HERMINE BERBERYAN

Date of birth	28/04/1993
Gender	Female
Languages	Armenian & Russian (native), English (fluent, academic level), Dutch (fluent)
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Google Scholar   **Researchgate**   **OSF**   **Github**

Research Summary

I am a computational cognitive neuroscientist with a main expertise in **modelling of EEG/MEG data**.
My **skills** include: • machine learning analysis of E/MEG (Hidden semi-Markov model analysis),
• conventional E/MEG analysis (event-related potentials, time-frequency analysis, source reconstruction),
• behavioral modelling (drift diffusion models, Shifted Wald), • advanced statistics (linear-mixed effect
models, cluster-based permutation tests, Bayesian analysis), • programming (Matlab, R, Python).

Research experience & Education

01/2018-current *Expected completion date: 01/01/2022*	**PhD Candidate** Bernoulli Institute for Mathematics, Computer Science and Artificial Intelligence, University of Groningen (UG), Groningen, the Netherlands *Topic:* Stage Detection in EEG/MEG *Advisors:* Dr. J. Borst, Prof. dr. H. van Rijn, Prof. dr. N. Taatgen
09/2016-05/2017	**Exchange PhD student (Erasmus+ scholarship)/ Researcher** Department of Cognitive Neuropsychology, Tilburg University, Tilburg, NL *Topic:* Perception of Audiovisual Simultaneity Advisors: Dr. M. Bastiaansen, Dr. J. Stekelenburg, Prof. dr. J. Vroomen.
02/2016-01/2017	**Research Assistant** Laboratory of Psychology of Abilities, National Research University Higher School of Economics (HSE), Moscow, Russia *Topic:* Differential diagnostics of subjective-personal features of the process of thought generation Advisors: Prof. dr. V. Shadrikov, Dr. S. Kurginyan
09/2015-10/2018	**Researcher. Lecturer** Doctoral School of Psychology, National Research University HSE, Moscow, Russia *Topic:* The genesis of mental operations of the individual *Advisor:* Prof. dr. V. Shadrikov
02/2015-02/2017	**Research Assistant** State Committee on Science, Ministry of Education and Science, Yerevan, Armenia *Topic:* The psychological aspect of personality's self-understanding of national identity formation in the context of historical experience in post-Soviet space *Advisor:* Prof. dr. A.S. Berberyan
09/2009-08/2015	**BSc & MSc in Psychology (both Cum Laude)** Department of Psychology, Russian-Armenian (Slavonic) University, Yerevan, Armenia 2 Diplomas (Russian and Armenian State) with GPA=**3.98** (from maximal 4)
09/2009-08/2013	**Exchange Student** Lomonosov Moscow State University, Moscow, Russia (03/2013); Tallinna Ülikool, Tallinn, Estonia (07/2013); Southern Federal University, Rostov-on-Don, Russia (09/2014-06/2015).

Awards & Scholarships

2018	**UG PhD Scholarship Programme**
	Dutch Ministry of Education, Culture, and Science (OCW) within the framework of the national PhD Scholarship Programme, 88368 €
2016	**Erasmus+ scholarship for mobility**
	Exchange semester in Tilburg University, 4360 €
2016	**Governmental Scholarship for outstanding students**
	Ministry of Education and Science of Russian Federation, 43200 ₽ (500 €)
2013	**Presidential Scholarship for outstanding students**
	Russian Federation, 26400 ₽ (300 €)
2012	**Moscow City Hall Scholarship**
	13500 ₽ (160 €)
2010	**The Best Student of the Faculty**
	Psychology Faculty, Russian-Armenian University, Yerevan, Armenia

Supervising experience

02/2021-07/2021	*Topic:* Investigating Insight in Chess (with Dr. J. Borst)
	Students: Alfiuddin Rahadian Hadiat & Wenshu Lou, MSc HMC; Eline Hageman & Chris Boersma, BSc in Artificial Intelligence (AI), UG
02/2021-07/2021	*Topic:* Hierarchical Discovery of Processing Stages (with Dr. J. Borst)
	Student: Loran Knol, MSc Human-Machine Communication (HMC), UG
09/2020-02/2021	*Topic*: Can perception be manipulated? Data modelling using HsMM-MVPA (with Dr. J. Borst)
	Students: Stefan Stokvisch, Melle Berentschot, & Thomas Swagerman, BSc in AI, UG
02/2020-07/2020	*Topic*: Discovering processing stages in lexical decision (with Dr. J. Borst)
	Student: Karlijn Rozestraten, MSc HMC, UG
02/2020-07/2020	*Topic*: Cognitive stages in learning phases (with Dr. J. Borst)
	Student: Isaiah van Hunen, BSc in AI, UG
02/2020-07/2020	*Topic*: Manipulating perceptual stage durations (with Dr. J. Borst)
	Student: Iris Kamsteeg, Honours College, BSc in AI, UG
02/2019-07/2019	*Topic*: EEG correlates of learning in the alpha-arithmetic task (with Dr. J. Borst)
	Student: Prajakta Shouche, BSc in AI, UG
02/2019-07/2019	*Topic*: Investigating Processing Stages in a Simple Visual Discrimination Experiment (with Dr. J. Borst)
	Student: Daan Sijbring, MSc HMC, UG

