NUTTIDA RUNGRATSAMEETAWEEMANA

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EMPLOYMENT

Postdoctoral fellow, The Salk Institute for Biological Studies & July 2020 - Present
The U.S. Army Combat Capabilities Development Command
Computational Neurobiology Laboratory (PI: Dr. Terrence J. Sejnowski)
Army Research Laboratory (PI: Dr. Javier O. Garcia)

EDUCATION

University of California, San Diego La Jolla, CA
Ph.D. in *Neurosciences with a Specialization in Computational Neurosciences* May 2020
Neural Dynamics of Probabilistic Perceptual Decision Making in the Human Brain
Research Advisors: Dr. John T. Serences & Dr. Larry R. Squire

M.S. in *Neurosciences with a Specialization in Computational Neurosciences* August 2016
Research Advisors: Dr. John T. Serences & Dr. Larry R. Squire

Middlebury College Middlebury, VT
B.S. in *Mathematics and Neuroscience, Highest Honor* May 2014
Mathematics Thesis: *A Mathematical Approach to Selective Visual Attention*
Neuroscience Thesis: *The Influence of Internal and External Arousal on Memory*
Research Advisors: Dr. Jason Arndt and Dr. Michael Olinick

AWARDS AND HONORS

Anuradha Rao Memorial Award, Cell Press/ Society for Neuroscience 2021
U.S. Army Research Laboratory Predoctoral Fellowship 2018 - 2020
Training Grant, UCSD Neurosciences Graduate Program 2014 - 2015
College Scholar Award, Middlebury College 2010 - 2014
Senior Research Fellowship, Middlebury College 2013 - 2014
Middlebury College Research Travel Grant November 2013
- Awarded to present a poster at *44th Annual Meeting of the Society for Neuroscience*

Middlebury College Summer Research Fellowship Summer 2012
- Awarded to intern in the lab of Dr. John T. Serences, UCSD

Neuroscience Undergraduate Research Scholarship 2009 - 2014
- Awarded by the Ministry of Science and Technology of Thailand

PUBLICATIONS

[1] **Rungratsameetaweemana N**, Itthipuripat S, Garcia, JO, Serences JT. Differential temporal dynamics of top-down control on probabilistic perceptual decision making. Preprint, 2020.

[2] Nelli S, Itthipuripat S, **Rungratsameetaweemana N**, Serences JT. The speed-accuracy tradeoff reveals flexible access to accumulating sensory evidence during human decision-making. Under revision.

[3] Lainscsek C*, **Rungratsameetaweemana N***, Cash SS, Sejnowski TJ. Cortical chimera states predict epileptic seizures. *Chaos: An Interdisciplinary Journal of Nonlinear Science*, 29: 121106, 2019.

[4] **Rungratsameetaweemana N**, Squire LR, Serences JT. Preserved capacity for learning statistical regularities and directing selective attention after hippocampal lesions. *The Proceedings of the National Academy of Sciences*, 116 (39): 19705-19710, 2019.

[5] **Rungratsameetaweemana N**, Serences JT. Dissociating the impact of attention and expectation on early sensory processing. *Current Opinion in Psychology.*, 29: 181-186, 2019.

[6] **Rungratsameetaweemana N***, Itthipuripat S*, Salazar A, Serences JT. Expectations do not alter early sensory processing during perceptual decision-making. *Journal of Neuroscience*, 38 (24): 5632-5648, 2018.

[7] **Rungratsameetaweemana N**, Squire, LR. Preserved capacity for scene construction and shifts in perspective after hippocampal lesions. *Learning & Memory*, 25: 347-351, 2018.

[8] Itthipuripat S, Garcia, JO, **Rungratsameetaweemana N**, Sprague TC, Serences JT. Changing the spatial scope of attention alters patterns of neural gain in human cortex. *Journal of Neuroscience*, 34(1): 112-123, 2014.

* *these authors made equal contributions*

INVITED TALKS

[1] Dynamics of top-down modulatory signals in humans and neural networks. *Dr. Dobromir Rahnev's lab*, Georgia Institute of Technology. March, 2021.

