

Teal Eich, PhD

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<https://gero.usc.edu/labs/lifecoglab/>

ACADEMIC APPOINTMENTS

Assistant Professor	University of Southern California Davis School of Gerontology (Secondary appointments in Psychology and Neuroscience)	2019-present
Associate Research Scientist	Columbia University Medical Center Cognitive Neuroscience Division, Department of Neurology	2017- present

EDUCATION and TRAINING

Postdoctoral	Columbia University Medical Center NIH NRSA T32 in Geriatric Psychiatry Advisor: Yaakov Stern	2014-2017
PhD (Psychology)	Columbia University Advisor: Edward E. Smith Committee: Kevin Ochsner, Daphna Shohamy, Dean Mobbs, BJ Casey, Gerard Bruder	2014
MPhil (Psychology)	Columbia University	2012
MA (Psychology)	Columbia University	2010
MA (Psychology)	University of California, Los Angeles Advisors: Alan Castel, Barbara Knowlton, Robert Bjork	2008
BA (Philosophy, French)	Columbia University	2002

Under Review

Balado, J.J., Habeck, C., Stern, Y. & **Eich, T. S.** The relationship between white matter hyperintensities and cortical thickness in mid to late-life. *Neurobiology of Aging*.

Pournaghдали, A. & **Eich, T. S.** Cautionary response strategy and impairment of post-conflict response selection underly age-related differences in the Stroop interference effect. *Journal of Experimental Psychology: Learning, Memory and Cognition*.

2024

35. Chien, J. & **Eich, T. S.** (2024) Does stereotype threat influence age-related differences on directed forgetting tasks? *Frontiers in Psychology: Psychology of Aging*.

2023

34. **Eich, T. S.**, Langfield, C., Sakhardande, J., Gazes, Y., Habeck, C., & Stern, Y. (2023). Older adults compensate for switch, but not mixing costs, relative to younger adults on an intrinsically-cued task switching experiment. *Frontiers in Aging Neuroscience*, 15, 1152582.

33. Corlier, F. & **Eich, T. S.** (2023). Principal component analysis reveals multiple dimensions of memory inhibition that are differentially affected by age. *Frontiers in Psychology: Psychology of Aging*, 13, 1020915.

2022

32. Schwartz, S.T., Siegel, A.M., **Eich, T.S.**, & Castel, A.D (2022). Value-Directed Memory Selectivity Relies on Goal-Directed Knowledge of Value Structure Prior to Encoding in Young and Older Adults. *Psychology and Aging*, 38(1), 30-48

31. Metcalfe, J., Towner, E. & Vuorre, M., **Eich, T. S.** (2022). Curiosity: The Effects of Feedback and Confidence on the Desire to Know. *Journal of Experimental Psychology: General*, 152(2), 464-482.

30. Balado, J.J., Corlier, F., Habeck, C., Stern, Y. & **Eich, T. S.** (2022). Effects of White Matter Hyperintensities distribution and clustering on late-life cognitive impairment. *Nature Scientific Reports*, 12(1), 1955.

2021

29. Balado, J.J., Ycaza Herrera, A., Igwe, K., Kelm, L., Irimia, A., Buyukturkoglu, K., Guo, J., Brickman, A. & **Eich, T. S.** (2021). Lower hippocampal GABA+ is associated with poorer episodic memory in older women: A pilot study. *Frontiers in Behavioral Neuroscience*, 15, 695416, Special Issue:

“Sex Hormone Fluctuations Across the Female Lifespan: Mechanisms of Action on Brain Structure, Function, and Behavior”.

28. Siegel, A.M & **Eich, T.S** (2021). Age, Sex, and Inhibitory Control: Identifying a Specific Impairment in Memorial, But Not Perceptual, Inhibition in Older Women. *Journal of Gerontology B: Psychological Sciences*, 76(10), 2013-2022.
27. **Eich, T. S.**, Lau, P. & Anderson, M. C. (2021). Cortical thinning in the right Inferior Frontal Gyrus mediates age-related performance differences on an item-method directed forgetting task. *Neurobiology of Aging*, 106, 95-102.
26. Balado, J.J. & **Eich, T. S.** (2021). GABAergic dysfunction, neural network hyperactivity and memory impairments in human aging and Alzheimer’s disease. *Seminars in Cell and Developmental Biology*, 116, 146-159, Special Issue: “Aging in the Nervous System”.