Teaching experience

04/2020-06/2020	*Course:* Computational Cognitive Neuroscience
	Role: Teaching Assistant. Lecturer/coordinator: Dr. M. van Vugt
	Degree program: MSc HMC, UG
11/2018-01/2019	*Course:* Advanced Statistical Modeling
	Role: Teaching Assistant. Lecturer/coordinator: Dr. J. van Rij
	Degree program: MSc HMC, UG
09/2015-02/2016	*Course:* Social Psychology
	Role: Instructor. Lecturer/coordinator: Prof. dr. O. Gulevich
	Degree program: BSc Economics, National Research University HSE
02/2016-/06/2016	*Course:* Analysis of performance and development of competency models
	Role: Teaching Assistant. Coordinators: Prof. dr. V. Shadrikov, Dr. S. Kurginyan
	Degree program: MSc Psychology in Business, National Research University HSE

Most recent publications

Berberyan, H. S., van Rijn, H., & Borst, J. P. (preprint). Discovering the Brain Stages of Lexical Decision: Behavioral Effects Originate from a Single Neural Decision Process. *PsyArXiv*.

Berberyan, H. S., van Maanen, L., van Rijn, H., & Borst, J. P. (2021). EEG-based Identification of Evidence Accumulation Stages in Decision-Making. *Journal of Cognitive Neuroscience*, *33*(3), 510-527.

Gäbler, M., **Berberyan, H. S.,** Prieske, O., Elferink-Gemser, M. T., Hortobágyi, T., Warnke, T., & Granacher, U. (2021). Strength Training Intensity and Volume Affect Performance of Young Kayakers/Canoeists. *Frontiers in physiology*, 12, 925.

Bastiaansen, M., **Berberyan, H.,** Stekelenburg, J. J., Schoffelen, J. M., & Vroomen, J. (2020). Are alpha oscillations instrumental in multisensory synchrony perception? *Brain Research*, 146744.

Abakumova, I., Berberyan, A., & **Berberyan, H.** (2019). Psychological characteristics of the value orientation system of Armenians in title ethnos and Russian diaspora. *International Journal of Cognitive Research in Science, Engineering and Education:(IJCRSEE)*, *7*(2), 11-17.

Berberyan, H. S., & Berberyan, A. S. (2018). The role of mental operations while memorizing. *Astra Salvensis*, 6(2), 694-702.

Conference Proceedings

Berberyan, H. S., van Maanen, L., van Rijn, H., & Borst, J. (2021). Can we directly observe stages of cognitive processing? EEG-based identification of evidence accumulation stages. In *MathPsych/ICCM*. https://www.youtube.com/watch?v=ndyrt3H9A0M

Berberyan, H. S., van Rijn, H., & Borst, J. (2019). Discovering Basic Stages in a Visual Discrimination Task. In *Donders Discussions*.

Berberyan, H. S., van Rijn, H., & Borst, J. (2019). Can we directly observe stages of cognitive processing? HsMM-EEG analysis of a Visual Discrimination Task. In *NVP Winterconference*.

Invited talks

02/07/2021	Department of Experimental Psychology, Faculty of Social and Behavioral Sciences, Utrecht University
21/06/2021	Donders Institute for Brain, Cognition and Behaviour, Radboud University
18/03/2021	Cognitive Modeling in dynamic Human-Machine Systems at the Department of Psychology and Ergonomics, the Technical University of Berlin
04/11/2020	Tilburg center for Cognition and Communication, Tilburg University
02/11/2020	Cognition & Plasticity Lab, Vrije Universiteit Amsterdam
12/09/2020	Artificial Cognitive Systems Lab, Donders Institute for Brain, Cognition and Behavior, Radboud University, Nijmegen

Organizational experience

09/2018 - current	Member of PhD Sounding Board of Graduate School of Science and Engineering, University of Groningen
11/2018 - current	Member of PhD Council of Behavioral and Cognitive Neurosciences (BCN), UG
09/2018	Groningen Spring School on Cognitive Modeling, University of Groningen
2016, 2017	International Balint Conference

Volunteering experience

01/2021- current	Buddies van Handicap NL
09/2019 - current	Konijklijke Visio, Haren, NL
09/2013 -11/2013	Center for Medical, Psychological and Pedagogical Diagnostics under the Ministry of Education and Science of the Republic of Armenia

Miscellaneous

Member of Dutch Neurofederation (representative of the Federation of European Neuroscience Societies in the Netherlands)
Member of Society for Neuroscience
Certified psychotherapist and councelor (child psychology, leader of Balint groups)