
Curriculum Vitae
Kamilla Rún Jóhannsdóttir Ph.D.
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Education:

- Ph.D. Cognitive Science, Carleton University, Ottawa, Canada, 2004
Concentration: Applied cognitive psychology, cognitive research and philosophy of mind
Dissertation: Situation awareness and working memory: an integration of an applied concept with a fundamental cognitive process
- B.A. Psychology, University of Iceland, Reykjavik, Iceland, 1996

Positions

- Director of the BSc Psychology Program, (2014-present), Reykjavik University
- Associate Professor, 2019-present Psychology Department, Reykjavik University, Reykjavik, Iceland
- Assistant Professor, 2011-2019, Psychology Department, Reykjavik University, Reykjavik, Iceland
- Assistant Professor, 2004-2017, School of Humanities and Social Sciences, University of Akureyri, Iceland
- Lecturer 2009-2011, Psychology Department, Reykjavík University, Reykjavík, Iceland
- Visiting Research Scientist 2007-2010, The Advanced Cognitive Engineering Lab, Carleton University, Ottawa, Canada
- Sessional Lecturer, Fall 2000, Carleton University, Ottawa, Canada
- Teaching Assistant, 1996-2002, Carleton University, Ottawa, Canada

Grants received:

- 2020 RU Research Fund**
Assessment of cognitive workload by understanding the heart's neurophysiology (PI, 5.340.000 ISK)
- 2019 Technology Development Fund: Vöxtur**
Cities that Sustain us 3 (Co-proposer, 50.000.000 ISK)
- 2017 Isavia Research Fund**
Cognitive Workload Monitoring for Air Traffic Controllers (PI, 2.500.000 ISK)
- Icelandair Group Research Fund**
Cognitive Workload Monitoring for Air Traffic Controllers (PI, 2.400.000 ISK)
- Technology Development Fund: Applied Research**
Cities that Sustain Us 2: Creating Virtual Futures (co-proposer, 45.000.000 ISK)
- Student Innovation Fund**
Individual differences in working memory capacity: exploring underlying physiological factors (PI, 1.398.000 ISK)
- Student Innovation Fund**
Learning efficiency improved with interactive educational software and biophysical measurements (co-proposer, 2.796.000 ISK)
- 2016 Isavia Research Fund**
Cognitive Workload Monitoring for Air Traffic Controllers (PI, 2.200.000 ISK)
- Icelandair Group Research Fund**
Cognitive Workload Monitoring for Air Traffic Controllers (PI, 2.250.000 ISK)
- Student Innovation Fund**
Virtual reality as a training tool for special education teachers (co-proposer, 1.398.000 ISK)
- 2014 The Icelandic Research Fund**

- Cities that Sustain Us: Using Virtual Reality to Test the Restorative Potential of Future Urban Environments (co-proposer, 30.000.000 ISK)
Student Innovation Fund
 Diagnosing emotional state in speech using biological markers (PI, 1.398.000 ISK)
- 2013 The Icelandic Research Fund**
 Monitoring Cognitive Workload in ATC using speech analysis (PI, 17.370.000 ISK)
The Icelandic Research Fund
 Effects of Dietary Caffeine Amongst Icelandic Youth (co-proposer, 19.962.000 ISK)
Technology Development Fund
 Biobehavioural Studies of Stress (Co-proposer, 6.532.000 ISK)
- 2005-7 The KEA, University Research Grant**
 Gender and age differences in multi-task environments (PI, 1.000.000 ISK)
 The effect of cell phone conversation on drivers' attention PI; 500.000 ISK)

Awards:

- CRESTech Student Poster Award (\$1000CND), *Framework for Evaluating Human Performance in an Aerospace Environment Theme*, 2003
- Carleton University Doctoral Scholarship (1996-2002)
- Ottawa Center for Research and Innovation: Futures Award, *The Student Researcher of the Year*. Awarded on March 29th, 2000.

Chapters in books

- Jóhannsdóttir, K. R. and Samsonovich, A. V. (2011). Biologically Inspired Cognitive Architectures: One More Step Forward. In Alexei V. Samsonovich and Kamilla R. Jóhannsdóttir (Eds.) *Biologically Inspired Cognitive Architectures: Proceedings of the Second Annual Meeting of the BICA Society. Frontiers in Artificial Intelligence and Applications, vol 233*. IOS Press.
- Jóhannsdóttir, K. R. (2009). The conscious computer: What are the minimal requirements for building such system? (In Icelandic). In *Veit efnið af andanum?* S. Atlason & Þ. Helgadóttir (Eds.). Reykjavík, Heimspækistofnun.

