List of Publications of Dr. Alexei V. Samsonovich

The list below is divided into (A) journal papers, (B) conference proceedings papers and book chapters, (C) selected abstracts, (D) other copyright works, and (E) manuscripts under review or in preparation for submission. Within each group A and B, original research papers are listed separately from all other kinds. According to *ISI Web of Knowledge*, as of 4/28/2011, the highest citation index for a paper was **303** for [13], then **143** for [12], and the total number of indexed citations was **686**. Three papers [5, 6, 13] mistakenly identified by ISI as reviews are original research papers. Many conference papers passed highly competitive selection (e.g., GECCO: 46%, NIPS: 30% acceptance rate). Full text of all publications is available on request via email to asamsono@gmu.edu

A note for the audience outside the artificial intelligence community: In general, due to the modern tradition, the majority of cutting-edge results in artificial intelligence in the United States are published in conference proceedings and books rather than in journals. This circumstance does not diminish their visibility and scientific impact.

A. Journals

• Original research papers

[1] Samsonovich, A. V. and Ascoli, G. A. (2010). Principal Semantic Components of Language and the Measurement of Meaning. *PLoS ONE* 5 (6): e10921.1-e10921.17. http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0010921

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

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

[4] Samsonovich, A. V. and 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.

[5] Samsonovich, A. V. and Nadel, L. (2005). Fundamental principles and mechanisms of the conscious self. *Cortex* 41 (5): 669–689. http://www.u.arizona.edu/~nadel/pdf/Papers%20as%20PDFs/2005%20PDFs/Cortex%2005.pdf

[6] Samsonovich, A. V. and 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. Supplementary Online Material available at http://binf.gmu.edu/~asamsono/sa_lm05_som/

[7] Samsonovich, A. V. and Ascoli, G. A. (2005). The conscious self: Ontology, epistemology and the mirror quest. *Cortex* 41 (5): 621–636.

[8] Samsonovich, A. V. and Ascoli, G. A. (2005). Statistical determinants of dendritic morphology in hippocampal pyramidal neurons: A hidden Markov model. *Hippocampus* 15 (2): 166–183.

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[12] Nadel, L., Samsonovich, A., Ryan, L., and Moscovitch, M. (2000). Multiple trace theory of human memory: Computational, neuroimaging, and neuropsychological results. *Hippocampus* 10 (4): 352–368. Available at http://www.u.arizona.edu/~nadel/pdf/Papers as PDFs/2000 PDFs/Hippocampus 2000

[13] Samsonovich, A. and McNaughton, B. L. (1997). Path integration and cognitive mapping in a continuous attractor neural network model. *Journal of Neuroscience* 17 (15): 5900–5920.

[14] Hameroff, S. R., Dayhoff, J. E., Lahozbeltra, R., Samsonovich, A. V., and Rasmussen, S. (1992). Models for molecular computation: Conformational automata in the cytoskeleton. *Computer* 25 (11): 30–39.

[15] Samsonovich, A., Scott, A., and Hameroff, S. (1992). Acousto-conformational transitions in cytoskeletal microtubules: Implications for intracellular information processing. *Nanobiology* 1 (4): 457-468.

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[19] Зайцев С. И., Самсонович А. В. (1990). Обратная задача в электронно-лучевой диагностике: методы наведённой концентрации (Russian). *Известия Академии Наук СССР Серия Физическая* 54 (2): 247–254.

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сканирующем электронном микроскопе (Russian). *Известия Академии Наук СССР Серия Физическая* 54 (2): 237–242.

[21] Зайцев С. И., Самсонович А. В. (1987). Интерпретация EBIC-контраста на дислокации (Russian). *Известия Академии Наук СССР Серия Физическая* 51 (9): 1587–1594.

- **Essays, reviews, position papers, commentaries, reprints**

[22] Stocco, A., Lebiere, C., and Samsonovich, A. V. (2010). The B-I-C-A of biologically inspired cognitive architectures. International Journal of Machine Consciousness 2 (2): 171-192.

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[26] Samsonovich, A. V., Goldin, R. F., and Ascoli, G. A. (2010). Toward a semantic general theory of everything. *Complexity* 15 (4): 12-18.

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

[29] Ascoli, G. A. and Samsonovich, A. V. (2007). For goal scoring, the right place and the right time are matters of context. *Journal of Neuroscience Online*, 8 February 2007 (electronic response to Hok, V. et al., *Journal of Neuroscience* 2007, 27: 472-482). Available at http://www.jneurosci.org/letters?first-index=126&hits=25

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microscope. *Bulletin of the Academy of Sciences of the USSR, Physical Series* (New York: Allerton) 54 (2): 43-48, 1990. (a translation of [19])

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B. Peer-refereed conference proceedings papers and book chapters

• Original research papers

[34] Samsonovich, A. V., and Ascoli, G. A. (2011). NeuroNavigator: A hippocampus-inspired cognitive architecture for spiking network implementation. In Sariel-Talay, S., Smith, S. F., & Onder, N. (Eds.). *Automated Action Planning for Autonomous Mobile Robots: Papers from the 2011 AAAI Workshop, AAAI Technical Report* WS-11-06. Menlo Park, CA: AAAI Press (forthcoming).

