Noémi Éltető

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EDUCATION

Max Planck Institute for Biological Cybernetics, Tübingen, Germany *2020 - present*
PhD in Computational Neuroscience

Eötvös Loránd University, Budapest, Hungary *2015-2019*
Master's Degree in Cognitive Science and Computer Science

Babes-Bolyai University, Cluj-Napoca, Romania *2012-2015*
Bachelor's Degree in Psychology Summa Cum Laude

RESEARCH EXPERIENCE

New York University, New York City, USA *Sept 2023 - Nov 2023*
Visiting PhD Researcher
Advisor: Wei Ji Ma

Max Planck Institute for Biological Cybernetics, Tübingen, Germany *2020 - present*
PhD Student
Advisor: Peter Dayan

Max Planck Institute for Biological Cybernetics, Tübingen, Germany *2019 - 2020*
Research Assistant
Advisor: Peter Dayan

Intrexon (now Precigen), San Francisco, USA / Budapest, Hungary *2018 - 2019*
Data Scientist
Advisor: Simon Prochnik

Hungarian Academy of Sciences, Budapest, Hungary *2015 - 2018*
Research Assistant
Advisor: Dezső Németh

PUBLICATIONS

Manuscripts

[1] Wu, S., **Éltető, N.**, Dasgupta, I., & Schulz, E. (2023). Chunking as a rational solution to the speed-accuracy trade-off. *Scientific reports, 13*(1), 7680.

[2] Kóbor, A., Tóth-Fáber, E., Kardos, Z., Takács, Á., **Éltető, N.**, Janacsek, K., ... & Nemeth, D. (2023). Deterministic and probabilistic regularities underlying risky choices are acquired in a changing decision context. *Scientific Reports, 13*(1).

[3] **Éltető, N.**, Nemeth, D., Janacsek, K., & Dayan, P. (2022). Tracking human skill learning with a hierarchical Bayesian sequence model. *PLoS Computational Biology 18*(11), e1009866.

[4] Kóbor, A., Kardos, Z., Takács, Á., **Éltető, N.**, Janacsek, K., Tóth-Fáber, E., ... & Nemeth, D. (2021). Adaptation to recent outcomes attenuates the lasting effect of initial experience on risky decisions. *Scientific reports, 11*(1), 1-20.

[5] **Éltető, N.**, Janacsek, K., Kóbor, A., Takács, Á., Tóth-Fáber, E. & Nemeth, D. (2019). Do adolescents take more risks? Not when facing a novel uncertain situation. *Cognitive Development, 50*, 105-117.

[6] Simor, P., Zavecz, Z., Horváth, K., **Éltető, N.**, Török, C., Pesthy, O., Janacsek, K., & Nemeth, D. (2019). Deconstructing procedural memory: Different learning trajectories and consolidation of Sequence and Statistical Learning. *Frontiers in Psychology, 9*, 2708.

[7] Takács, Á., Kóbor, A., Chezan, J., **Éltető, N.**, Tárnok, Z., Nemeth, D., Ullman, M.T. & Janacsek, K. (2018). Is procedural memory enhanced in Tourette syndrome? Evidence from a sequence learning task. *Cortex, 100*, 84-94.

Conference papers

[1] Saanum, T., **Éltető, N.**, Dayan, P., Binz, M., & Schulz, E. (2023). Reinforcement Learning with Simple Sequence Priors. *NeurIPS*.

[2] **Éltető, N.** & Dayan, P. (2023). Habits of Mind: Reusing Action Sequences for Efficient Planning. *CogSci*.

[3] Wu, S., **Éltető, N.**, Dasgupta, I., & Schulz, E. (2022). Learning Structure from the Ground up—Hierarchical Representation Learning by Chunking. *NeurIPS*.

[4] Schwartenbeck, P., Éltető, N., Braun, A., Bányai, M., & Dayan, P. (2022). Hierarchically structured representations facilitate visual understanding. *RLDM*.

Selected conference abstracts

[1] Éltető, N., Veit, L., Koparkar, A., & Dayan, P. (2023). Variable syllable context depth in Bengalese finch songs: A Bayesian sequence model. *Cosyne*.

