Sharif Ismail Kronemer

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Education & Training

National Institutes of Health
National Institute of Mental Health
Section on Functional Imaging Methods
Postdoctoral Fellow, October 2021 (*Present*)

Yale University
Interdepartmental Neuroscience Program
PhD in *Neuroscience*, December 2021
Master of Philosophy in *Neuroscience*, May 2019

Johns Hopkins University
Division of Cognitive Neuroscience, Department of Neurology
Research Assistant, September 2013 - July 2015

University College London (UCL)
Master of Science in *Cognitive Neuroscience*, August 2013
Mark: Distinction (highest mark)

Ohio Wesleyan University (OWU)
Bachelor of Arts, May 2012
Major: *Neuroscience*; Minor: *Philosophy*
GPA: 3.82

Funding and Scholarships

NINDS T32 NS007224 – *Neurobiology of Cortical Systems*: Competitively awarded to top Yale PhD candidates investigating cortical networks. (2018-2019)

Yale University Conference Travel Award: Awarded for conference travel. (2018, 2019)

Yale Gruber Foundation Graduate Fellowship: Awarded to the top ranked Yale neuroscience PhD applicants for academic merit and research potential. (2015-2017)

NCAA Post-Graduate Scholarship: Awarded to 29 male student-athletes across all NCAA Divisions to cover graduate school tuition and fees. (2012-2013)

OWU Theory-to-Practice Grant: Scholarship to fund research and travel costs to study water shortage and pollution in nine Chinese cities. (2010)

OWU Clinton R. Stevenson Leadership Award: Awarded to one incoming OWU freshman and covers first year room and board costs. (2009)

OWU Trustee Honors Scholarship: 2/3 of undergraduate tuition at OWU. (2008-2012)

Honors & Awards

Yale University Annie Le Fellowship: Awarded for leadership in research and community engagement, exemplifying the qualities emulated in the life and career of Annie Le. (2020)

Highlight Paper of *Dialogue* October 2012 Issue: Awarded to the most outstanding article in an issue of *Dialogue*, the journal of the international honor society for philosophy. (2013)

NCAA Academic All-American: Competitively awarded to top student-athletes nationwide (NCAA Division III) for excellence in athletics and academic achievement. (2012)

NCAC Don Hunsinger Award: North Coast Athletic Conference's top male athlete, based on athletic ability, academic record, and leadership potential. (2012)

OWU Meek Leader Award: Awarded to top senior undergraduate OWU student who demonstrates exceptional leadership ability and service. (2012)

OWU Daniel E. Anderson Award: Awarded to one senior OWU student philosophy major or minor who exemplifies strong philosophic research. (2012)

OWU Dale J. Bruce Presidential Scholar Athlete of the Year: OWU's top student athlete, based on athletic achievement and ability, academic excellence, character, and leadership philosophic research. (2012, 2011)

Leadership

NIH Consciousness Research Interest Group – Co-Chair: Organize NIH symposia and conferences on themes in the scientific study of consciousness. (2023)

Association for the Scientific Study of Consciousness – Committee Member, Chair: Three-year position on ASSC student committee. (2016-2018; Chair 2018-2019)

Graduate Student Assembly Representative: Elected to represent graduate students in the Interdepartmental Neuroscience Program at Yale University. (2017-2018)

Open Labs at Yale University – Director: Elected co-director of Open Labs, a science outreach organization at Yale University (theopenlabs.org). (2015-2018)

Student Academic Representative: Elected to represent graduate students in the MSc in Cognitive Neuroscience program at UCL. (2013)

Student Body President: Elected to represent the Student Body and led the student government at OWU. (2011-2012; Vice President 2010-2011)

Teaching

Howard University Summer Seminar – ***A Primer in the Study of Consciousness***: Designed and taught 5-session seminar for Howard University undergraduates on the philosophy, neuroscience, and medicine of consciousness (2023)

NIH FAES Faculty – ***The Neural Mechanisms of Consciousness: Implications in Medicine, Technology, and Society*** *(NEUR/MEDI 305)*: Designed and taught 7-week course (2022, 2023)

NIH FAES Faculty – ***Human Neuroscience*** *(BIOL 325)*: Designed/taught 7-week course (2022)

NIH Summer Interns Journal Club – ***Mystery, mirage, and mind: How illusions and neuroimaging reveal the working brain***: Designed and co-instructed 4-week journal club (2022)

NIH Course – ***Scientists Teaching Science***: 9-week training course on teaching skills and strategies for collegiate teaching in the sciences (2022)

NIH Course – ***Best Teaching Practices in Higher Education: Building a Learner-Centered Course from Principles to Practice***: 7-week training course on teaching skills and strategies for collegiate teaching in the sciences (2022)

