

Curriculum Vitae
Karin Schon, Ph.D.
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Department of Anatomy and Neurobiology
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Academic Training:

- 3/2005 Ph.D. Boston University, Boston, MA; Psychology (Brain, Behavior, and Cognition program)
- 6/1998 B.A./M.A. Universität Hamburg, Hamburg, Germany; Psychology (“Dipl.-Psych.” degree)

Postdoctoral Training:

- 9/2010-4/2013 Pathway to Independence Awardee (Post Doc Principal Investigator) in Cognitive Neuroscience of Aging and Exercise Physiology, Mentors: Chantal Stern, D.Phil., Robert Wagenaar, Ph.D., Alice Cronin-Golomb, Ph.D., Boston University, Boston, MA, and Andrew Budson, M.D. Boston University School of Medicine, Boston, MA (K99 award; PI: Schon)
- 4/2009-8/2010 Senior Postdoctoral Associate (Post Doc) in Cognitive Neuroscience, Mentor: Chantal E. Stern, D.Phil., Boston University, Boston MA
- 4/2005-3/2009 Research Associate (Post Doc) in Cognitive Neuroscience, Mentor: Chantal E. Stern, D.Phil., Boston University, Boston MA

Academic Appointments:

- 6/2015-present Investigator, Clinical Research Core, Alzheimer’s Disease Center (Faculty Member since 4/2013)
- 6/2014-present Assistant Professor of Neuroscience, Joint Programmatic Appointment with Undergraduate Program in Neuroscience, Boston University, Boston, MA
- 9/2013-present Assistant Professor of Psychological and Brain Sciences, Joint Programmatic Appointment with Dept. of Psychological and Brain Sciences and Center for Memory and Brain, Boston University, Boston, MA
- 5/2013-present Assistant Professor of Anatomy and Neurobiology, Primary Appointment, Boston University School of Medicine, Boston MA (Primary Appointment)
- 4/2013-present Faculty Member, Alzheimer’s Disease Center, Boston University School of Medicine, Boston MA

Honors:

- 2015 UROP Outstanding Mentor Award, Undergraduate Research Opportunities Program, Boston University, Boston, MA (for Summer 2015 UROP mentorship)
- 2015 Junior Faculty Spivack Scholar 2015, Boston University School of Medicine, Boston, MA
- 2013 CCAD Junior Investigator, Charleston Conference on Alzheimer’s Disease (CCAD), Charleston, SC
- 2010 NIH Pathway to Independence Award (K99/R00)
- 2005 Kavita Jain Dissertation Award, Boston University, Boston MA
- 2005 Felicia Sorembe Lambros Prize for Research, Boston University, Boston MA
- 7/2002 Summer Workshop in fMRI Informatics, Dartmouth College, fellowship award
- 2002 Clara Mayo Memorial Fellowship, Department of Psychological and Brain Sciences, Boston University, Boston MA

1995 Travel Scholarship, Emmy and Alfred B. Steffens Memorial Fund, German Academic Exchange Service (DAAD), Universität Hamburg, Hamburg, Germany

Departmental and University Committees:

9/2014-present Faculty member, Faculty Advisory Committee for the Undergraduate Research Opportunities Program, Boston University, Boston, MA

Dissertation/Thesis Committees:

3/2014-5/2014 Dissertation Committee for Sandra Ladd, Behavioral Neuroscience Program, Boston University School of Medicine, Boston MA (4th reader)
1/2014-3/2015 Dissertation Committee for Maya Rosen, Brain, Behavior, and Cognition Program, Department of Psychological and Brain Sciences, Boston University, Boston, MA (member)
5/2013-present Dissertation Committee for Danielle Farrar, M.D./Ph.D. program, Department of Anatomy and Neurobiology, Boston University School of Medicine, Boston MA (member)
5/2013-12/2013 Dissertation Committee for Randall Newmark, Graduate Program in Neuroscience, Boston University, Boston MA (member)
5/2011-5/2012 Senior Distinction Thesis Committee for Andrew Whiteman, Undergraduate Program in Neuroscience, Boston University, Boston MA (reader)

Teaching Experience and Responsibilities:

Fall 2015 Director, Journal Club for Anatomy & Neurobiology graduate students: “Teaching and old brain new tricks: from mouse models of neurogenesis to human neuroimaging of brain plasticity“, enrollment: 8
Spring 2015 Course Director and Instructor for GMS IM630: Methods of Functional Imaging of the Brain, 2cr, enrollment: 22
Spring 2015 Course Director and Instructor (jointly with Dr. Mark Moss) for GMS AN811: Cognitive Neuroscience
12/3/2013 Guest lecture on exercise, aging, memory (PS337), Department of Psychological and Brain Sciences, Boston University, Boston MA

