

CURRICULUM VITAE

Sara E. Alger, Ph.D.

CONTACT INFORMATION

University of Notre Dame
Department of Psychology
208 Haggard Hall
Office: (574) 631-2301
Email: salger@nd.edu, sealger78@gmail.com

RESEARCH INTERESTS

Learning and memory processes, sleep and memory consolidation, information processing during dreaming, stress, memory and aging

EDUCATION

Postdoctoral Research Associate 09/12 - present
The University of Notre Dame
Sleep, Stress, and Memory Lab
Advisor: Dr. Jessica Payne

Ph.D., Cognitive Neuroscience 08/05 – 09/11
The Graduate Center, The City University of New York
Department of Psychology: Cognitive Neuroscience Subprogram
Dissertation: *The Temporal Relationship Between Daytime Napping and Memory Consolidation*
Advisor: Dr. William Fishbein

B.F.A., Dance Performance; Minor, Psychology 08/96 - 05/00
Southern Methodist University, Dallas, TX

RESEARCH GRANTS AND TRAINING FELLOWSHIPS

National Institutes of Health (National Institute on Aging) 01/15 – 12/17
National Research Service Award Postdoctoral Fellowship (F32AG047807)
Primary Investigator: Sara Alger (Sponsor: Jessica Payne, Co-Sponsors: Michael Perlis, Cindy Bergeman, Elizabeth Kensinger)
The Impact of Emotional Salience and Aging on Selective Sleep-Based Memory Consolidation
Total Funding: \$184,518

PUBLICATIONS

Journal Articles

Pardilla-Delgado, E., **Alger, S.E.**, Cunningham, T.J., Kinealy, B., & Payne, J.D. (2016). Effects of post-encoding stress on performance in the DRM false memory paradigm. *Learning & Memory*, 23(1), 46-50.

Payne, J.D., Kensinger, E.A., Wamsley, E.J., Spreng, R.N., **Alger, S.E.**, Gibler, K., Schacter, D.L., & Stickgold, R. (2015). Napping and the selective consolidation of negative aspects of scenes. *Emotion*, 15(2), 176-186.

Cunningham, T. J., Crowell, C. R., **Alger, S. E.**, Kensinger, E. A., Villano, M. A., Mattingly, S. M., & Payne, J. D. (2014). Psychophysiological arousal at encoding leads to reduced reactivity but enhanced emotional memory following sleep. *Neurobiology of learning and memory*, 114, 155-164.

Alger, S.E., Lau, H., & Fishbein, W. (2012). Slow wave sleep during a daytime nap is necessary for protection from subsequent interference and long-term retention. *Neurobiology of Learning and Memory*, 98, 188-196.

<http://dx.doi.org/10.1016/j.nlm.2012.06.003>

***Reissued as a Virtual Special Issue on Neural Plasticity from Neurobiology of Learning and Memory**

Lau, H., **Alger, S.E.**, & Fishbein, W. (2011). Relational memory: A daytime nap facilitates the abstraction of general concepts. *PLoS ONE* 6(11): e27139. doi:10.1371/journal.pone.0027139

Alger, S.E., Lau, H., & Fishbein, W. (2010). Delayed onset of a daytime nap facilitates retention of declarative memory. *PLoS ONE* 5(8): e12131. doi:10.1371/journal.pone.0012131

Fishbein, W., Lau, H., DeJesús, R., & **Alger, S.E.** (2010). Sleep, neural reuse, and memory consolidation processes. *Behavioral and Brain Sciences*, 33, 273-273 doi:10.1017/S0140525X10001135

Under Review

Alger, S.E., & Payne, J.D. The differential effects of emotional salience on direct associative and relational memory during a nap. *Cognitive, Affective, and Behavioral Neuroscience*.

BOOK CHAPTERS

Pardilla-Delgado, E., Mattingly, S.M., **Alger, S.E.**, Chambers, A., Cunningham, T.C. (*in press*). Sleep's role in the consolidation and integration of declarative memories.

In M. Sakakibara & E. Ito (Eds.), *Memory Consolidation, in press*. Nova Science Publishers: New York.

Alger, S.E., Chambers, A.M., Cunningham, T., Payne, J.D. (2014). The Role of Sleep in Human Declarative Memory Consolidation. In *Current Topics in Behavioral Neurosciences*. Springer, Heidelberg.

Cunningham, T., Pardilla-Delgado, E., **Alger, S.**, and Payne, J. (2014). The Role of REM Sleep in Emotional Memory and Affective Reactivity in Humans. In C. Saylor (Ed.), *REM Sleep: Characteristics, Disorders and Physiological Effects*. Nova Science Publishers: New York.

Alger, S.E., Lau, H., & Fishbein, W. (2009). Sleep Deprivation and Declarative Memory: A Brief Review. *Sleep Deprivation: Causes, Effects and Treatment*. 223-238. Hauppauge, NY: Nova Science Publishers.

Under Review

Alger, S.E., & Payne, J.D. Sleep and Memory. *The Stevens' Handbook of Experimental Psychology and Cognitive Neuroscience (4th Ed., Vol. 1)*.