Yale University Poorvu Public Communication Certificate (2021)

Yale University Certificate of College Teaching Preparation: Comprehensive teaching program for training in advanced and effective collegiate education. (2020)

Yale University Teaching Fellow – ***Neurobiology***, Prof. Haig Keshishian, PhD (2020)

Yale University Pathways to Science – ***Consciousness: Science, Self, and Society***: Designed and taught 12-hour course on the philosophy and neuroscience of consciousness. (2016-2020)

Yale University Teaching Fellow – ***Neuroanatomy***, Prof. Michael Schwartz, PhD (2018)

Yale University Teaching Fellow – ***Bioethics***, Prof. Charlie Greer, PhD (2016-2017)

OWU Consciousness and Mind (*Psychology 499*): Designed and taught 15-week course on the philosophy and neuroscience of consciousness to OWU undergraduates. Supervised by Prof. Jennifer Yates, PhD (2011)

Science Outreach (2013-2023)

University programming – Keynote speaker
Yale Science Diplomats - Science in the News, Yale Science Diplomats - Flipped Science Fair, Yale EXPLO, Yale Young Global Scholars, Yale Synapse, Yale Pathways to Science, Yale Open Labs - Science Café, Yale Science at BAR, UCL Year 10 Debating Summer School, UCL Transition Program - Uni-Link

Public seminar series – Keynote speaker
Institute for Learning in Retirement (New Haven, CT), North Haven Public Library (New Haven, CT), Guilford Public Library (New Haven, CT), Branford Public Library (New Haven, CT), Barbican Centre - Brain Waves (London, UK)

Classroom visits
MBA High School (New Haven, CT), Co-op High School (New Haven, CT), Springbrook High School (Silver Spring, MD), Discovery High School (Lake Alfred, FL)

Mentorship

NIH Postbaccalaureate Research Assistant Mentor: Primary mentor for two NIH research assistants in their independent research projects and guiding career development. (2022-2023)

OWU Real Life 101 Mentor Program (2021-2022)

Yale Bio. & Biomedical Sciences Diversity & Inclusion Collective Mentor Program (2021)

Yale University Graduate Affiliate Program – Pierson College (2017-2021)

Yale University Undergraduate Senior Thesis Mentor: Primary mentor for two senior undergraduate thesis projects. (2018-2020)

Yale University Postbaccalaureate Research Assistant Mentor: Primary mentor for four research assistants. (2016-2021)

Invited Lectures

University of Münster Institute of Medical Psychology and Systems Neuroscience – *"Human visual consciousness involves large scale cortical and subcortical networks"* (December 14, 2023)

Yale University Magnetic Resonance Research Center Seminar Series – *"Examining afterimage conscious perception with whole brain and V1 layer-resolution fMRI"* (December 7, 2023)

OWU "The Neurds" Research Talk – *"The space and time of visual consciousness in the human brain"* (April 14, 2023)

Yale Clinical Neuroimaging Symposium – *"Transient increases in subcortical arousal and salience networks associated with conscious visual perception"* (February 20, 2018)

Johns Hopkins University, Neurology HEAD Seminar Series – *"Uncovering the Neural Mechanisms of Consciousness: Outstanding questions and obstacles"* (May 14, 2018)

Conference Workshops

NIH-NSF Next Frontiers in Consciousness Research Workshop *(Workshop Outreach Ambassador)*: Organized outreach classes for underrepresented undergraduate and graduate students in the science of consciousness in preparation of the Workshop. (2023)
https://new.nsf.gov/funding/opportunities/cognitive-neuroscience-cogneuro/announcements/95736

Association for the Scientific Study of Consciousness, Conference 26 *(Workshop speaker) – Shared subcortical arousal mechanisms across diverse perceptual and volitional modalities*. (2023)

Association for the Scientific Study of Consciousness, Conference 22 *(Workshop organizer and speaker) – Investigating cortical and subcortical mechanisms of conscious perception*. (2018)

Ad Hoc Manuscript Review and Editing

Cognitive, Affective, and Behavioral Neuroscience
Consciousness and Cognition
Current Opinion in Behavioral Sciences
eLife
Frontiers in Behavioral Neuroscience
Frontiers in Neuroscience
Perception
Progress in Neurobiology
Yale Undergraduate Research Journal

Professional Memberships

American Association for the Advancement of Science
Association for the Scientific Study of Consciousness *(full-voting member)*
Society for Neuroscience
Phi Beta Kappa