Major Mentoring Activities:

Doctoral Students

9/2013-present Rachel Nauer, B.A.*, Ph.D. student (Dept. of Psychological and Brain Sciences; Brain, Behavior, and Cognition program), cognitive neuroscience and exercise physiology, graduate student, Boston University, Boston MA
**Recipient of the Dean of Arts and Sciences Award for best poster presentation at the Annual Research Symposium 2015 under my mentorship (3/2015).*
9/2013-10/2013 Mary Orczykowski, B.S./B.A., rotating 1st year Ph.D. student (Dept. of Anatomy and Neurobiology), Boston University School of Medicine, Boston MA

Master’s Students

8/2015-present Corey Kronman, graduate student (M.S. in Medical Sciences Program) and M.S. Thesis advisee, Boston University School of Medicine, Boston, MA

Undergraduate Students

10/2014-present Natalia Lopez, undergraduate student (Undergraduate Program in Neuroscience), cognitive neuroscience and exercise physiology, volunteer (Fall 2014), Senior Thesis in Neuroscience advisee (Fall 2015/ Spring 2016), Boston University, Boston MA

- 9/2014-present José Romo, undergraduate student (Undergraduate Program in Neuroscience), cognitive neuroscience and exercise physiology, volunteer (Fall 2014) and Undergraduate Research Opportunities Program (Summer 2015), Senior Thesis in Neuroscience advisee (Fall 2015/ Spring 2016), Boston University, Boston MA
- 6/2014-12/2014 Natalie Cherry, undergraduate student (Undergraduate Program in Neuroscience), cognitive neuroscience and exercise physiology, volunteer (Summer 2014) and Directed Study program (Fall 2014), Boston University, Boston MA
- 9/2013-present Alexander Delgado, undergraduate student (Biology: Neurobiology, and Psychological and Brain Sciences), cognitive neuroscience and exercise physiology, Work Study program (Summer and Fall 2014, Spring and Fall 2015), Directed Study program (Fall 2014, Spring and Fall 2015), Undergraduate Research Opportunities Program (Summer 2015), Boston University, Boston MA
- 9/2013-4/2015 Victoria Gomez, undergraduate student (Undergraduate Program in Neuroscience), cognitive neuroscience and exercise physiology, Directed Study program (Spring 2014) and Undergraduate Research Opportunities Program (Summer and Fall 2014), volunteer (Spring 2015), Boston University, Boston MA
- 9/2013-present Benjamin Coleman*, undergraduate Kilachand Honors College (KHC) student (Undergraduate Program in Neuroscience), cognitive neuroscience and exercise physiology, preclinical Alzheimer's disease: subjective memory complaints, volunteer (Spring and Fall 2014, Spring 2015) and Undergraduate Research Opportunities Program (Summer 2014, Summer 2015), KHC Keystone project research / Senior Thesis in Neuroscience (Junior and Senior years), Boston University, Boston MA
**Recipient of Mary Erskine Outstanding Undergraduate Research Award (6/2015)*
- 3/2011-12/2012 Andrew Whiteman, B.A.*, undergraduate student (Undergraduate Program in Neuroscience), cognitive neuroscience and exercise physiology, Undergraduate Research Opportunities Program (Summer 2011), Senior thesis project (Fall 2011, Spring 2012), research assistant (5/2012-12/2012), now research assistant at Boston University.
**UROP Summer 2011 project featured in BU Today (4/2012)*

Other Mentees

- 9/2013-present Matthew Dunne, B.A., Research Assistant and Lab Manager (full time), Aerobic Exercise, Neurotrophins, and fMRI of Hippocampal Function and Structure (R00 project)

Other Professional Activities:

Professional Societies: Memberships, Offices, and Committee Assignments:

- 2014-present Member, Organization for Human Brain Mapping
2011-present Member, International Neuropsychological Society
2006-present Member, Cognitive Neuroscience Society
1999-present Member, Society for Neuroscience

Boston University Community Outreach:

- 7/18/2014 Summer Pathways Outreach in Science and Engineering program for female high-school students; STEM career panel participant, Boston University, Boston MA

Ad-Hoc Journal Reviews:

- American Journal of Preventive Medicine
Applied Physiology, Nutrition, and Metabolism
Brain