ARTICLES IN PREPARATION

Payne, J.D., Cunningham, A., Mattingly, S., Wirth, M.M., & **Alger, S.E.** Stress exposure magnifies tradeoffs in emotional memory: Implications for memory consolidation.

Mattingly, S., **Alger, S.E.**, Chambers, A., Wirth, M., Cunningham, T. & Payne, J.D. Cortisol and preferential memory for objects in long-term memory.

CONFERENCE PRESENTATIONS

Alger, S.E., & Payne, J.D. (2015). The differential effects of emotional salience on direct associative and relational memory during a nap. Selected as an Oral Presentation in the 2015 Society for Neuroscience Meeting.

Alger, S.E., & Payne, J.D. (2015). The differential effects of emotional salience on direct associative and relational memory during a nap. Accepted as a Poster Presentation in the 2015 APSS annual Sleep meeting.

Alger, S.E., & Payne, J.D. (2015). The differential effects of emotional salience on direct associative and relational memory during a nap. Presented at the annual Graduate Student Union and Office of Postdoctoral Scholars research symposium, University of Notre Dame.

- Alger, S.E.,** Chambers, A., & Payne, J.D. (2014). A nap rich in slow wave sleep selectively preserves emotional scene components. Accepted as a Poster Presentation in the 2014 APSS annual Sleep meeting.
- Alger, S.E.,** Chambers, A., & Payne, J.D. (2014). A nap rich in slow wave sleep selectively preserves emotional scene components. Accepted as a Poster Presentation in the 2014 Cognitive Neuroscience Society's annual meeting.
- Cunningham, T., Crowell, C., Villano, M., **Alger, S.,** Mattingly, S., Kensinger, E., & Payne, J.D. (2013). Sleep's depotentiating effect on heart rate deceleration and skin conductance response. Accepted as a Poster Presentation in the 2013 Society for Psychophysiological Research annual meeting.
- Cunningham, T., Crowell, C., Villano, M., **Alger, S.,** Mattingly, S., Kensinger, E., & Payne, J.D. (2013). Increased visceral reactivity at encoding predicts memory for negative items but only after a night of sleep. Accepted as a Poster Presentation in the 2013 Society for Psychophysiological Research annual meeting.
- Alger, S.E.,** Lau, H., & Fishbein, W. (2010). Memory consolidation: The temporal relationship between learning and sleep. Accepted as an oral presentation in the 2010 APSS annual Sleep meeting.
- DeJesús, R., Lau, H., **Alger, S.,** & Fishbein, W. (2010). Post-learning sleep selectively enhances retention of emotional memories: Both full and half-night (REM) sleep deprivation inhibits the enhancement. Accepted as an oral presentation in the 2010 APSS annual Sleep meeting.
- Lau, H., **Alger, S.E.,** & Fishbein, W. (2010). Effects of a daytime nap on temporal and spatial relations. Accepted as an oral presentation in the 2010 APSS annual Sleep meeting.
- Alger, S.E.,** Lau, H., & Fishbein, W. (2010). Memory consolidation: The temporal relationship between learning and sleep. Accepted as an oral presentation at the first annual CUNY Psychology's Building Bridges: All-Psychology Research Day.
- Alger, S.,** Lau, H., & Fishbein, W. (2009). Memory consolidation: Time dependent effects of a brief nap. Selected as an Oral Presentation in the 2009 Society for Neuroscience Meeting.
- Lau, H., **Alger, S.,** & Fishbein, W. (2009). Daytime napping: Effect on temporal and spatial relations. Selected as an Oral Presentation in the 2009 Society for Neuroscience Meeting.

Lau H., **Alger S.**, & Fishbein W. (2008). A daytime nap facilitates extraction of general concepts. Accepted as an abstract in the 2008 Society for Neuroscience Meeting. Selected for SfN lay-language press conference.

Wamsley, E.J., **Alger, S.**, Nelson, J., Tucker, M., Hirota, Y. & Antrobus, J.S. (2006). Circadian and homeostatic influences on dreaming: NREM mentation during a short daytime nap. *Sleep*, 29(supplement), A49. Abstract for oral presentation at the 2006 APSS meeting. [**Recipient of Sleep Research Society Trainee Abstract Award**]

INVITED TALKS

Sleep on It! It's More Than Just a Saying. Wellness Wednesdays 01/14
McDonald Center for Student Well-Being, University of Notre Dame

PROFESSIONAL TALKS

Alger, S.E. (2014). The impact of emotional salience and aging on selective sleep-based memory consolidation. Presented at the Sleep, Stress, and Memory Laboratory's weekly meeting.

Alger, S.E. (2014). Take a nap!: A nap rich in slow wave sleep selectively preserves emotional scene components. Presented at the Cognition, Brain, and Behavior Study Group Colloquium, University of Notre Dame.

RELATED RESEARCH EXPERIENCE

Postdoctoral Research Associate 09/12 - present
Sleep, Stress, and Memory Lab, The University of Notre Dame, Dept. of Psychology
Supervisor: Jessica Payne, Ph.D.

