Ali Yalcinkaya

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Education

2022- June 2025 **M.Sc. Neuroscience** at **İstanbul Medipol University**, İstanbul, Turkey
GPA: 3.48/4.00
Thesis: Effects of DLPFC-targeted tDCS Stimulation in the Acute Period on Resting-State Networks and Cognitive Recovery in Post-Stroke Cognitive Impairment Patients: An fMRI Study
Supervisor: Prof.Dr. Lutfu Hanoglu

2016- 2021 **B.Sc Psychology** at **İstanbul Medipol University**, İstanbul, Turkey (1-year English Prep. School
GPA: 3.61/4.00 (Graduated with honors)

Academic Experience

Dec 2023- Jul 2024 **Researcher and Neuropsychologist at Alanya Alaadin Keykubat University Education and Research Hospital, Department of Neurology and Neuroscience, Antalya, Turkey (Supervisor: Prof. Dr. Burak Yulug)**

- Applied neuromodulation (tDCS/tACS), conducted neuropsychological assessments, and collected MRI/EEG data in patients with acute stroke and other neurological/psychiatric conditions. Developed MRI protocols for research purposes in collaboration with technicians.
- Engaged in research involving various patient groups, performing neuroimaging and computational analyses.

Sep 2022- May 2025 **Researcher at Functional Imaging and Cognitive-Affective Neuroscience Lab (fINCAN), Health Sciences and Technology Research Institute (SABITA), Istanbul Medipol University, Istanbul, Turkey (Supervisor: Prof. Dr. Lutfu Hanoglu)**

- Organized and preprocessed MRI data for analysis.
- Developed standardized analysis pipelines

Sep 2022- May 2025 **Researcher and Neuropsychologist at Clinical Electrophysiology, Neuroimaging and Neuromodulation Lab, Medipol University Hospital, Istanbul, Turkey**

- Neuromodulation applications in patients with Stroke, Alzheimer's, Parkinson's, and TBI patients.
- Neuropsychological assessments in patients with Alzheimer's, MCI, Parkinson's, and Attention Deficit.
- EEG data collection

Sep 2021 – Dec 2021 **Undergraduate Intern at Erenköy Mental and Nervous Diseases Training and Research Hospital, Istanbul, Turkey**

- Engaged with patients diagnosed with schizophrenia, bipolar disorder, and personality disorders, collaborating with physicians on case studies and patient management.

Selected Projects

COST, *NeuralArchCon*, Comparison of REM Dream Consciousness and Waking Consciousness; Phenomenal, Metacognitive, Memory Properties and Relation of Neurobiological Structure, 2022- 2025

- Developed the Dream Consciousness Scale (RU-BİL).
- Conducted sleep EEG recordings and administered scales in a sleep lab.
- Collaborated with engineers for computational analysis of EEG data.

Comparing Memory Retrieval Mechanisms in REM Dream and Wakefulness, 2024-2025

- Developed a procedure to compare dream recall mechanisms in REM versus waking memory using naturalistic scenarios.
- Conducted EEG analyses to examine recall processes in both states.

Awards and Scholarships

2021 **Certificate of Honor and Excellence**, **Bachelor of Arts, İstanbul Medipol University**

2022 **TUBITAK (The Scientific and Technological Research Council of Turkey) BAP (Scientific Research Projects) Scholarship**

2022 **2515- COST (European Cooperation in Science and Technology) Support Program (CA18106 Action - The neural architecture of consciousness (NeuralArchCon))**

Students Mentored

Research Group Mentorship: Guided new students in neuroimaging, neuropsychological testing, fMRI data analysis, and neuromodulation protocols, fostering both technical skills and practical clinical understanding.

Skill Sets

Programming: Python, MATLAB, UNIX/Linux

High-Performance Computing: Processed large-scale fMRI datasets using HPC clusters with SLURM.

Statistical Analysis: R, SPSS, Jamovi

Neuroimaging Analysis: EEG (EEGLAB), **fMRI** (FSL, SPM, CONN, Nipype): ICA, Seed-based, dFC, Graph Theory, Multiple Time Scale Complexity (Dispersion Entropy), MVPA, **sMRI** (Freesurfer)

Neuromodulation: tDCS, tACS, TMS

Neuropsychological Assessment

Data Acquisition: fMRI, EEG, Neuropsychological Tests, PsychoPy

Language: Turkish (Native), English (Advanced)

Publications

Cankaya, S., Ayyildiz, B., Sayman, D., Duran, U., Ucak, D., Karaca, R., Ayyildiz, S., Oktem, E. O., Lakadamyalı, H., Sayman, C., Ozsimsek, A., **Yalcinkaya, A**., Hanoglu, L., Velioglu, H. A., & Yulug, B. (2024). **Hippocampal connectivity dynamics and volumetric alterations predict cognitive status in migraine: A resting-state fMRI study**. *Neuroimage*, 120961. https://doi.org/10.1016/j.neuroimage.2024.120961.