Brain Research Bulletin
Cerebral Cortex
European Journal of Sports Science
Future Neurology
Hippocampus
International Journal of Sports Medicine
Journal of Cognitive Neuroscience
Learning and Memory
NeuroImage
Psychonomic Bulletin and Review
The Journal of Neuroscience

Media Coverage of Research:

3/2014 Psychology Today mentions our research in “Eight Habits that Improve Cognitive Function“
2/2014 HHS Healthbeat describes our research in the podcast “Fit Memory”; NewsTribune.com features our HHS Healthbeat interview “Fit Memory”
1/2014 Interviewed by Good Housekeeping magazine about exercise and brain health
12/2013 Whiteman et al. (2014) is featured in ScienceDaily, and is mentioned in the Psychology Today blog “Can Physical Activities Improve Fluid Intelligence?”
4/2012 BU Today writes about our research: “Inquiring Minds: Exercise and Mental Recall”

Major Committee Assignments:

10/2015 RR&D Fall 2015 SPiRE Reviewer, Office of Research and Development’s Rehabilitation Research and Development Service (RR&D), Department of Veterans Affairs

Other Support:

Current:

4/2013-3/2016 R00AG036845 PI: Karin Schon, Aerobic Exercise, Neurotrophins, and fMRI of Hippocampal Function and Structure, \$149,679 direct cost per year (role: PI)
7/2015-6/2016 AOTFIRG14 PI: Simone Gill, Use of Motor Learning Principles to Reduce Fall Risk After Surgical Weight Loss, \$50,000 direct cost (role: Co-Investigator)

Past:

9/2010-12/2012 K99AG036845 PI: Karin Schon, Aerobic Exercise, Neurotrophins, and fMRI of Hippocampal Function and Structure, \$83,199 direct cost per year

Invited Lectures and Conference Presentations:

Local:

6/30/2015 Exercise and the Brain, Evergreen Program (geared toward adults 58 years or older), Boston University, Boston, MA
10/24/2014 Neuroimaging as a tool for delirium research: Functional Neuroimaging, CEDARTREE Second Annual Delirium Bootcamp, Beth Israel Diaconess Medical Center, Boston MA
3/20/2014 Exercise, memory, and brain plasticity, Center for Noninvasive Brain Stimulation, Beth Israel Diaconess Medical Center, Boston MA

- 4/24/2013 Walk to remember, 7th Annual South Shore Alzheimer Educational Conference, South Shore Partnership, Alzheimer's Association Massachusetts/New Hampshire Chapter
- 3/21/2013 Cognitive neuroscience of memory, aerobic exercise and brain plasticity, Boston University Sargent College of Health and Rehabilitation Sciences, Child Development Laboratory, Boston University, Boston MA
- 5/17/2012 Is aerobic exercise good for your memory?, Department of Anatomy and Neurobiology, Boston University School of Medicine, Boston MA

National:

- 3/1/2013 Memory enhancement in AD through acute aerobic exercise, Charleston Conference on Alzheimer's Disease, Charleston SC
- 11/15/2012 Cognitive neuroscience of memory, aerobic exercise and brain plasticity, Cardiovascular Research Center, Department of Physiology, Temple University School of Medicine, Philadelphia PA
- 4/17/2012 Cognitive neuroscience of memory, aerobic exercise and brain plasticity, Shriners Hospitals Pediatric Research Center (Center for Neural Repair and Rehabilitation), Temple University School of Medicine, Philadelphia PA
- 1/19/2012 Is aerobic exercise good for your memory?, Institute of Gerontology and Department of Psychology, Wayne State University, Detroit MI
- 3/15/2011 Is aerobic exercise good for your memory?, Department of Kinesiology, University of Maryland, College Park MD
- 12/1/2010 Aerobic exercise, neurotrophins, and fMRI of hippocampal function and structure: background and design, Center for Clinical Biopsychology, Department of Psychological and Brain Sciences, Boston University, Boston MA
- 9/24/2008 Working memory in the medial temporal lobes, LCTS – Section on Brain Electrophysiology and Imaging, National Institutes of Health, NIAAA, Bethesda MD
- 1/24/2008 Working memory in the medial temporal lobes and prefrontal cortex, Integrative Neuroimaging Unit, Clinical Brain Disorders Branch, National Institutes of Health, NIMH, Bethesda MD

International:

