

# Sari Sadiya, PhD

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## AUTOBIOGRAPHY

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Researcher at the Frankfurt Institute of Advanced Studies. I completed a dual PhD in Computer Science and Cognitive Neuroscience Winter 2022. Previously, I worked as a VLSI engineer at Apple Inc. and studied Mathematics and Computer Science at the Technion. My main research interests are computational neuroscience, emergent representations, brain-computer interfaces, and digital humanities. Beside research, I am passionate about expanding access to educational opportunities, and occasionally moonlight as a cellist.

## EDUCATION

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- **Dual PhD in Cognitive Neuroscience and Computer Science** Michigan State University  
*Academic advisers Dr Taosheng Liu (PSY) and Dr Mohammad Ghassemi (CSE)* Aug. 2017 – Dec. 2022
- **MSc Computer Science (Fulbright)** Michigan State University  
*Academic adviser Dr Joyce Chai. Sponsored by the Fulbright program.* Aug. 2015 – May. 2017
- **BSc Mathematics** Technion - Israel Institute of Technology  
*Final Grade A– DU equivalent 1.3* Dec. 2009 – Apr. 2013
- **BSc Computer Science** Technion - Israel Institute of Technology  
*Final Grade A– DU equivalent 1.3* Dec. 2009 – Apr. 2013

## PEER-REVIEWED COMPUTER SCIENCE PUBLICATIONS

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- 2023: T. Ettling\*, **S. Sadiya\***, G. Roig; *Different Algorithms (Might) Uncover Different Patterns: A Brain-Age Prediction Case Study*  
In Proceedings of the 2023 IEEE International Conference on Bioinformatics and Biomedicine (BIBM)
- 2022: **S. Sadiya**, T. Alhanai, M. Ghassemi; *Feature Imitating Networks*  
In Proceedings of the 2022 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)
- 2021: **S. Sadiya**, T. Alhanai, M. Ghassemi; *Artifact Detection and Correction in EEG data: A Review*  
In Proceedings of the 2021 IEEE International Conference on Neural Engineering (NER).
- 2020: **S. Sadiya**, T. Alhanai, T. Liu, M. Ghassemi; *Unsupervised EEG Artifact Detection and Correction*.  
In Frontiers in Digital Health. Volume 2.
- 2020: **S. Sadiya**, T. Alhanai, T. Liu, M. Ghassemi; *EEG Channel Interpolation Using Deep Encoder-decoder Networks*.  
In Proceedings of the IEEE International Conference on Bioinformatics and Biomedicine (BIBM).
- 2018: S. Yang, **S. Sadiya**, Q. Gao, Y. Chai; *Commonsense Action Explanation in Human-Agent Communication*.  
In Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP).
- 2018: J. Chai, Q. Gao, L. She, S. Yang, **S. Sadiya**, G. Xu; *Language to Action: Towards Interactive Task Learning with Physical Agents*.  
In Proceeding of the International Joint Conferences on Artificial Intelligence Organization (IJCAI).
- 2018: H. Karimi, P.C. Roy, **S. Sadiya**, J. Tang; *Multi-Source Multi-Class Fake News Detection*.  
The 27th International Conference on Computational Linguistics (COLING).
- 2016: C. Liu, S. Yang, **S. Sadiya**, N. Shuka, Y. He, S. Zhu, and J. Y. Chai; *Joint Learning Task Structures from Language Instruction and Visual Demonstration*.  
In Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP).

## PEER-REVIEWED COGNITIVE SCIENCE PUBLICATIONS

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- 2023: K. Dwivedi, **S. Sadiya**, M. Balode, G. Roig, R. Cichy; *Visual features are processed before navigational affordances in the human brain*  
(Under Review in Nature Scientific Reports)
- 2023: A. Burgoyne, **S. Sadiya**, L. Harris, M. Becker, J. Brascamp, D. Hambrick; *Revisiting the Self-Generation Effect in Proofreading*  
In Psychological Research: Journal of Perception, Attention, Memory, and Action
- 2022: T. Liu, M. Fang, **S. Sadiya**; *Adaptive visual selection in feature space*  
Psychonomic Bulletin & Review

## PREPRINTS AND OTHER MANUSCRIPTS

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- 2023: A. Gifford, B. Lahner, **S. Sadiya**, M. Vilas, A. Lascelles, A. Oliva, K. Kay, G. Roig, R. Cichy  
The Algonauts Project 2023 Challenge: How the Human Brain Makes Sense of Natural Scenes

## EXPERIENCE

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### • Machine Learning Consultant

- **Aneesi.ai**: Designed and implemented an LLM based personalized b2b marketing system. The company went on to acquire pre-seed funding.
- **GamerTag**: (post series-A) Helped implementing an embedding-based recommender system.