[2] Probabilistic decision making in humans and recurrent neural networks & The importance of mentorship in supporting diversity in science. *Diversity and Science Lecture Series*, UCSD. December, 2020.

[3] Uncovering dynamical chimera states in the human brain. *Intelligent and Complex Systems Research Seminar Series*, Chulalongkorn University, Thailand. June, 2020.

[4] Temporal dynamics of probabilistic decision making. *Neuroscience and Psychology Research Talk Series*, Middlebury College. January, 2020.

CONFERENCE TALKS

[1] **Rungratsameetaweemana N**, Kim R, Sejnowski TJ. Neural dynamics of probabilistic computations in humans and recurrent neural networks. *Virtual Meeting of the Cognitive Neuroscience Society.* March, 2021.

[2] **Rungratsameetaweemana N**, Kim R, Sejnowski TJ. Probabilistic information processing in humans and recurrent neural networks. *Neuromatch 3.0 Conference.* October, 2020.

[3] **Rungratsameetaweemana N**, Lainscsek C, Cash SS, Sejnowski TJ. Cortical chimera states as predictors for epileptic seizures. Research spotlight, *IEEE Engineering in Medicine and Biology Society symposium and workshop on Brain, Mind, and Body: Cognitive Neuroengineering for Health and Wellness.* December, 2019.

[4] **Rungratsameetaweemana N**, Itthipuripat S, Salazar A, Serences JT. Expectation influences late stages of information processing. *18th Annual Meeting of the Vision Sciences Society.* May, 2018.

[5] **Rungratsameetaweemana N**, Olinick M. Mathematical implications of the normalization model of attention. *Annual Conference of Women in Mathematics of New England.* September, 2012.

ABSTRACTS

[1] **Rungratsameetaweemana N**, Lainscsek C, Cash SS, Sejnowski, Garcia JO, Bansal K. Intrinsic network topologies underlie distinct propagation dynamics of focal seizures. *Society for Neuroscience Global Connectome.* January, 2021.

[2] **Rungratsameetaweemana N**, Lainscsek C, Garcia JO, Bansal K, Cash SS, Sejnowski TJ. Uncovering dynamical states through concurrent electroencephalography (EEG) and electrocorticography (ECoG). *Virtual Meeting of the Cognitive Neuroscience Society.* June, 2020.

[3] **Rungratsameetaweemana N**, Lainscsek C, Cash SS, Sejnowski TJ. Cortical chimera states as predictors for epileptic seizures. *17th Annual Computational and Systems Neuroscience (Cosyne) Meeting.* February, 2020.

[4] **Rungratsameetaweemana N**, Lainscsek C, Cash SS, Sejnowski TJ. Cortical chimera states as predictors for epileptic seizures. *IEEE Engineering in Medicine and Biology Society symposium and workshop on Brain, Mind, and Body: Cognitive Neuroengineering for Health and Wellness.* December, 2019.

[5] **Rungratsameetaweemana N**, Itthipuripat S, Serences JT. Dissociable modulation of top-down control on perceptual decision making. *19th Annual Meeting of the Vision Sciences Society.* May, 2019.

[6] **Rungratsameetaweemana N**, Schmaelzle R, Bansal K, Wasylyshyn N, Roy H, Lauharatanahirun N, Johnson T, Fernandez R, O'Donnell M, Falk E, Metcalfe J, Vettel JM, Garcia JO. Capturing communication success of driver-passenger dyads during real-world driving. *9th International Conference of the IEEE Engineering in Medicine and Biology Society on Neural Engineering.* March, 2019.

[7] Garcia JO, Bansal K, **Rungratsameetaweemana N**, Wasylyshyn N, Roy H, Lauharatanahirun N, Johnson T, Fernandez R, Falk E, Metcalfe J, Vettel JM. Brain network communities between driver-passenger dyads capture successful communication while driving. *9th International Conference of the IEEE Engineering in Medicine and Biology Society on Neural Engineering.* March, 2019.