[2] Éltető, N., Janacsek, K., Nemeth, D, & Dayan, P. (2022). Tracking human skill learning with a hierarchical Bayesian sequence model. *Cosyne*.

[3] Éltető, N., Janacsek, K., Nemeth, D., & Dayan, P. (2021). Tracking the Unknown: Modeling Long-Term Implicit Skill Acquisition as Non-Parametric Bayesian Sequence Learning. *CogSci*.

[4] Éltető, N., Janacsek, K., & Nemeth, D. (2018). Age-related differences in the underlying mechanism of statistical learning. *Annual Meeting of the Cognitive Neuroscience Society*.

TALKS

Compositionality Workshop, Cosyne (Invited)	*Mar 2024*
Title TBD	
Ölveczky Lab, Harvard (Invited)	*Oct 2023*
"Principles of sequential behavior in animals and machines"	
Gershman Lab, Harvard	*Sept 2023*
"Habits of Mind: Reusing action sequences for efficient planning"	
Computational Cognitive Science Community Forum, New York University (Invited)	*Sept 2023*
"Habits of Mind: Reusing action sequences for efficient planning"	
CogSci, Sydney	*Aug 2023*
"Habits of Mind: Reusing action sequences for efficient planning"	
Ma Lab, New York University (Invited)	*Sept 2023*
"Sequential behavior and planning"	
Vision Lab, Central European University (Invited)	*Jan 2023*
"Hierarchical sequence models for efficient chunking of actions"	
26th Annual Meeting of the Hungarian Psychological Association	*June 2017*
"The interplay of implicit statistical learning and executive functions (in Hungarian)"	

TEACHING

Neural Modeling (reinforcement learning module), University of Tübingen, Germany	*F 2023*
Role: TA; Instructors: Peter Dayan, Zhaoping Li	
Cognitive Maps Seminar, University of Tübingen, Germany	*F 2022*
Role: TA; Instructors: Charley Wu, Phillipp Schwartenbeck	
Experimental Psychology, Pazmany Peter University, Budapest, Hungary	*F 2017*
Role: TA; Instructor: Dezső Németh	
Experimental Psychology, Eötvös Loránd University, Budapest, Hungary	*F 2016, S 2017*
Role: TA; Instructor: Dezső Németh	

SERVICE

Cybernetic Seminar Series, Max Planck Institute for Biological Cybernetics	*2023*
Yearly Co-Organizer	
Max Planck PhDnet	*2022, 2023*
Organizer of the student representative elections	
Reviewer for CogSci	*2021*
6th Implicit Learning Seminar, Eötvös Loránd University, Budapest, Hungary	*2017*
Co-organizer	
Hungarian Students' Union, Cluj-Napoca, Romania	*2012-2014*
Organizing member (social and scientific events, student conferences)	

Outreach

Speaker at TEDx Targu Mures *2024 February*
Title: Artificial Intelligence Becomes Natural

Technical Skills

Natural languages: Hungarian, English
Programming languages: Python, R, MATLAB, HTML/JavaScript

Summer schools

Brains, Minds, and Machines Summer Course, Woods Hole, MA, USA *Aug 2023*
European Summer School on Eye Movements, Bonn, Germany *May 2018*

Honors and awards

Glushko Travel Award for attending CogSci *2023*
International Max Planck Research School (IMPRS) Fellowship *2022 - present*
Fellowship of the Hungarian Excellence Program *2016, 2017*
Republican Fellowship of Hungary *2016, 2017, 2018*
Member of the College Club for Academic Excellence, Babes-Bolyai University *2015 - 2016*
Hungarian National Scientific Students' Associations Conference 3rd prize *2015*
Fellowship of the Talent Program of the Balassi Institue *2014 - 2015*
Fellowship of the Ministry of Human Resources to talents living in Hungarian minorities *2014 - 2015*

Interests beyond science

cinema, perfume, taekwondo, calisthenics, sauna & cold dips, diving, cappuccino, always interested in others' interests