Sharif Ismail Kronemer

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Education

Yale University
Interdepartmental Neuroscience Program
Ph.D. Candidate in *Neuroscience*, May 2021
Master of Philosophy in *Neuroscience*, May 2019

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

Research Experience

2015-2020 Ph.D. Candidate – Yale University

Research aims: Examining the spatial and temporal dynamics underlying the neural mechanism of visual perception utilizing neuroimaging (fMRI), electrophysiological (scalp/depth EEG and intracranial EEG), pupillometry, and machine learning.

PI: Hal Blumenfeld, M.D. Ph.D., Department of Neurology, Yale University

2013-2015 Research Assistant – Johns Hopkins University

Research aims: (1) Investigate the impact of chronic HIV on cognitive and motor function. (2) Cognitive and emotional regulation aberrance in cerebellar ataxia.

PI: Cherie Marvel, Ph.D., Department of Neurology, Division of Cognitive Neuroscience, Johns Hopkins University

Peer-Reviewed Original Research

Kronemer, S. I., Slapik, M. B., Pietrowski, J. R., Margron, M. J., Morgan, O. P., Bakker, C., … Marvel, C. L. (in-review). Neuropsychiatric symptoms as a reliable phenomenology of cerebellar ataxia

Li, J., **Kronemer, S. I.**, Herman, W. X., Kwon, H., Ryu, J. R., 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

Marvel, C. L., Morgan, O. P., & **Kronemer, S. I.** (2019). How the motor system integrates with working memory. *Neuro Biobeh Rev*, 102, 184-194. doi: 10.1016/j.neubiorev.2019.04.017

Herman, W. X., Smith, R. E., **Kronemer, S. I.**, Watsky, R. E., Chen, W. C., Gober, L. M., … 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

Slapik, M., **Kronemer, S. I.**, 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

Kronemer, S. I., Mandel, J. A., Sacktor, N. C., & Marvel, C. L. (2017). Impairments of motor function while multitasking in HIV. *Front Hum Neurosci, 11*, 212. doi:10.3389/fnhum.2017.00212

Anderson, B.A., **Kronemer, S.I.**, Rilee, J.J., Sacktor, N., & Marvel, C.L. (2015). Reward, attention, and HIV-related risk in HIV+ individuals. *Neurobiology of Dis*. doi: 10.1016/j.nbd.2015.10.018

Liao, D., **Kronemer, S.I.**, Yau, J., Desmond, J., & Marvel, C. (2014). Motor system contributions to verbal and non-verbal working memory. *Frontiers in Human Neuroscience, 8*(753). doi: 10.3389/fnhum.2014.00753

Kronemer, S.I. & Yates, J. (2012). An undergraduate taught course on consciousness and mind. *The Journal of Undergraduate Neuroscience Education, 11*(1), A17-A21.

Kronemer, S.I. (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.

Kronemer, S.I. (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.

Kronemer, S.I. (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.

Academic Honors and Scholarships

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)

NIH Training Grant: Awarded to top Yale Ph.D. candidates studying cortical systems for thesis dissertation – T32 NS007224. (2018-2019)

Yale University Conference Travel Award: Competitively awarded for conference travel to present thesis research. (2018, 2019)

Yale University Gruber Fellowship: Awarded to the most highly ranked Yale University 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)

Best Paper of *Dialogue* October 2012 Issue: Awarded to the most outstanding paper published in each issue of *Dialogue*, the journal of the international honor society for philosophy. (2013)

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)

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

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)

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

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

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

Abstracts

Gusso, M.M., Christison-Lagay, K.L., Zuckerman, D., Chandrasekaran, G., Kronemer, S.I., Rapuano, A., … Blumenfeld, H. (2020). *A novel tactile threshold perception study using single-unit recordings, hdEEG, and pupillometry.* Gordon Research Conference Thalamocortical Interactions