Design experiments; recruit and prepare subjects for sleep recording; collect data using PSG/EEG recordings; score sleep data; mentor undergraduate and graduate students in the lab; develop training program for sleep staging and train graduate and undergraduate students; design computer-based memory tasks; cortisol collection and assay; analyze data using SPSS; prepare, submit, and publish own research as well as collaborations in scientific peer-reviewed journals; present research at conferences

Doctoral Student/Researcher 09/05 – 09/11
Laboratory for Cognitive Neuroscience and Sleep, City College of New York, NY
Supervisor: William Fishbein, Ph.D.

Designed experiments; recruited and prepared subjects for sleep recording; collected data using PSG/EEG recordings; scored sleep stages; administered MAB-II; designed and programmed computer-based declarative memory tasks; analyzed data using SPSS; prepared, submitted, and published own research in scientific journals; participated as a reviewer for various scientific journals under the supervision of Dr. Fishbein.

Master Student/Research Assistant 09/03 – 09/05
Laboratory for Cognitive Neuroscience and Sleep, City College of New York, NY
Supervisors: John Antrobus, Ph.D., William Fishbein, Ph.D.

Learned to apply and remove electrodes; recruited and prepared subjects for sleep recordings; collected data using PSG/EEG recordings; scored sleep stages; transcribed dream reports

TEACHING EXPERIENCE

University of Notre Dame

Instructor

Cognitive Psychology PSY-30400/PSY-60400 (lecture) Fall 2014

Guest Lecturer

Neuroscience and Behavior Lab, Dr. Nancy Michael

-EEG Lab 12/03/15

Introduction to Cognitive Neuroscience, Dr. Jessica Payne

- Attention and Consciousness 11/10/15

- The Cognitive Neuroscience of Language 03/26/15

- Attention and Consciousness 02/24/15

- Attention and Consciousness 04/08/14

Developmental Cognitive Neuroscience: The Sleeping Brain, Dr. Jessica Payne

- Sleep and Procedural Memory 11/10/15

- Sleep and Plasticity 09/29/15

- Sleep and Dreaming I 04/21/15

- Sleep and Meditation 04/16/15

- Sleep and Psychopathology 02/24/15

- ADHD and Apnea 02/11/15

- Emotion 04/08/14

- Information Processing 03/06/14

- Plasticity 02/18/14

- ADHD and Apnea 02/13/14

- Sleep and Procedural Memory 11/05/12

- Sleep and Declarative Memory 10/31/12

- Benefits of Napping 10/08/12

MENTORING EXPERIENCE

Undergraduate Research Assistant Advisor

- Michael Broderick, Shirley Chen, Jessica Gibson, 08/14 – 05/16

Cecily Swanson, Rosemary Pfaff, Brianna Casey, McKenzie Huguette, Khanh Mai, Kimberly Trochuck, Jimmy Moley, Alyssa McBride

Honors/Thesis Advisor

- Shirley Chen 05/15 – 05/16
- Michael Dai 04/13 – 04/14

PROFESSIONAL SERVICE

Ad Hoc Reviewer

Learning and Memory; Neurobiology of Aging; Neurobiology of Learning and Memory; NeuroLeadership Journal; Neuropsychologia; Perspectives on Psychological Science; Psychonomic Bulletin and Review

Grant Reviewer (Ad Hoc)

Netherlands Organization for Scientific Research, The dynamic nature of emotional memory: toward a network understanding of emotional memory consolidation 2013

HONORS/AWARDS

National Research Service Award (NIH) – 01/15 – 12/17

Proposal: “The Impact of Emotional Salience and Aging on Selective Sleep-Based Memory Consolidation”

Academic year 2011 – 2012 **Joseph C. Barmack Award**

- Award for Outstanding Doctoral Dissertation

Academic year 2009 – 2010 **Rosenberg Zalk Student Travel and Research Fund**

Academic year 2008 – 2009 **CUNY Doctoral Student Research Grant**

- Competitive community-wide grant
- Proposal: “Memory Consolidation: Time Dependent Effects of a Brief Nap”

Academic years 2006 – 2010 **CUNY University Fellowship**

Academic year 2006 – 2007 **CUNY Doctoral Student Research Grant**

- Competitive community-wide grant
- Proposal: “The Relationship Between Sleep Spindles and Cognitive Ability”

MEMBERSHIP

Sleep Research Society
Cognitive Neuroscience Society
Society for Neuroscience
Psychonomic Society

MEDIA COVERAGE

10 Healthy Hacks for Busy Bodies 06/15
SUCCESS Magazine

<http://www.success.com/article/10-health-hacks-for-busy-bodies>

Take a nap: You just might learn something

10/14

Brainscape

<https://www.brainscape.com/blog/2014/10/take-a-nap/>

The Perfect Nap: Sleeping Is a Mix of Art and Science

09/13

Wall Street Journal

<http://www.wsj.com/articles/SB10001424127887323932604579050990895301888>