### • Frankfurt Institute for Advanced Studies

Frankfurt am Main, Germany

- **Lecturer**: Goethe University Frankfurt, Seminar Pattern Analysis and Machine Intelligence (2023)
- **Thesis Supervisor**: Supervised multiple Bachelor and Master Thesis projects
- **Postdoctoral Fellow**: Under Principal Investigator Dr Gemma Roig.

### • Michigan State University

East Lansing, MI

- **Instructor for Pen-Pal App Independent Study (CSE 490)**: Supervised by Dr Josh Nahum, and in cooperation with the Refugee Outreach Collective NGO. In this course 3 students from the MSU CSE department and 3 students from the AppFactory in Dzaleka refugee camp in Malawi collaborated on building a PenPal app to facilitate intercultural relationship building. *Spring 2019*
- **Teaching Assistant**: (Introduction to Programming, Introduction to AI) Held lab, identified and invited guest lecturers, and contributed to designing course work. *Fall 2019-Spring 2020*
- **Research Assistant - Natural Language Processing**: Human robot interaction, dialogue management, and multi-modal task learning from demonstration. Research funded by the DARPA SIMPLEX program and the DARPA XAI project. *Aug. 2015 – Aug 2018*

### • Apple Inc.

Matam Center, Haifa, Israel

*VLSI Engineer*

*Mar. 2013 - Aug. 2015*

### • Technion - Israeli Institute for Technology.

Haifa, 3200003, Israel

- **CS Industrial Project**: Technion / IBM joint industrial project supervised by Dr T. Salman
- **Applied Mathematics Project**: Research on “*Stable Marriage Problems*” supervised by Dr G. Wolansky
- **Mathematical Analysis Project**: Research on “*Andronov Hopf bifurcations*” supervised by Dr M. Zhitomerski

## FELLOWSHIPS, SCHOLARSHIPS, AND AWARDS

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- **Dissertation Completion Fellowship** 2021  
*Support for Students completing their dissertation, from the Graduate School at MSU. Total value: 5,416\$*
- **Cultural Heritage Informatics Fellowship** 2020  
*Researching digital methods and computational approaches for cultural heritage. Total value: 4,000\$*
- **Graduate Office Fellowship** 2020  
*Awarded to graduate students as a summer assistantship. Total value: 6,942\$*
- **Fulbright Scholarship program for international educational exchange** 2015 – 2017  
*Full Scholarship, Granted by the U.S. Bureau of Educational and Cultural Affairs. Total value: 30,000\$*
- **Dean Honour List, Technion - Israeli Institute for Technology.** 2013  
*Academic Award Given to top 10% of students in program*

## SERVICE

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- **Computer Environment Committee** Michigan State University  
*Department of Computer Science Graduate Student representative* 2017-2019
- **Engineering Graduates Studies Committee** Michigan State University  
*Department of Computer Science Graduate Student representative* 2017-2018
- **Reviewer**  
*ICCV (2023). AAAI Conference on Artificial Intelligence (2017, 2022), EMNLP-IJCNLP Conference on Empirical Methods in Natural Language (2019). IEEE Conference on Big Data (2018). IEEE/CVF Conference on Computer Vision and Pattern Recognition (2018), ACM Conference on Intelligent User Interfaces (2016).*

## TECHNICAL SKILLS

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Python: PyTorch, PsychoPy, Sklearn, Numpy, Pandas.  
Extensive knowledge of Verilog and SVA for hardware design and verification.  
C / C++: Android app development, openCV for image processing.  
Matlab: MGL for experimental psychophysics.  
Unix: Slurm, TCL, CShell.

## LANGUAGES

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- **Arabic:** Native Language.
- **Hebrew:** Native Language.
- **English:** High Level of writing, reading, and speaking abilities (107 Tofel Score).
- **German:** Equivalent to B1 proficiency.

## COMMUNITY INVOLVEMENT

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- **Project Director** 2018 - present  
*The Refugee Outreach Collective (established 2015) is 501(c)(3) non-profit that leverages university resources and networks to expand access to educational opportunities to those who have experienced displacement.*
- **English Tutor through Paper Airplanes** 2018  
*Tutoring conflict-affected individual from the MENA region through Skype.*
- **Co-founder at “Almahata”** 2013-2017  
*‘Almahata Youth Cooperative’, was a non-profit cooperative aiming to provide an open space for cultural activities in Haifa. The cooperative functioned daily, hosting over 300 lectures, workshops, book launchings and independent film screenings.*

ADDITIONAL EXPERIENCE

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Professional cellist. Composed and performed music for multiple projects. Played in several orchestras (most notably the Tarshiha Ensemble). Collaborated with many contemporary artists. Performed both locally and internationally.