Blumenfeld, H., Christison-Lagay, K.L., Kronemer, S.I., Hunki, K., Khalaf, A., Li, R., Aksen, … Spencer, D.S. (2020). *Neuroimaging and electrophysiology in large data set reveal neural sequence of human conscious perception: Detect, pulse, switch, and wave.* ABIM

Kronemer, S.I., Aksen, M., Ryu, J.R., Kwon, H., Forman, S. Khosla, M., … Blumenfeld, H. (2019). *Subcortical and cortical electrophysiology and fMRI in visual conscious perception: Detect, pulse, switch, and wave model*. ASSC 23

Aksen, M., Kronemer, S.I., Prince, J.S., Ding, Z., Agarwal, A., Wolf, G., … Blumenfeld, H. (2018). *Pupil dynamics as a covert measure of conscious perception in a visual no report paradigm*. Society for Neuroscience. Abstract No. 789.12

Forman, S., Christison-Lagay, K.L., Micek, C., Kronemer, S.I., Aksen, M., Chun, M.M., & Blumenfeld, H. (2018). *Potential novel mechanism for the attentional blink in a conscious perception task*. Society for Neuroscience. Abstract No. 789.11

Kronemer, S.I., Aksen, M., Kwon, H., Micek, C., Christison-Lagay, K.L., Forman, S., … Blumenfeld, H. (2018). *Early and late electrophysiological changes to visual conscious perception*. Society for Neuroscience. Abstract No. 789.10

Micek, C., Christison-Lagay, K.L., Williams, M., Kronemer, S.I., Herman, X.R., Li, J., … Blumenfeld, H. (2018). *Relationship between stimulus opacity and intracranial broadband gamma power in a conscious visual perception task*. Society for Neuroscience. Abstract No. 789.09

Li, J., Kronemer, S.I., Kwon, H., Ryu, J. Aksen, M., Herman, W.R., … Blumenfeld, H. (2018). *Intracranial EEG topography of neural networks with transient and sustained shifts in attention*. Society for Neuroscience. Abstract No. 789.08

Christison-Lagay, K.L., Micek, C., Kronemer, S.I., Forman, S., Aksen, M., Abdel-Aty, A., … Blumenfeld, H. (2018). *Investigating auditory conscious perception with a threshold task and intracranial EEG*. Society for Neuroscience. Abstract No. 789.07

Kronemer, S.I., Aksen, M., Kwon, H., Micek, C., Christison-Lagay, K.L., Forman, S., … Blumenfeld, H. (2018). *The temporal sequence of physiological changes for visual conscious perception.* ASSC 22

Ding, Z., Prince, J.S., Forman, S., Morgan, O., Zhao, C.W., Wafa, S., … Blumenfeld, H. (2017). *Machine learning to predict conscious visual perception using pupillary dynamics*. Society for Neuroscience. Abstract No. 804.13

Kronemer, S.I., Forman, S., Ryu, J.H., Khosla, M., Sarberski, E., Xiao, W.R., … Blumenfeld, H. (2017). *The cortical and subcortical neural mechanisms of visual perception*. Society for Neuroscience. Abstract No. 804.12.

Xiao, W.R., Kronemer, S.I., Gerrard, J.L., Spencer, D.D., & Blumenfeld, H. (2017). *Effect of peri-stimulus alpha activity phase and power on detection of threshold visual perceptual stimuli*. Society for

Neuroscience. Abstract No. 804.11

Forman, S., Kronemer, S.I., Saberski, E., Ryu, J.H., Khosla, M., Xiao, W.R., … Blumenfeld, H. (2017). *Subjective conscious perception shortens reaction time independently of objective task performance*. Society for Neuroscience. Abstract No. 804.1

Bloes, R., Kronemer, S.I., Otero-Millan, J., Peterburs, J., & Marvel, C.L. (2017) *Selective working memory deficits in cerebellar ataxia*. Society for Neuroscience. Abstract No. 213.22

Slapik, M., Kronemer, S.I., Mandel, J.A., Bloes, R.D., Creighton, J.A., Lieberman, S.D., … Marvel, C.L. (2017). *Visuospatial processing and strategy formation in cerebellar ataxia*. Society for Neuroscience. Abstract No. 213.21