2020

25. Metcalfe, J., Schwartz, B. & **Eich, T.S.** (2020) Epistemic Curiosity and the Region of Proximal Learning. *Current Opinion in Behavioral Sciences*, 35, 40-47.
24. **Eich, T.S.**, Parker, D., Gazes, Y., Razlighi, Q., Habeck, C., & Stern, Y. (2020). Towards an ontology of cognitive processes and their neural substrates: A structural equation modelling approach. *PLoSOne*, 15(2), e0228167.
23. Habeck, C., **Eich, T.S.**, Gu, Y & Stern, Y. (2020). Occupational Patterns of Structural Brain Health: Independent Contributions Beyond Age, Gender, Intelligence, and Education. *Frontiers in Human Neuroscience*, 13, 449.

2019

22. **Eich, T. S.**, Tsapanou, A., & Stern, Y. (2019). When time’s arrow doesn’t bend: *APOE-ε4* influences episodic memory before old age. *Neuropsychologia*, 133, 107180. Special Issue: “Endel Tulving”.
21. Metcalfe, J. & **Eich, T.S.** (2019). Memory and truth: correcting errors with true feedback versus overwriting correct answers with errors. *Cognitive Research: Principles and Implications*, 4(1), 4.

2018*

20. Habeck, C., **Eich, T.S.**, Razlighi, Q., Gazes, Y. & Stern, Y. (2018). Reference ability neural networks and behavioral performance across the adult life span. *NeuroImage*, 172, 51-63.

2017

19. **Eich, T. S.** Razlighi, Q. & Stern, Y. (2017). Perceptual and memory inhibition are associated with region-specific, doubly dissociable patterns of cortical thinning in clinically healthy older adults. *Behavioral Neuroscience*, 131(3), 220-5.
18. Razlighi, Q., Oh, H., Habeck, C., O’Shea, D., Gazes, Y., **Eich, T.**, Parker, D., Lee, S. & Stern, Y. (2017). Dynamic patterns of brain structure-behavior correlation across the life span. *Cerebral Cortex*. 27(7), 3586-99.

2016

17. **Eich, T. S.**, Gonçalves, B., Razlighi, Q., Nee, D. E, Jonides, J. & Stern, Y. (2016). Inhibitory selection mechanisms in clinically healthy older and younger adults. *Journal of Gerontology B: Psychological Sciences*, 73(4), 612-21.
16. **Eich, T. S.**, MacKay-Brandt, A., Stern, Y & Gopher, D. (2016). Age-based differences in task switching performance costs are moderated by dissociable executive control demands. *Journal of Gerontology B: Psychological Sciences*, 73 (6), 954-63.
15. **Eich, T. S.** Parker, D., Liu, D., Oh, H., Razlighi, Q., Gazes, Y., Habeck, C. & Stern, Y. (2016). Functional brain and age-related changes associated with congruency in task switching. *Neuropsychologia*, 91, 211-21.
14. **Eich, T. S.** & Castel, A. D. (2016). The cognitive control of emotional versus value-based information in younger and older adults. *Psychology & Aging*, 31 (5), 503-12.
13. Tsapanou, A., Gu, Y., O'Shea, D., **Eich, T.**, Tang, M-X., Schupf, N., Manly, J., Scarmeas, N. & Stern, Y. (2016). Daytime somnolence as an early sign of cognitive decline in a community-based study of elderly. *International Journal of Geriatric Psychiatry*, 31 (3), 247-55.

2015

12. **Eich, T. S.**, Rakitin, B.C. & Stern, Y. (2015). Response-conflict moderates the cognitive control of episodic and contextual load in older adults. *Journal of Gerontology B: Psychological Sciences*, 71 (6), 995-1003.