Edited volumes

- Pirrone, R., Sorbello, R., & Jóhannsdóttir, K. R. (2013). *Biologically Inspired Cognitive Architectures 2012: Proceedings of the Third Annual Meeting of the BICA Society* (Vol. 196). Springer.
- Samsonovich, A. V., & Jóhannsdóttir, K. R. (2011). *Biologically Inspired Cognitive Architectures 2011. Proceedings of Second Annual Meeting of the BICA Society.-Amsterdam et al.*: IOS Press.
- Samsonovich, A. V., Jóhannsdóttir, K. R., Chella, A., & Goertzel, B. (Eds.). (2010). *Biologically Inspired Cognitive Architectures 2010: Proceedings of the First Annual Meeting of the BICA Society* (Vol. 268). IOS Press.

Refereed publications

- Gylfason, H. F., Valgeirsson, V. F., Olafsdóttir, K., & Jóhannsdóttir, K. R. (Submitted). Cognitive reflection does not predict the acceptance of unfair ultimatum game offers. *Judgment and Decision Making*
- Magnúsdóttir, E. H., Jóhannsdóttir, K. R., Majumdar, A., & Guðnason, J. (Submitted). Cognitive workload classification with heartbeat synchronized cardiovascular measures and speech features. Submitted to *Transportation Research, Part C: Emerging Technologies*.
- Jóhannsdóttir, K. R., Rafnsdóttir, H., Oddson, A. H. & Gylfason, H. F. (Under review). The role of emotion and gender in false memory formation following confabulation. *Memory and Cognition*.
- Kristjánsson, H., Jóhannsdóttir, K. R., Pic, M., & Saavedra, J. M. (2019). Psychological characteristics in women football players: Skills, mental toughness, and anxiety. *Scandinavian Journal of Psychology*, 60(6), 609-615.
- Hoffman-Peterson, A., Jóhannsdóttir, K. R., Ladd, M Rini, C., Peshkin, B., Graves, K., Schwartz, M. D. & Valdimarsdóttir, H. B (2019). Does emotional expression mediate or moderate the impact of intrusive thoughts on knowledge gained after genetic counseling? Abstract submitted to the Society of Behavioral Medicine Washington DC.

- James, J. E., Baldursdottir, B., Johannsdottir, K. R., Valdimarsdottir, H. B., & Sigfusdottir, I. D. (2018). Adolescent habitual caffeine consumption and hemodynamic reactivity during rest, psychosocial stress, and recovery. *Journal of psychosomatic research*, 110, 16-23.
- Johannsdottir, K. R., Magnúsdottir, E. H., Sigurjonsdottir, S., & Gudnason, J. (2018). The role of working memory capacity in cardiovascular monitoring of cognitive workload. *Biological Psychology*, 132, 154-163.
- Lindal, P. J., Johannsdottir, K. R., Kristjansson, U., Lensing, N., Stühmeier, A., Wohlan, A., & Vilhjalmsón, H. H. (2018, September). Comparison of Teleportation and Fixed Track Driving in VR. In *2018 10th International Conference on Virtual Worlds and Games for Serious Applications (VS-Games)* (pp. 1-7). IEEE.
- Magnúsdottir, E. H., Johannsdottir, K. R., Bean, C., Olafsson, B., & Gudnason, J. (2017, September). Cognitive workload classification using cardiovascular measures and dynamic features. In *2017 8th IEEE International Conference on Cognitive Infocommunications (CogInfoCom)* (pp. 000351-000356). IEEE.
- Magnúsdottir, E. H., Borsky, M., Meier, M., Johannsdottir, K., & Gudnason, J. (2017). Monitoring Cognitive Workload Using Vocal Tract and Voice Source Features. *Periodica Polytechnica. Electrical Engineering and Computer Science*, 61(4), 297.
- Meier, M., Borsky, M., Magnúsdottir, E. H., Johannsdottir, K. R., & Gudnason, J. (2016, October). Vocal tract and voice source features for monitoring cognitive workload. In *Cognitive Infocommunications (CogInfoCom), 2016 7th IEEE International Conference on* (pp. 000097-000102). IEEE.
- Lindal, P.J., Miri, H., Johannsdottir, K. R., Hartig, T. & Vilhjalmsón, H. (2016). Testing the Restorative Potential of Future Urban Environments Using VR Technology - The Cities that Sustain Us Project. In *the Proceedings of the 24th Annual Conference of the International Association for People-Environment Studies (IAPS24)*, Lund/Alnarp, Sweden.
- Lindal, P. J., Miri, H., Johannsdottir, K. R., Hartig, T., Vilhjalmsón, H. (2015, August). *Cities That Sustain Us: Using Virtual Reality to Test the Restorative Potential of Future Urban Environments*. In Proceedings of the 11th Biennial Conference on Environmental Psychology, Groningen, The Netherlands.
- Werff, L. V. D., Guðnason, J., & Jóhannsdóttir, K. R. (2015). Detection of Cardiovascular Reactivity in Speech. In *Sixteenth Annual Conference of the International Speech Communication Association*.
- Rafnsdottir, H. B., Oddsson, A. H., and Johannsdottir, K. R. (2013). Are false memories more likely to be created by emotional compared to neutral dynamic stimuli? *The Icelandic Journal of Psychology*, 18, 7.
- Olafsdottir, I., and Johannsdottir, K. R. The impact of warning and stress on memory and false recall. *The Icelandic Journal of Psychology*, 17, 55-58.
- Johannsdottir, K. R. & Herdman, C. M. (2010). The role of working memory in supporting drivers' Situation Awareness for surrounding traffic. *Human Factors*, 52, 663-673.
- Cafaro, A., Vilhjalmsón, H., Bickmore, T., Heylen, D., Jóhannsdóttir K., and Valgarðsson. G. (2012). First impressions: users' judgments of virtual agents' personality and interpersonal attitude in first encounters. In *Intelligent Virtual Agents* (pp. 67-80). 2012. Springer Berlin Heidelberg.
- Vargas Martin, M., Johannsdottir, K., Reynaga, G. B., Tashiro, J. & Garcia-Ruiz. M. A. (2010) Unconscious mind: Authenticating with something you don't know? Or just an infallible liveness test? In *the Proceedings of IEEE Canadian Conference on Electrical and Computer Engineering*. Calgary, Canada.
- Johannsdottir, K. R., Freysdottir, E. S., & Aradottir, G. (2008). The impact of cell-phone and radio use on skills and attentional processes of experienced and inexperienced drivers (in Icelandic). In Gunnar Þór Jóhannesson (Ed.), *Rannsóknir í Félagsvísindum IX*. Reykjavík: Háskólaútgáfan.
- Herdman, C. M. & Johannsdottir, K. R. (2006). Working memory and driver situation awareness in automobiles: The role of spatial and phonological subsystems. In Proceedings of the *16th Annual Meeting of the Canadian Society for Brain, Behaviour and Cognitive Science*. Saskatoon, Canada.
- Jarmasz, J., Herdman, C. M., & Johannsdottir, K. (2005). Object-based attention and cognitive tunnelling. *Journal of Experimental Psychology: Applied*, 11, 3-12.
- Johannsdottir, K. R., LeFevre, J.-A., & Herdman, C. (2005). The role of working memory in maintaining situation awareness. In *Proceedings of the Thirteen International Symposium on Aviation Psychology*, Oklahoma City, Oklahoma: The Ohio State University.
- Johannsdottir, K. R., LeFevre, J.-A., & Herdman, C. (2003). Cognitive system engineering (CSE) framework for evaluating cockpit interfaces. In *Proceedings of The Twelfth International Symposium on Aviation Psychology*, Columbus, OH: The Ohio State University.