Marvel, C.L., Kronemer, S.I., Pietrowski, J.R., Rosenthal, L.I., & Onyike, C.U. (2017). *Emotion dysfunction and its correlates in cerebellar ataxia*. Society for Neuroscience. Abstract No. 213.2

Kronemer, S.I., Forman, S., Ryu, J.H., Khosla, M., Saberski, E., Xiao, W.R., … Blumenfeld, H. (2017). *The subcortical neural mechanisms of network switching for visual conscious perception*. ASSC 21

Xiao, W.R., Kronemer, S.I., Gober, L.M., Smith, R.E., Wafa, S.M.A., Raja, A., … Blumenfeld, H. (2016). *Broadband gamma activity in the formation of a conscious visual experience in humans*. Society for Neuroscience. Abstract No. 646.12

Kronemer, S.I., Xiao, W.R., Gober, L., Smith, R.E., Wafa, S.M.A, Raja, A., … Blumenfeld, H. (2016). *Intracranial cortical event-related potentials and alpha wave gating of visual consciousness*. Society for Neuroscience. Abstract No. 646.04

Kronemer, S.I., Xiao, W.R., Gober, L., Smith, R.E., Wafa, S.M.A., Raja, A., … Blumenfeld, H. (2016). *The cortical event-related potential and alpha wave signatures for visual consciousness*. ASSC 20

Xiao, W.R., Kronemer, S.I., Gober, L., Smith, R.E., Wafa, S.M.A, Raja, A., … Blumenfeld, H. (2016). *An organized wave of intracranial broadband gamma activity during the first second of conscious visual perception*. ASSC 20

Kronemer, S.I., & Marvel, C.L. (2015). *The interaction between working memory and motor performance in cerebellar ataxia*. Society for Neuroscience. Abstract No. 653.08

Marvel, C.L., Kronemer, S.I., & Rilee, J.J. (2014). *Verbal and non-verbal working memory in spinocerebellar ataxia*. Society for Neuroscience. Abstract No. 173.23

Rilee, J.J., Faulkner, M.L., Liao, D.A., Kronemer, S.I., & Marvel, C.L. (2014). *Cerebro-cerebellar contributions to verbal and non-verbal working memory*. Society Neuroscience. Abstract No. 173.17

Kronemer, S.I., Anderson, B.A., Rilee, J.J., Sacktor, N., & Marvel, C.L. (2014). *The role of impulsivity and working memory on reward-based attentional capture in HIV and addition*. Society for Neuroscience. Abstract No. 173.13

Invited Presentations

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

Association for the Scientific Study of Consciousness, Conference 24 *(Workshop organizer)* – *The neural timeline of consciousness: Detect, pulse, switch, and wave.* (2020)
Association for the Scientific Study of Consciousness, Conference 22 *(Workshop organizer)* – *Investigating cortical and subcortical mechanisms of conscious perception*. (2018)

Teaching

Yale University Teaching Fellow – Neurobiology, Prof. Haig Keshishian, Ph.D. (2020)

Yale University Certificate of College Teaching Preparation: Comprehensive teaching program for development of advanced and effective college teaching (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, Ph.D. (2018)

Yale University Teaching Fellow – Bioethics, Prof. Charlie Greer, Ph.D. (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, Ph.D. (2011)

Public and Student Science Outreach (2013-2020)

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)

Leadership

Association for the Scientific Study of Consciousness – Committee Member, Chair: Competitively awarded a three-year position on the four-person ASSC student committee tasked with organizing elements of the ASSC annual conference and academic events for members of the ASSC. (2016-2018; Chair 2018-2019)

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

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

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

Ad Hoc Manuscript Review

Consciousness and Cognition
Yale Undergraduate Research Journal

Professional Memberships

2012 - Phi Beta Kappa
2014 - Society for Neuroscience
2015 - Association for the Scientific Study of Consciousness
2016 - American Association for the Advancement of Science

References are available upon request.