2014

11. **Eich, T. S.**, Murayama, K., Castel, A. & Knowlton, B. (2014). The Dynamic Effects of Age-Related Stereotype Threat on Explicit and Implicit Memory Performance in Older Adults. *Social Cognition*, 32 (6), 559-70.
10. Ahmari, S., **Eich, T.**, Cebenoyan, D., Smith, E. E. & Simpson, B. H. (2014) Assessing neurocognitive function in psychiatric disorders: a roadmap for enhancing consensus. *Neurobiology of Learning and Memory*, 115, 10-20. PMID: 24994503
9. **Eich, T. S.**, Nee, D., Insel, K., Malapani, C. & Smith, E. E. (2014). Neural correlates of impaired control over working memory in Schizophrenia. *Biological Psychiatry*, 76(2), 146-53.
8. **Eich, T. S.** & Smith, E. E. (2014). Schizophrenia and emotional rubbernecking. *Cognitive, Affective & Behavioral Neuroscience*, Special Issue: "Edward Smith", 14(1), 202-8.

2013*

7. Metcalfe, J, **Eich, T. S.** & Miele, D. (2013). Metacognition of agency: Proximal action and distal outcome. *Experimental Brain Research*, 229, 485-96.

2012

6. **Eich, T. S.**, Metcalfe, J. & Stern, Y. (2012). The hypercorrection effect in younger and older adults. *Aging, Neuropsychology, and Cognition*, 20, 511-21. PMID: 23241028; PMCID: PMC3604148
5. **Eich, T. S** & Smith, E. E. (2012). *Cognitive Neuroscience. Oxford Bibliographies Online.*

2011*

4. Smith, E. E., **Eich, T. S.**, Cebenoyan, D. & Malapani, C. (2011). Intact and impaired cognitive control processes in schizophrenia. *Schizophrenia Research*, 126, 132-7.

2010-2009

3. Metcalfe, J., **Eich, T. S.**, & Castel, A. D. (2010) Metacognition of agency across the lifespan: Similar and differential effects in college students, older adults and children. *Cognition*, 116(2), 267-282.
2. Kornell, N., Castel, A. D., **Eich, T. S.**, & Bjork, R. A. (2010). Spacing as the friend of both memory and induction in younger and older adults. *Psychology and Aging*, 25, 498-503.
1. **Eich, T. S.** & Metcalfe, J. (2009). Effects of the stress of marathon running on implicit and explicit memory. *Psychological Bulletin & Review*, 16, 475-479.

FUNDINGActive

2022-2027	Role: PI. National Institute on Aging / Office of Research on Women's Health R01AG079512, "The role of sex in GABAergic-mediated, Alzheimer's disease-related episodic memory impairments from mid to late life." (\$4,129,513)
2022-2025	Role: PI. Alzheimer's Association AARG-22-928813 "Does GABA predict episodic memory deficit in preclinical Alzheimer's disease?" (\$149,984)
2023	Role: PI. Hansen Thorell Award (\$25,000)
2023	Role: PI. Kathleen Gilmore Biology of Aging Award (\$20,000)

Pending

2024-2029	Role: Co-I. National Institute on Aging U01, "Latina Mothers, Environmental chemicals, and Markers Of Risk In preclinical AD/ADRD (LA MEMORIA)" (PI: Bastain).
2024-2029	Role: Co-I. National Institute on Aging R01, "Testing sex and gender as moderators of health impacts of upward mobility on indicators for AD risk in young adulthood". (PIs: Silvers and Callaghan).
2024-2026	Role: Co-I. National Institute on Aging R21, "Investigating Sociodemographic, Genetic and Epigenetic Factors Related to ADHD that Elevate Risk for ADRD". (PI: Arpawong).