[8] **Rungratsameetaweemana N**, Vettel JM, Oliva JB, Verstynen T, Serences JT, Garcia JO. Intrinsic neural oscillations modulate feature selectivity in human visual cortex. *48th Annual Meeting of the Society for Neuroscience.* November, 2018.

[9] **Rungratsameetaweemana N**, Itthipuripat S, Serences JT. Temporal dynamics of prior expectations on human perceptual decision-making. *41st Annual European Conference on Visual Perception.* August, 2018.

[10] **Rungratsameetaweemana N**, Squire LR, Serences JT. Effects of attention and expectation on perceptual decision making after medial temporal lobe lesions. *47th Annual Meeting of the Society for Neuroscience.* November, 2017.

[11] **Rungratsameetaweemana N**, Itthipuripat S, Barker E, Wagstaff L, Serences JT. Task-irrelevant contextual expectation impairs orientation discrimination performance. *16th Annual Meeting of the Vision Sciences Society.* May, 2016.

[12] **Rungratsameetaweemana N**, Itthipuripat S, Barker E, Salazar A, Serences JT. Dissociable effects of attention and expectation on perceptual decision making. *45th Annual Meeting of the Society for Neuroscience.* October, 2015.

[13] **Rungratsameetaweemana N**, Itthipuripat S, Serences JT. Dissociable effects of sensory evidence and expectation during visual discrimination tasks. *15th Annual Meeting of the Vision Sciences Society.* May, 2015.

[14] **Rungratsameetaweemana N**, Arndt J. The influence of internal and external arousal on memory. *55th Annual Meeting of the Psychonomic Society.* November, 2014.

[15] Itthipuripat S, Garcia JO, **Rungratsameetaweemana N**, Sprague TC, Serences JT. Changing the spatial scope of attention alters patterns of neural gain in human cortex. *43rd Annual Meeting of the Society for Neuroscience.* November, 2013.

OUTREACH & MEDIA

Featured news article on *The U.S. Army CCDC Research Spotlight* — June 2020

Diversity Recruitment Committee Member, Neurosciences Graduate Program, UCSD — 2015 - 2020

- Represented UCSD at Annual Meeting of the Society for Advancement of Chicanos/Hispanics and Native Americans in Science — October 2019

Xiao Pengyou, an outreach program for local Asian adoptees in Vermont — 2011-2014

Team Leader, Pakchong Community Science Outreach, Thailand — 2011-2013

Executive Board Member, Southeast Asian Service Leadership Network (SEALNet) — 2011

Middlebury College Community Friends Outreach Program — 2011

National Mathematics and Science Outreach Team, Thailand — 2010

MENTORSHIP & TEACHING

Computational and Systems Neuroscience (Cosyne) 2021 Mentoring Forum — Winter 2020

Research Mentor for Graduate and Undergraduate Students — 2019 - 2020

The Salk Institute & The U.S. Army Research Laboratory

- Students: Mia Borzello (UCSD), Brianna Marsh (UCSD), Julia Phillips (Fordham U)

Guest Lecturer for Neuroscience: From Brain to Behaviors, UCSD — Summer 2019

Graduate Student Mentor for Undergraduate Students — 2014-2020

Perception and Cognition Laboratory, UCSD

- Students: Emily Barker, Lili Wagstaff, Jimmy Yu, Chenlu Wang, Tzu-en Wang, Kevin Diep, Emely Anaya, Chenlu Wang

Teaching Assistant for Special Topics in Psychology Course — Fall 2015

Department of Psychology, UCSD

Teaching Assistant for Department of Mathematics, Middlebury College

Multivariable Calculus Course	Spring 2013
Differential Equations Course	Fall 2013
Heart of Mathematics Course	Winter 2012
Calculus II Course	2011 - 2012

Teaching Assistant for Department of Neuroscience & Psychology, Middlebury College

Neurophysiology; Psychological Statistics; Introduction to Psychology Course — Fall 2013

Lecturer for Geometry Course and Calculus I Course — Summer 2011

Roong Arun High School, Thailand

Guest Lecturer for General Biology Course — Summer 2010

Princess Chulabhorn's College, Thailand