Preprint Publications

1. ***Kronemer, SI***, Gobo, VE, Teves, JB, Burk, DC, Shahsavarani, S, Walsh, CR, Gonzalez-Castillo, J, Bandettini, PA (2024). Cross-species real time detection of trends in pupil size fluctuation. *bioRxiv*. https://www.biorxiv.org/content/10.1101/2024.02.12.579393v1
2. ***Kronemer, SI,*** Holness, M, Morgan, AT, Teves, JB, Gonzalez-Castillo, J, Handwerker, DA, Bandettini, PA (2023). Visual imagery vividness correlates with afterimage brightness and sharpness. *bioRxiv*. https://www.biorxiv.org/content/10.1101/2023.12.07.570716v1

Peer-Reviewed Publications

1. ***Kronemer, SI***, Aksen, M, Ding, J, Ryu, JH, Xin, Q, Ding, Z, … Blumenfeld, H (2022). Human visual consciousness involves large scale cortical and subcortical networks independent of task report and eye movement activity. *Nature Communications*, 13:7342. https://doi.org/10.1038/s41467-022-35117-4
2. Khalaf, A, ***Kronemer, SI***, Christison-Lagay, KL, Kwon, H, Li, J, Wu, K, & Blumenfeld, H (2023). Early neural activity changes associated with stimulus detection during visual conscious perception. *Cerebral Cortex*, 22:bhac140. 10.1093/cercor/bhac140
3. Gusso, MM, Christison-Lagay, KL, Zuckerman, D, Chandrasekaran, G, ***Kronemer, SI***, Ding, JZ, Freedman, NC, Nohama, P, & Blumenfeld, H (2022). More than a feeling: scalp EEG and eye correlates of conscious tactile perception. *Conscious Cogn.*, 105:103411. 10.1016/j.concog.2022.103411
4. Joyce, RM, Nadkarni, PA, ***Kronemer, SI***, Margron, MJ, Slapik, MB, Morgan, OP, Rosenthal, LS, Onyike, CU, & Marvel, CL (2022). Quality of life changes following the onset of cerebellar ataxia: Symptoms and concerns self-reported by ataxia patients and informants. *The Cerebellum*, 21. https://doi.org/10.1007/s12311-022-01393-5

5. ***Kronemer, SI***, Slapik, MB, Pietrowski, JR, Margron, MJ, Morgan, OP, Bakker, C, … Marvel, CL (2021). Neuropsychiatric symptoms as a reliable phenomenology of cerebellar ataxia. *The Cerebellum*, 20. doi:10.1007/s12311-020-01195-7
6. Kwon, H, ***Kronemer, SI***, Christison-Lagay, KL, Khalaf, A, Li, J, Ding, JZ, Freedman, NC, Blumenfeld, H (2021). Early cortical signals in visual stimulus detection. NeuroImage, 244. https://doi.org/10.1016/j.neuroimage.2021.118608
7. Morgan, OP, Slapik, MB, Iannuzzelli, KG, LaConte, SM, Lisinski, JM, Nopoulos, PC, … Marvel, CL (2021). The cerebellum and implicit sequencing: Evidence from cerebellar ataxia. *The Cerebellum*, 20, 222-245. doi: 10.1007/s12311-020-01206-7
8. Li, J, ***Kronemer, SI***, Herman, WX, Kwon, H, Ryu, JR, Micek, C, … Blumenfeld, H, (2019). Default mode and visual network activity in an attention task: Direct measurement with intracranial EEG. *NeuroImage*, 201. doi: 10.1016/j.neuroimage.2019.07.016
9. Marvel, CL, Morgan, OP, & ***Kronemer, SI*** (2019). How the motor system integrates with working memory. *Neuro Biobeh Rev*, 102, 184-194. doi: 10.1016/j.neubiorev.2019.04.017
10. Herman, WX, Smith, RE, ***Kronemer, SI***, Watsky, RE, Chen, WC, Gober, LM, … Blumenfeld, H (2019). A switch and wave of neuronal activity in the cerebral cortex during the first second of conscious perception. *Cerebral Cortex, 29*(2), 461-474. doi: 10.1093/cercor/bhx327
11. Slapik, M, ***Kronemer, SI***, Morgan, O, Bloes, R, Lieberman, S, Mandel, J, … Marvel, C (2019). Visuospatial organization and recall in cerebellar ataxia. *Cerebellum, 18*(1), 33-46. doi: 10.1007/s12311-018-0948-z
12. ***Kronemer, SI***, Mandel, JA, Sacktor, NC, & Marvel, CL (2017). Impairments of motor function while multitasking in HIV. *Front Hum Neurosci, 11*, 212. doi:10.3389/fnhum.2017.00212
13. Anderson, BA, ***Kronemer, SI***, Rilee, JJ, Sacktor, N, & Marvel, CL (2015). Reward, attention, and HIV-related risk in HIV+ individuals. *Neurobiology of Dis*. doi: 10.1016/j.nbd.2015.10.018
14. Liao, D, ***Kronemer, SI***, Yau, J, Desmond, J, & Marvel, CL (2014). Motor system contributions to verbal and non-verbal working memory. *Frontiers in Human Neuroscience, 8*(753). doi: 10.3389/fnhum.2014.00753
15. ***Kronemer, SI*** & Yates, J (2012). An undergraduate taught course on consciousness and mind. *The Journal of Undergraduate Neuroscience Education, 11*(1), A17-A21
16. ***Kronemer, SI*** (2012). The Death of Expressed Personhood: A neuroscientific model to solve our greatest bioethical dilemmas. *Dialogue: Journal of International Honor Society for Philosophy*, *55*(1), 1-9
17. ***Kronemer, SI*** (2012). The Death of Personhood and the Rise of the Expressed-Self: What neuroscience tells us about self and death. *Sapere Aude: The Wooster Journal of Philosophical Inquiry, Volume V*, 1-9
18. ***Kronemer, SI*** (2011). Schopenhauer's and Nietzsche's Quest in a Godless World and the Will to Think That Drove Them. *Dialogue: Journal of International Honor Society for Philosophy*, *53*(2-3), 121-125