Completed

2017-2022	Role: PI. National Institute on Aging K99AG055684 K99/R00 Pathway to Independence Award, "Exploring the Latent Class Structure of Inhibition in Normal Aging." (\$1,009,952)
2015	Role: PI. fMRI Pilot Award, Taub Institute, Columbia University (\$20,000)
2014	Role: PI. Dr. Rita Rudel Developmental Neuropsychology Award (\$10,000)

TALKS

2024	Aspen Memory and Aging Conference (Aspen, Co)
2023	Learning and Memory Conference (Huntington Beach, CA)
2023	Alzheimer's Association Research Program (Coachella Valley, CA)
2022	Winter Brain Conference (Snowbird, CO)
2022	Alzheimer's Association Research Program (Los Angeles, CA)
2021	USC School of Gerontology Board of Councilor's Meeting (Los Angeles, CA)
2019	USC Department of Psychology Colloquium (Los Angeles, CA)

FELLOWSHIPS and AWARDS

2017	Fellow, Psychonomic Society
2016	NIMH Summer Research Institute Fellowship in Geriatric Mental Health, Weill Cornell Medical College
2015	Rising Star, Association for Psychological Science
2014-2017	T32 Ruth L. Kirshstein National Research Service Award Postdoctoral Fellowship in Geriatric Psychiatry
2014	Association for Psychological Science Travel Award
2012-2013	Richard Christie Memorial Fellowship, Columbia University
2008-2012	Faculty Fellow, Columbia University
2006-2008	University Graduate Fellowship, UCLA
2007	Summer Graduate Research Mentorship Award, UCLA
2006-2007	Edwin W. Pauley Distinguished Fellowship, UCLA

TEACHING**Instructor: USC Davis School of Gerontology & Neuroscience Graduate Program**

- Neuroaffective Disorders of Aging (GERO 415)
 - Fall 2020, Spring 2021, Fall 2021, Spring 2022, Fall 2022, Spring 2023, Fall 2023, Spring 2024
- Advanced Overview of Neurosciences II (NSCI 525)

- Spring 2021
- A Journey into the Mind (GERO 315)
 - Spring 2021

Instructor: Columbia University Psychology Department

- Cognitive Neuroscience of Aging (PSYCH G4222): Fall 2016, 2017
- Cognition: Mind and Brain (PSYCH 2215): Spring 2012

Teaching Assistant: Columbia University Psychology Department

- Mind, Brain and Behavior (PSYCH 1010): Fall 2012
- The Science of Psychology (PSYCH 1001): Fall 2010 and 2013
- Cognition: Mind & Brain (PSYCH 2215): Spring 2010, 2009, 2005

Teaching Assistant: UCLA Psychology Department

- Cognitive Psychology (PSYCH 120A): Spring 2008
-Responsible for 4 Lab Sections (25 students each)
- Social Psychology Laboratory (PSYCH 136B): Winter 2008
- Cognitive Psychology Laboratory (PSYCH 121): Fall 2007

MENTORSHIP

Training Programs

- Neurocognitive Aging and Analytics Research Education (BD3-REAP, PI: Braskie).
- Multidisciplinary Research Training in Gerontology (T32 AG000037, PI: Crimmens)
- Gerontology Enriching MSTEM (GEMSTEM) to Enhance Diversity in Aging (R25AG076400, PI: Curran)

Postdoctoral Fellows

- Ali Pournaqhdali, 2022-
- Joan Jiménez-Balado, 2019-2021
Research Faculty at IMIM-Hospital del Mar Medical Research Institute, Barcelona
- Fabian Corlier, 2019-2021
Senior Data Scientist at Kaiser Permanente
- Alex Siegel, 2019-2021
Quantitative UX Researcher at Lyft

Graduate Students

Primary Faculty Advisor

- Jessie Chien, Gerontology, 2020-
- Dokyung Yoon, Gerontology, 2022-
- Jillian Joyce, Neuroscience, 2023-

