

Farhad Farkhondeh Tale Navi

Assistant Professor

College: Education & Psychology

I hold a Ph.D. in Cognitive Neuroscience, with a strong foundation in engineering. My research focuses on decision-making, memory systems, brain oscillations, and cognition. I am particularly interested in leveraging cutting-edge approaches, such as closed-loop systems, machine learning, neuromodulation techniques, and computational neuroscience, to drive advancements in brain and cognitive research.

Employment Information

Faculty/Department	Position/Rank	Employment Type	Cooperation Type	Grade
(not set)	(not set)	(not set)	Full Time	

Competitions

Dr. Farhad Farkhondeh Tale Navi is an Assistant Professor of Cognitive Neuroscience at the University of Tabriz, with an interdisciplinary background spanning engineering, cognitive neuroscience, computational modeling, and neurotechnology. His research focuses on understanding how neural dynamics give rise to cognition, with particular interests in decision-making, memory, cognitive control, brain oscillations, and the computational mechanisms underlying human and animal behavior.

His work integrates **cognitive neuroscience, EEG/ERP, computational cognitive modeling, machine learning, and closed-loop neurotechnology** to move beyond the measurement of brain activity toward the investigation and modulation of cognitive processes. He is particularly interested in interventional approaches—including neurofeedback and closed-loop neuromodulation—as tools for investigating the causal contribution of neural dynamics to cognition and for developing evidence-based approaches to cognitive enhancement and rehabilitation.

Dr. Farkhondeh Tale Navi is also interested in **NeuroAI, brain-inspired artificial intelligence, human–AI**

interaction, and computational approaches to cognition. His broader research vision is to bridge theories of cognition with quantitative models and engineering systems, translating principles discovered in cognitive neuroscience into intelligent technologies.

Conferences

Academic Contributions:

- **Computational Approaches in Social and Cognitive Neuroscience**: Presented at BCNC2023, highlighting the integration of computational methods in neuroscience research.
- **Panel on Closed-Loop Neurofeedback Systems**: Participated in discussions on the future of neurofeedback systems at BCNC2018.

Membership in Scientific Societies

Iranian Neuroscience Society

Papers in Conferences

1. فرهاد فرخنده طالع ناوی و سایر،Closed-Loop Neurofeedback System: An Innovative Technical Setup for Animal Brain Stimulation Research،10th Internathional conference on Cognitive Science،1403/02/26،تهران.
2. سیدمحمدرضا سیدنورانی , فرهاد فرخنده طالع ناوی , کیمیا خجند ,Neuromusculoskeletal Modeling of Elbow Flexion/Extension – Aided by OpenSim ,Advanced Engineering Days ,2024/07/09, تبریز.

Papers in Journals

1. Saied Sabaghypour, Farhad Farkhondeh Tale Navi, Laura J Batterink,Echoes of Pink Noise: A Hypothesized Mechanism for Enhancing Sleep-Dependent Memory Consolidation with Auditory Stimulation,The Neuroscientist,2026 2 1.
2. Farhad Farkhondeh Tale Navi et al.,Adaptive Closed-Loop Modulation of Cortical Theta Oscillations: Insights into the Neural Dynamics of Navigational Decision-Making,Brain Stimulation,Vol. 17,pp. 1101-1118,2024 9 12.
3. Mohammad Ali Nazari, Sedigheh Naghel, Sevda Abbasi, Ayda Khayyat Naghadehi, Behzad Nikzad, Saied Sabaghypour, Farhad Farkhondeh Tale Navi,Electrophysiological correlates of cognitive control and performance monitoring in risk propensity: An event-related potential study,Brain and Cognition,pp. Volume 175, March 2024, 106136,2024/3/1.
4. Reza Eyvazpour, Farhad Farkhondeh Tale Navi, Elmira Shakeri, Behzad Nikzad, Soomaayeh Heysieattalab،Machine learning-based classifying of risk-takers and risk-aversive individuals using resting-state EEG data: A pilot feasibility study،Brain and Behavior،27 9 13،2023 مجلد.
5. Faezeh Zarfsaz, Soomaayeh Heysieattalab, Ali Jaafari suha, Farhad Farkhondeh Tale Navi, Hamid Basiryan,Social subordination is associated with better cognitive performance and higher theta coherence of the mPFC-vHPC circuit in male rats,PLoS One,2025/4/16.
6. Farhad Farkhondeh Tale Navi, Soomaayeh Heysieattalab, Dhakshin S Ramanathan, Mohammad Reza Raoufy, Mohammad Ali Nazari,Closed-loop modulation of the self-regulating brain: A review on approaches, emerging paradigms, and experimental designs,Neuroscience,pp. Volume 483, 10 February