Conference Abstracts *(first or senior authorship abstracts only)*

1. ***Kronemer, SI***, Holness, M, Morgan, TA, Gonzalez-Castillo, J, Akin, B, Huber… Bandettini, PA (October 2023). *Perceptually-matched images and afterimages share whole brain fMRI dynamics*. Poster presented at *Society for Neuroscience*, Washington, DC, USA
2. Gobo, VE, Gonzalez-Castillo, J, Teves, J, Holness, M, Bandettini, PA, & ***Kronemer, SI*** (October 2023). *Pupil size and phase as a real-time marker of perceptual sensitivity and whole brain activity*. Poster presented at *Society for Neuroscience*, Washington, DC, USA
3. ***Kronemer, SI***, Holness, M, Morgan, TA, Gonzalez-Castillo, J, Teves, J, Handwerker, D, & Bandettini, PA (July 2023). *The neural mechanisms of interoceptive conscious perception: A 7T fMRI study of afterimages*. Poster presented at *Organization for Human Brain Mapping*, Montreal, CA
4. Gobo, VE, Gonzalez-Castillo, J, Teves, J, Handwerker, D, Bandettini, PA, & ***Kronemer, SI*** (July 2023) *Real time pupil size detection as a marker of arousal state and perceptual sensitivity*. Poster presented at *Organization for Human Brain Mapping*, Montreal, CA
5. Gobo, VE, Gonzalez-Castillo, J, Teves, J, Handwerker, D, Bandettini, PA, & ***Kronemer, SI*** (June 2023) *Pupil size as a real-time marker of arousal and perception state.* Poster presentation at *Association for the Scientific Study of Consciousness*, New York City, USA
6. ***Kronemer, SI***, Holness, M, Morgan, TA, Gonzalez-Castillo, J, Teves, J, … Bandettini, PA (June 2023) *Exteroceptive versus interoceptive conscious perception: A 7T fMRI study of afterimages.* Oral presentation at *Association for the Scientific Study of Consciousness*, New York City, USA
7. Holness, M, Morgan, TA, Teves, J, Handwerker, D, Bandettini, PA, & ***Kronemer, SI*** (October 2022) *The neural mechanisms of afterimages: A model of illusory conscious perception*. Poster presentation at *Society for Neuroscience*, San Diego, USA
8. ***Kronemer, SI***, Aksen, M, Ryu, JH, Kwon, H, Forman, S … Blumenfeld, H (June 2019) *Subcortical and cortical electrophysiology and fMRI in visual conscious perception: Detect, pulse, switch, and wave model.* Poster presentation at *Association for the Scientific Study of Consciousness*, London, CA
9. ***Kronemer, SI***, Aksen, M, Hunki, K, Christison-Lagay, KL, Forman, S … Blumenfeld, H (June 2018) *The temporal sequence of physiological changes for visual conscious perception.* Poster presentation at *Association for the Scientific Study of Consciousness*, Krakow, PL
10. ***Kronemer, SI***, Forman, S, Ryu, JH, Khosla, M, Saberski, E … Blumenfeld, H (June 2017) *The subcortical neural mechanisms of network switching for visual conscious perception.* Poster presentation at *Association for the Scientific Study of Consciousness*, Beijing, CN
11. ***Kronemer, SI***, Xiao, WR, Gober, L, Smith, RE, Wafa, SA … Blumenfeld, H (June 2016) *The cortical event-related potential and alpha wave signatures for visual consciousness.* Poster presentation at *Association for the Scientific Study of Consciousness*, Buenos Aires, AR

References are available upon request.