Yalcinkaya, A., Yuluğ, B., Hanoğlu, L., Özdemir Öktem, E., Sayman, C., Çankaya, Ş., & Sayman, D. (2025). **Anodal tDCS over the left DLPFC modulates brain connectivity and cognitive recovery after acute mild stroke.** *Brain Stimulation, 18*(1), 363. https://doi.org/10.1016/j.brs.2024.12.449 [Abstract Only].

Under Review Manuscripts

Yulug, B., **Yalcinkaya, A.**, Safa, S., Sayman, C., Sayman, D., Cankaya, S., Velioglu, H. A., & Hanoglu, L. (2025). **Subjective cognitive decline in major depressive patients is associated with altered entropy and connectivity changes of temporal and insular region** (accepted, Translational Psychiatry).

Yulug, B., Karakuş, A., **Yalcinkaya, A**., Safa, S. S., Sayman, D., Berekelia, A., Cankaya, S., Ayyildiz, S., Ayyildiz, B., Ozansoy, M., Velioglu, H. A., Hanoglu, L., & Mardinoglu, A. **Transcranial alternating current stimulation at individual theta frequency enhances cognition through modulation of intrinsic and extrinsic hippocampal connectivity with language networks in healthy individuals** (Brain Stimulation)

Yulug, B., **Yalcinkaya, A.,** Sayman, C., Sayman, D., Karaca, R., Cankaya, S., Ozdemir, E., Safa, S., Duran, U., Ayyildiz, B., Ayyildiz, S., Aylak, U., Sutcubası, B., & Hanoglu, L. (2025). **Neuroimaging evidence of cognitive impairment in tension-type headache: A structural and functional analysis.** (NeuroImage).

Yulug, B., **Yalcinkaya, A.,** Sayman, C., Sayman, D., Cankaya, S., Safa, S., Ayyildiz, B., Ayyildiz, S., Velioglu, H. A., & Hanoglu, L. (2025). **Association of cognitive impairment with cognitive networks, pulvinar, and regional entropy in multiple sclerosis.** (Acta Neuropathologica).

Submitted Manuscripts

Cadirci Tungac, F., Akturk, A., Sayman, D., Duran, U., Karaca, R., Cankaya, S., Ozdemir, E., Safa, S., **Yalcinkaya, A**., Sayman, C., Hanoglu, L., & Velioglu, H. A. (2024). **Transcranial Direct Current Stimulation (tDCS) improves emotional recognition irrespective of cognitive status and empathetic abilities in healthy individuals**. (submitted to Nature Electronics)

Poster Presentations

Yalçınkaya, A., Yuluğ, B., Hanoğlu, L., Özdemir Öktem, E., Sayman, C., Çankaya, Ş., & Sayman, D. (2025, February). **Anodal tDCS over the left DLPFC modulates brain connectivity and cognitive recovery after acute mild stroke.** *6th International Brain Stimulation Conference, Kobe, Japan*.

Yalçınkaya, A., Yulug, B., Hanoglu, L., Sayman, D., Öktem, E. O., Sayman, C., & Cankaya, S. (2024, June). **The effect of anodal tDCS on post-stroke cognitive impairment in the acute phase: A pilot study** [Virtual]. *10th Congress of the European Academy of Neurology, Helsinki, Finland*.

Yulug, B., Ozdemir Oktem, E., Sayman, D., Cankaya, S., Ozsimsek, A., Sayman, C., **Yalçınkaya, A**., & Hanoglu, L. (2024, June). **Cognitive impairment and pulvinar volume alterations in MS patients** [Virtual]. *10th Congress of the European Academy of Neurology, Helsinki, Finland*.

Yıldız, Z., Velioğlu, H. A., Senturk, H., **Yalçınkaya, A**., & Hanoğlu, L. (2022). **Developing a "Dream Consciousness Scale" to compare various forms of consciousness based on constituent elements of the consciousness scene**. *21st Turkish Neuroscience Congress, Turkey.*

References

***Dr. Burak Yulug**, Full Professor, Department of Neurology and Neuroscience, Alanya Alaaddin Keykubat University*

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***Dr. Lutfu Hanoglu**, Full Professor, Research Institute for Health Sciences and Technologies (SABITA), Clinical Electrophysiology, Neuroimaging and Neuromodulation Lab, Istanbul Medipol University, Istanbul, Turkey*

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***Dr. Halil A. Velioglu**, Postdoctoral Fellow, Feinstein Institute for Medical Research, Psychiatric Neuro Center, New York, USA*

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