[35] Samsonovich, A. V., De Jong, K. A., Kitsantas, A., and O'Brien, E. (2010). Assessment of the critical components of a transformative self-regulated learning assistant. In Pirrone, R., Azevedo, R., and Biswas, G. (Eds.). *Cognitive and Metacognitive Educational Systems: Papers from the AAAI Fall Symposium. AAAI Technical Report* FS-10-01, pp. 87-92. Menlo Park, CA: AAAI Press. ISBN 978-1-57735-483-3.

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[43] Samsonovich, A. V., Ascoli, G. A., Morowitz, H., and Kalbfleisch, M. L. (2008). A scientific perspective on the hard problem of consciousness. In Wang, P., Goertzel, B., and Franklin, S. (Eds.). *Artificial General Intelligence 2008: Proceedings of the First AGI Conference. Frontiers in Artificial Intelligence and Applications* vol. 171, pp. 493-505. IOS Press: Amsterdam, The Netherlands. ISBN 978-1-58603-833-5. Available at http://members.cox.net/alexei.v.samsonovich/samsonovich_workshop.pdf

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- **Edited volumes**

[61] Samsonovich, A. V., Jóhannsdóttir, K. R., Chella, A., and Goertzel, B. (Eds.). (2010). *Biologically Inspired Cognitive Architectures 2010: Proceedings of the First Annual Meeting of the BICA Society. Frontiers in Artificial Intelligence and Applications,* vol. 221. Amsterdam: IOS Press. ISSN 0922-6389.

[62] Samsonovich, A. V. (Guest Editor). (2010). Special Issue on Biologically Inspired Cognitive Architectures (Selected Papers from BICA 2008, BICA 2009 and BICA 2010). *International Journal of Machine Consciousness* 2 (2).

[63] Samsonovich, A. V. (Ed.). (2009). *Biologically Inspired Cognitive Architectures II: Papers from the AAAI Fall Symposium. AAAI Technical Report* FS-09-01. Menlo Park, CA: AAAI Press. ISBN 978-1-57735-435-2. 199+xi pages. http://www.aaai.org/Press/Reports/Symposia/Fall/fs-09-01.php

[64] Samsonovich, A. V. (Ed.). (2008). *Biologically Inspired Cognitive Architectures: Papers from the AAAI Fall Symposium. AAAI Technical Report* FS-08-04, 206 + viii pages. Menlo Park, CA: AAAI Press. ISBN 978-1-57735-396-6. 206+viii pages. http://www.aaai.org/Press/Reports/Symposia/Fall/fs-08-04.php

- **Essays, position papers, reviews, commentaries, reprints, and Scholarpedia articles**

[65] Samsonovich, A. V., Jóhannsdóttir, K. R., Chella, A., and Goertzel, B. (2010). Preface. In Samsonovich, A. V., Jóhannsdóttir, K. R., Chella, A., and Goertzel, B. (Eds.). *Biologically Inspired Cognitive Architectures 2010: Proceedings of the First Annual Meeting of the BICA Society. Frontiers in Artificial Intelligence and Applications,* vol. 221, pp. v-vii. Amsterdam, The Netherlands: IOS Press. ISSN 0922-6389.

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[74] Samsonovich, A. V., and Mueller, S. T. (2008). Toward a growing computational replica of the human mind. In Samsonovich, A. V. (Ed.). *Biologically Inspired Cognitive Architectures. Papers from the AAAI Fall Symposium. AAAI Technical Report* FS-08-04, pp. 1-3. Menlo Park, CA: AAAI Press. ISBN 978-1-57735-396-6. http://www.aaai.org/Papers/Symposia/Fall/2008/FS-08-04/FS08-04-000.pdf

[75] Samsonovich, A. V., Kitsantas, A., Dabbagh, N., and De Jong, K. A. (2008). Self-awareness as metacognition about own self concept. In Cox, M. T., and Raja, A. (Eds.). *Metareasoning: Thinking about Thinking, Papers from the 2008 AAAI Workshop, AAAI Technical Report* WS-08-07, pp. 159-162. Menlo Park, CA: AAAI Press. Available at http://binf.gmu.edu/~asamsono/papers/sams08e.pdf

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