

Serin Atiani, PhD

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Education

2004-2010 University of Maryland, College Park MD, USA, *PhD Neuroscience and Cognitive Science*
1999-2001 American University, Washington DC, USA, *M.S. Information Systems*
1994-1998 Birzeit University, Birzeit, Palestine, *B.S. Computer Science*

Honors and awards

2013- 2014 National Science and Engineering Research Council of Canada, Auditory Cognitive Neuroscience Postdoctoral Fellowship, Canada
2012- 2013 Canadian Imperial Bank of Commerce-McGill University Postdoctoral Fellowship, Canada
2011- 2012 National Science and Engineering Research Council of Canada, Auditory Cognitive Neuroscience Postdoctoral Fellowship, Canada
2008- 2009 William Hodos Dissertation Research Award, University of Maryland, USA
2004 -2010 PhD Scholarship, Institute for Systems Research, University of Maryland, USA
1999-2001 Best teaching assistant award, Computer Science Dept., American University, USA
1996-1998 Tafawuq Merit Award, Birzeit University, Palestine.

Experience

Sept 2021- present: Chair, Data Science Dept. Princess Sumaya University for Technology, Amman, Jordan

- Guide the process of defining and ensuring the compliance with the learning outcomes of the Bachelor program in data science and artificial intelligence offered by the data science dept.
- Define and manage academic and administrative objectives of the Data Science department
- Build partnerships with industry, improving the visibility of the department and its students
- Write Data Science academic and training proposals, that serves government and industry

Sept 2020- present: Assistant professor Data Science Dept. Princess Sumaya University for Technology

- Teach data science courses and computer science courses (Machine Learning, Databases, etc.)
- Help develop and refine course plans and teaching goals required for training qualified data science professionals.
- Develop and conduct data science training courses for companies in the Jordanian market.

Oct 2015- June 2019: Adjunct professor, Computer Science dept., German Jordanian University, Jordan

- Taught computing fundamentals, systems analysis and design courses to computer science and engineering students

Sept 2011-September2016: Postdoctoral Researcher, McGill University, Montreal, Canada:

- Investigated the functional connectivity in the brain that facilitate perceptual learning of auditory tasks in the brain.
- Designed experiments that conceptualized the transition of studying of behavioral plasticity in the brain from an animal model to a human model using fMRI as an investigation technique
- Designed and developed and finely tuned the stimuli needed for the different experiments by conducting pilot studies.
- Conducted fMRI experiments utilizing algorithms and techniques developed by myself and colleagues in the laboratories in the Montreal Neurological Institute.

May 2009-Sept 2009: Researcher Telluride Neuromorphic Cognitive Engineering lab CO, USA

- Developed parametric measures to segregate different acoustic sources in a simulated natural acoustic scene
- Worked in a team of three to develop algorithm and write the programs to identify and classify auditory objects, in complex acoustic environments

Feb 2004- May 2010: Graduate Researcher, Neural Systems Lab, University of Maryland, MD, USA:

- Conducted electrophysiological experiments using awake behaving animal preparation, recording neural responses and tracing rapid plasticity of response properties of neurons in primary, secondary auditory and prefrontal cortices of the ferret.
- Utilized signal processing and machine learning techniques to analyze data and model results
- Developed analysis packages that allowed user to sort neural spike trains from noise
- Wrote various programs for conducting experiments interfacing with the Alpha-Omega Neural Acquisition system and for analyzing data.

May 2001-Feb 2004: Software Engineer, Information Technology Services, Loyola College, MD, USA

- Developed a scheduling system that allowed various departments and students in the university to schedule events online
- Designed schema, developed and maintained two Oracle databases used in the scheduling system developed and a registration system.
- Worked in a team of five to design and implement a major system transition from an old legacy registration system to a new state of the art system.

June 1998- Aug 1999: Software Developer and training coordinator, Computer Center, Birzeit University, Birzeit, Palestine.

- Developed an inventory system used by the Palestinian Cement company, designed and implemented the system's database.
- Lead a team of IT professionals in raising awareness of the potentials of using technology and the internet for Palestinian small and medium size businesses
- Developed training curricula and programs to raise the technical ability and specialization of IT professionals in Palestine.

Publications

- Atiani, S, Elhilali, M, David, S.V, Fritz,, J.B, Shamma, S., "Task Difficulty and Performance Induce Diverse Adaptive Patterns in Gain and Shape of Primary Auditory Cortical Receptive Fields" *Neuron*. 2009 Feb 12;61(3):467-80.
- Atiani, S., David, S.V., Elgueda, D., Locastro, M., Raadtke-Shuller, S., Shamma, S.A., Fritz, J.B., "Emergent selectivity for task-relevant stimuli in secondary auditory cortex" *Neuron* 2014, 82(2):486-99.
- Atiani, S., Zatorre, R.J., Schönwiesner, M., "Dynamics of plasticity in human auditory cortex during course of perceptual learning". In preparation.

Selected conference Abstracts

- Atiani, S., Zatorre, R.J., Schönwiesner, M., "Cortical plasticity and interaction during auditory perceptual learning". In Human Brain Mapping conference 2016, Abstract 1886
- Atiani, S., Zatorre, R.J., Schönwiesner, M., "Dynamics of plasticity in human auditory cortex during course of perceptual learning". In Annual Meeting of the Association for Research in Otolaryngology 2013, Abstract 432
- Fritz, J.B, David, S.V, Atiani,S., Elgueda, D., Radtke-Shuller, S., Elhilali, M., Kanold, P., Shamma, S.A, "Attention and auditory cortical plasticity". In the International Symposium on Auditory and Audiological Research 2013.
- Atiani, S., Fritz J.B., Shamma, S.A., "Comparison of Rapid Task Related Plasticity in Primary and Secondary Auditory Cortex", In Annual Meeting of the Association for Research in Otolaryngology 2010, Abstract 293
- Atiani, S., David, S.V., Malval, N., Shamma, S.A., "Local field potentials and single unit spiking activity: Comparison of spectro-temporal tuning properties in A1", In Society for Neuroscience meeting 2009 Abstract 556.16/BB24
- Winkowski, D.E., Atiani, S., Yin, .P, Fritz, J.B., Shamma, S.A, "Effects of Electrical Microstimulation of Prefrontal Cortex on Auditory Response Properties in Primary Auditory Cortex", In Annual Meeting of the Society for Research in Otolaryngology 2009 Abstract 111
- Atiani, S., Yin, P, Elhilali, M, Shamma, S.A, Fritz, J.B., "Effect of Task Difficulty on Receptive Field Plasticity in A1". In Annual Meeting of the Society for Research in Otolaryngology 2006 Abstract 1302.