Committee Member

- Stephanie Rubenstein, Gerontology, Qualls Committee, Dissertation Committee, 2023 (Liz Zelinski, Chair).
- Yujin Jeong Franco, Gerontology, Qualls Committee, 2020
- Shelby Bachman, Gerontology, Dissertation Committee, 2022 (Mara Mather, Chair).
- Laura Fenton, Clinical Psychology, Qualls committee; Dissertation Committee 2022 (Darby Saxbe, Chair)
- Matt Pilgram, Clinical Psychology, Qualls Committee 2021, Dissertation Committee 2022 (Chris Beam, Chair)
- Layla Vasquez, Neuroscience, Qualls Committee, 2021 (Scott Kanoski, Chair)
- Adam Jones, Neuroscience, Qualls Committee, 2021 (Bartlett Mel, Chair; Laurent Itti, Mentor)
- Anissa Marshall, Clinical Psychology, Qualls Committee, 2021 (Dan Nation/Chris Beam, Chairs)

Undergraduate and Master's Students

- Sushmita Chopra, Undergraduate, Biological Sciences, 2022-
- Blanca Diaz, Undergraduate, Health and Human Sciences, *GEMSTEM Fellow*, 2023-
- Hannah Makkai, Undergraduate, Gerontology, 2020-, *Summer 2023 Provost Fellowship*
- Temi Ogunade, Undergraduate, Gerontology and Neuroscience, 2022-, *GEMSTEM Fellow*
- Anya Vincent, MA, Gerontology and Neuroscience, 2022-
- Yaseen El-Magharbel, Undergraduate, Health and Human Sciences, 2023-
- Evelyn Lee, Undergraduate, Gerontology, 2022-23
- Unnati Singhal, MA, Computer Science, 2022-23
- Lily Munoz, MA, Gerontology, 2022-23

SERVICEGerontology

- Faculty Council (2023-)
- Gerontology PhD Committee (2021-)
- Human Subjects Committee (2023-)
- Chair, Neuroscience of Aging Track in the Gerontology PhD (2022-)
- Faculty Search Committee (2022-2023)
- Co-Chair, Colloquium Committee (2021-2023)
- Web Committee (2019-2021)

Neuroscience Graduate Program

- Web Committee (2023-)

USC

- Academic Senate, Tenure and Tenure Track Committee (2020-21)

Extramural

- NIH Review Panel, National Institute on Aging Clinical Research (L30) Loan Repayment Program (February 2024)
- NIH Review Panel, National Institute on Aging AGCD-1 K99 Applications (February 2024)
- NIH Review Panel, Human Complex Mental Function (June 2023)
- Associate Editor, *Journal of Gerontology Series B: Psychological Science* (2024)

- Alzheimer’s Association, Community Partnership Engagements in Los Angeles, Sherman Oaks and Cochella Valley (2023-Present)
- Co-Chair, Reserve and Resilience Satellite Conference (2020, 2021, 2022), <https://reserveandresilience.com/pmc/>

PROFESSIONAL AFFILIATIONS

- Alzheimer’s Association
- Cognitive Neuroscience Society
- Society for Neuroscience
- Society for Biological Psychiatry
- Women in Cognitive Science
- Association for Psychological Science
- Psychonomic Society
- American Psychological Association, Division 3, Division 20 ‘
- Women’s Health Research Cluster
- USC Women in Science and Engineering
- USC Women in Neuroscience

AD HOC REVIEWER

- *Aging, Neuropsychology, and Cognition*
- *Asian Journal of Social Psychology*
- *Cognitive, Affective, and Behavioral Neuroscience*
- *European Psychiatry*
- *Frontiers in ...*
- *Journal of Applied Research in Memory and*
- *Cognition Journal of Geriatric Psychiatry and Neurology*
- *Journal of Gerontology B: Psychological Sciences*
- *Journal of the International Neuropsychological Society*
- *Journal of Gerontology: Psychological Sciences*
- *Journal of Neuroscience*
- *International Journal of Geriatric Psychiatric*
- *Nature Neuroscience*
- *Neurobiolog of Aging*
- *Neuropsychologia*
- *Neurorehabilitation and Neural Repair*
- *PLOS*
- *Psychiatry Research*
- *Psychological Science*
- *Psychology & Aging*
- *Quarterly Journal of Experimental Psychology*
- *Schizophrenia Research*
- *Scientific Reports*
- *SAGE Publishers*