

Curriculum Vitae of Alexei V. Samsonovich

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Citizenship: United States of America
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Education:

Years	Institution and location	Field of study	Degree
1991-1997	Program in Applied Mathematics at the Graduate College of the University of Arizona, Tucson, AZ 85721	Applied Mathematics	Ph.D. (1997) M.Sc. (1996)
1974-1980	Moscow Institute of Physics and Technology, Moscow Region, 141700, Russian Federation	Theoretical Physics	M.Sc. equivalent (1980)
1971-1974	Kiev Physical Mathematical School #145, Kiev, 01023, Ukraine	General	B.Sc. equivalent (1974)

Research experience, including positions held and research grant awards:

2000 - present: Research Assistant Professor, Krasnow Institute for Advanced Study, George Mason University, Fairfax, VA 22030-4444. *Supporting grants:* HBP NIH R01 Grant NS39600 from NINDS, NIMH and NSF (PI: G. A. Ascoli); DARPA IPTO Program “Biologically Inspired Cognitive Architectures” (BICA) Grant “An Integrated Self-Aware Cognitive Architecture” (PI: K. A. De Jong, co-PIs: **A. V. Samsonovich** and G. A. Ascoli); current support: DARPA DSO Grant “SyNAPSE” (PI: G. A. Ascoli); George Mason University Center for Consciousness and Transformation mini-grant “A Pilot Study to Assess Critical Components of a Transformative Self-Regulated Learning Assistant” (PI: K. A. De Jong, co-PIs: **A. V. Samsonovich** and A. Kitsantas).

1997 - 2000: Postdoctoral Research Associate, Arizona Research Laboratories, Division of Neural Systems Memory & Aging and Psychology Department, University of Arizona, Tucson, AZ 85721. *Support:* The University of Arizona Consciousness Studies Research Grant "Artificial Consciousness as a Metaphor for Human Consciousness" (co-PIs: L. Nadel and **A. V. Samsonovich**); McDonnell-Pew Cognitive Neuroscience Center Grant (PI: L. Nadel); Flinn Foundation Research Grant (PI: L. Nadel).

1991 - 1997: Graduate Research Assistant / Associate, Program in Applied Mathematics and Arizona Research Laboratories, Division of Neural Systems Memory & Aging, University of Arizona, Tucson, AZ 85721. *Support:* MH 46823-07, NS-20331, ONR-352590, DMS-8902579, DMS-9114503. **Ph.D. Dissertation:** A. Samsonovich, *Attractor-Map Theory of the Hippocampal Representation of Space*, 302 pages. The University of Arizona: Tucson, AZ. UMI Dissertation Services: A Bell & Howell Company, Ann Arbor, MI, 1997 (copy available at <http://mason.gmu.edu/~asamsono/disser.pdf>).

Recent professional service awards:

2010: Special issue guest editor of the *International Journal of Machine Consciousness*. Program Committee member of *Models of Consciousness workshop at BICS-2010*.

2008-2009: Chair, AAAI 2008-2009 Fall Symposia on Biologically Inspired Cognitive Architectures (<http://binf.gmu.edu/~asamsono/bica/>). Co-organizer, Workshop on Machine Consciousness at *KIMAS 2009*. “Models of Self” Panel Discussion leader at *AAAI 2008 Workshop on Metareasoning*. Invited panelist at *PerMIS-2008* and *PerMIS-2009*. Program Committee member of *AGI-2008*.

Other recent service awards: Editorial Board member of *IJMC*, *JAGI*, *SCR*. *Behavioral and Brain Sciences (BBS)* Associate. Ad-hoc referee for mainstream journals (*PNAS*, *Hippocampus*, *Neural Computation*, *Learning & Memory*, *Cortex*, *Neural Networks*), conferences and workshops (*CogSci*, *ICCM*, *IJCNN*, *NIPS*, *AAAI*) and grants (*NWO*).

Teaching and leadership experience:

Spring 2009-2010: “Phil. Found. of Neuroscience” (guest lecturer for Dr. H. Morowitz).

2008-2009: Symposium Series Chair, AAAI Fall Symposia on BICA (see above).

Spring 2007: GMU BIOL 580. Computer Applications for the Life Sciences.

Spring 2007: GMU MATH 125. Discrete Mathematics.

Fall 2006: GMU BINF 739. High-Performance Computing in Computational Biology.

2005-2006: Scientific leader of 3 graduate students within the DARPA IPTO BICA Grant.

2000-2002: GMU PSYC 372. “Physiological Psychology” (TA to Dr. G. A. Ascoli).

Fall 2002: GMU PSYC Lecture #65. “A Model of the Human Theory of Mind”.

Fall 1999: Chair of the weekly Graduate Student Seminar on Artificial Consciousness, Psychology Department, the University of Arizona, Tucson, AZ.

Representative refereed papers (out of 52 original + 2 under review):

Samsonovich, A. V., De Jong, K. A., & Kitsantas, A. (2009). The mental state formalism of GMU-BICA. *International Journal of Machine Consciousness* 1 (1): 111-130.

Ascoli, G. A., and Samsonovich, A. V. (2008). Science of the conscious mind. *The Biological Bulletin* 215 (3): 204-215.

Samsonovich, A. V. (2007). Bringing consciousness to cognitive neuroscience: A computational perspective. *J. of Integrated Design & Process Science* 11 (3): 19-30.

Samsonovich, A. V. & Ascoli, G. A. (2006). Morphological homeostasis in cortical dendrites. *Proceedings of the National Academy of Sciences of the United States of America* 103 (5): 1569-1574.

Samsonovich, A. V. & Nadel, L. (2005). Fundamental principles and mechanisms of the conscious self. *Cortex* 41 (5): 669–689.

Samsonovich, A. V. & Ascoli, G. A. (2005). A simple neural network model of the hippocampus suggesting its pathfinding role in episodic memory retrieval. *Learning & Memory* 12 (2): 193–208.

Samsonovich, A. V. (2005). Hallucinating objects versus hallucinating subjects. *Behavioral and Brain Sciences* 28 (6): 772–773.

Nadel, L., Samsonovich, A., Ryan, L., & Moscovitch, M. (2000). Multiple trace theory of human memory: Computational, neuroimaging, and neuropsychological results. *Hippocampus* 10 (4): 352–368.

Samsonovich, A. & McNaughton, B. L. (1997). Path integration and cognitive mapping in a continuous attractor neural network model. *Journal of Neuroscience* 17 (15): 5900–5920 (**Web of Science Citation Index for this paper alone is 266**).