apr 2, 2006
 17. But a quick nap shows. *The Wall Street Journal*, Nov 17, 2004
 18. Napping may be beneficial. *National Public Radio*, Jul 4, 2003
 19. Power napsters do it better. *Times of India*, Jun 28, 2003
 20. Could 40 winks provide more than a battery recharge? *The Lancet*, Jun 28, 2003
 21. Daytime nap is as refreshing as a night's. *The Daily Telegraph* (London), Jun 23, 2003
 22. Day dreams as good as a night's sleep. *The Guardian* (London), Jun 23, 2003
 23. The power of sleep. *The Boston Globe*, Jan 28, 2003
 24. Sleep with the boss. *New Scientist*, Jun 1, 2002
 25. Siesta time. *The Economist*, Jun 1, 2002
 26. A Quick Power Nap's Benefits. *The New York Times*, May 28, 2002
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