- 6/13/2012 Cognitive neuroscience of memory, aerobic exercise and brain plasticity, Department of Kinesiology and Physical Education, McGill University, Montréal, Québec, Canada
- 11/24/2011 Is aerobic exercise good for your memory?, Research Department of Neuroscience, Ruhr-Universität Bochum, Germany

Bibliography:

Original, Peer Reviewed Articles:

1. R. K. Nauer, A. S. Whiteman, M. F. Dunne, C. E. Stern, **K. Schon** (2015). Hippocampal subfield and medial temporal cortical persistent activity during working memory reflects ongoing encoding. *Front. Syst. Neurosci.* 9:30. doi: 10.3389/fnsys.2015.00030. eCollection 2015. PMID: PMC4372545.
2. **K. Schon**, R. E. Newmark, R. S. Ross, C. E. Stern (2015). A working memory buffer in parahippocampal regions – evidence from a load effect during the delay period. *Cereb Cortex*. doi: 10.1093/cercor/bhv013 [Epub ahead of print]. PMID: In Progress.
3. A. S. Whiteman, D. E. Young, R. C. Wagenaar, C. E. Stern, **K. Schon*** (2014). Interaction between serum BDNF and aerobic fitness predicts recognition memory in healthy young adults. *Behavioral Brain Research* 259:302-12. doi: 10.1016/j.bbr.2013.11.023. Epub 2013 Nov 21. PMID: PMC3991014.

*Recommended by Faculty of 1000 (12/2013) and received media attention

4. R. S. Ross, M. L. LoPresti, **K. Schon**, C. E. Stern (2013). Role of the hippocampus and orbitofrontal cortex during the disambiguation of social cues in working memory. [*Cognitive, Affective and Behavioral Neuroscience* 13\(4\):900-15](#). doi: 10.3758/s13415-013-0170-x. PMCID: PMC3796192 [Available on 2014/12/1]
5. R. E. Newmark, **K. Schon**, R. S. Ross, M. Young, C. E. Stern (2013). Disambiguation during working memory: A high-resolution fMRI study of the human medial temporal lobe. [*Hippocampus* 23\(6\): 467-475](#). doi: 10.1002/hipo.22106. Epub 2013 Mar 18.
6. **K. Schon**, R. S. Ross, M. E. Hasselmo, C. E. Stern (2013). Complementary Roles of medial temporal lobes and dorsolateral prefrontal cortex for working memory for novel and familiar trial-unique visual stimuli: an fMRI study. [*European Journal of Neuroscience* 37\(4\):668-678](#). doi: 10.1111/ejn.12062. Epub 2012 Nov 21.
7. **K. Schon**, Y. T. Quiroz, M. E. Hasselmo, C. E. Stern (2009). Greater working memory load results in greater medial temporal activity at retrieval. [*Cerebral Cortex* 19\(11\):2561-2571](#) Epub 2009 Feb 18. PMCID: 2758675
8. M. L. LoPresti, **K. Schon**, M. D. Tricarico, J. D. Swisher, K. A. Celone, C. E. Stern (2008). Working memory for social cues recruits orbitofrontal cortex and amygdala: a functional magnetic resonance imaging study of delayed matching to sample for emotional expressions. [*The Journal of Neuroscience* 28\(14\):3718-28](#). PMCID: 2748754
9. **K. Schon**, S. Tinaz, D. C. Somers, and C. E. Stern (2008). Delayed match to object or place: an event-related fMRI study of short-term stimulus maintenance and the role of stimulus pre-exposure. [*NeuroImage* 39\(2\):857-72](#). Epub 2007 Sep 21. PMCID: 2147068
10. Tinaz, H. E. Schendan, **K. Schon**, and C. E. Stern (2006). Evidence for the importance of basal ganglia output nuclei in semantic event sequencing: An fMRI study. [*Brain Research* 1067\(1\):239-49](#).
11. **K. Schon**, A. Atri, M. E. Hasselmo, M. D. Tricarico, M. L. LoPresti, and C. E. Stern. (2005) Scopolamine reduces persistent activity related to long-term encoding in the parahippocampal gyrus during delayed matching in humans. [*The Journal of Neuroscience* 25\(40\): 9112-9123](#).
12. **K. Schon**, M. E. Hasselmo, M. L. LoPresti, M. D. Tricarico, and C. E. Stern. (2004) Persistence of parahippocampal representation in the absence of stimulus input enhances long-term encoding: A functional Magnetic Resonance Imaging study of subsequent memory after a delayed match-to-sample task. [*The Journal of Neuroscience* 24\(49\):11088-11097](#).