2022, Pages 104-126,2022/2/10.
7. Soroush Fazel, Abdol ,& Hossein Vahabie, Farhad Farkhondeh Tale Navi, Soomaayeh Heysieattalab,Unraveling the Social Hierarchy: Exploring Behavioral and Neural Dynamics in Shaping Inhibitory Control,Behavioural Brain Research,2024/1/5.
8. Elham Bakhshi Jifroudi, Soomaayeh Heysieattalab, Farhad Farkhondeh Tale Navi, Ali Jaafari Suha, Faezeh Zarfsaz, Yousef Panahi,Olfactory bulb differently synchronizes ventral hippocampus–medial prefrontal cortex circuit during spatial working memory across social dominance hierarchies,Plos one,2026/2/12.
9. Masoud Ghaffarvand ,& Mokari, Zahra Saberi Najafi, Soomaayeh Heysieattalab, Farhad Farkhondeh Tale Navi,Target Interpretability and Functional Mapping of rTMS and Theta-Burst Stimulation of the Cerebellar Vermis and Midline Cerebellum: A Scoping Review,The Cerebellum,2026/9/5.
10. Bahare Seyedhosseini, Mohammad Ali Nazari, Farhad Farkhondeh Tale Navi, Zeynab Barzegar, Mohammad Taghi Joghataei,A resting-state alpha sub-band marker of attentional vulnerability in children with high-risk for ADHD: A preliminary electrophysiological study,Applied Neuropsychology: Child,2026/8/27.
11. Saied Sabaghypour, Farhad Farkhondeh Tale Navi, Martin H Fischer, Parvin Amini, Mohammad Ali Nazari Yeganeh, Mojtaba Soltanlou,The journey of numbers from attention to motor processing: an embodied account of neural response to number magnitudes,Behavioral and Brain Functions,2026/8/2.
12. Soroush Fazel, Abdol ,& Hossein Vahabie, Soomaayeh Heysieattalab, Farhad Farkhondeh Tale Navi,Neural and behavioral signatures of error monitoring are differentially modulated by social hierarchy and trial type,Scientific Reports,2026/4/18.
13. Elham Bakhshi Jifroudi, Soomaayeh Heysieattalab, Farhad Farkhondeh Tale Navi, Faezeh Zarfsaz, Yousef Panahi,Olfactory bulb differently synchronizes ventral hippocampus–medial prefrontal cortex circuit during spatial working memory across social dominance hierarchies,PLOS One,2026/2/12.
14. Elham Bakhshi Jifroudi, Soomaayeh Heysieattalab, Farhad Farkhondeh Tale Navi, Faezeh Zarfsaz, Yousef Panahi,Olfactory bulb differently synchronizes ventral hippocampus–medial prefrontal cortex circuit during spatial working memory across social dominance hierarchies.,Plos one,2026 2 12.
15. , Mohammad Ali Nazari, Sevda Abbasi, Maryam Rezaeian, Soomaayeh Heysieattalab, Farhad Farkhondeh Tale Navi,Iranian 6-11 years age population-based EEG, ERP, and cognition dataset,Scientific Data,2025/2/22.
16. Hadi Mohamadpour, Farhad Farkhondeh Tale Navi, Soomaayeh Heysieattalab, Metehan Irak, Abdol ,& Hossein Vahabie, Behzad Nikzad,How is social dominance related to our short-term memory? An EEG/ERP investigation of encoding and retrieval during a working memory task,Heliyon,2024/9/15.
17. Saied Sabaghypour, Farhad Farkhondeh Tale Navi, Nooshin Basiri, Fereshteh Shakibaei, Negin Zirak,[HTML] from frontiersin.org Differential roles of brain oscillations in numerical processing: Evidence from resting-state EEG and mental number line,Frontiers in Human Neuroscience,2024/6/21.
18. Saied Sabaghypour, Farhad Farkhondeh Tale Navi, Elena Kulkova, Parnian Abaduz, Negin Zirak, Mohammad Ali Nazari,The dark and bright side of the numbers: how emotions influence mental number line accuracy and bias,Cognition and Emotion,2023 11 21.
19. Soroush Fazel, Abdol ,& Hossein Vahabie, Soomaayeh Heysieattalab, Farhad Farkhondeh Tale Navi,Neural and behavioral signatures of error monitoring are differentially modulated by social hierarchy and trial type.,Scientific Reports,18 April 2026.