- Johannsdottir, K. R., & Stelmach, L. (2001) Monovision: A Review of the scientific Literature. *Optometry and Vision Science*, 78, 646-651.
- Herdman, C. H., Johannsdottir, K. R., Lessard, L., Jarmasz, J., Churchill, L. L. & Farrell, P. S. E. (2001). Attentional demands associated with integrating a direct voice input (DVI) system into a multi-crew helicopter environment. In *Proceedings of The Eleventh International Symposium on Aviation Psychology*, Columbus, OH: The Ohio State University.
- Herdman, C. M., Johannsdottir, K. R., Lessard, L., Churchill, L. L., Wellwood, M., Gamble, M., Armstrong, A., & Farrell, P. S. E. (2001). The impact of a direct voice input (DVI) system on flight safety and mission performance in the CH-146 Griffon helicopter. In *Proceedings of The Eleventh International Symposium on Aviation Psychology*, Columbus, OH: The Ohio State University.
- Jarmasz, J., Herdman, C.M., & Johannsdottir, K. R. (2001). Grouping symbology with object layers in HUDs. In *Proceedings of The Eleventh International Symposium on Aviation Psychology*, Columbus, OH: The Ohio State University.
- Johannsdottir, K. R., Herdman, C. M., & Jarmasz, J. (2000). Development of an attitude recovery task for rotary aircraft in a simulator environment. *Engineering Psychology and Cognitive Ergonomics*, Vol 5, 241-248. Ashgate: UK.
- Herdman, C. M., Johannsdottir, K. R., Jarmasz, J. & Armstrong, J. (2000). Mixed up but flyable: The emergence of object layers in HMDs with head-referenced symbology. *Engineering Psychology and Cognitive Ergonomics*, Vol 5, 73-80. Ashgate: UK.
- Jarmasz, J., Johannsdottir, K. R. & Herdman, C. M (2000). Object layers in HUDs: Grouping symbology by common motion. *Engineering Psychology and Cognitive Ergonomics*, Vol 5, 65-72. Ashgate: UK.

In preparation

- Johannsdottir, K. R. & Magnusdottir, B. B. (In preparation). Physiological differences between high and low working memory individuals. *Journal of Neuroscience*.
- Magnusdottir, B. B. & Johannsdottir, K. R. The impact of PTSD on cognitive functioning. (In preparation). *Psychological bulletin*.
- Lindal, P., Hartig, T., Jóhannsdóttir, K. R., & Vilhjálmsson. (In preparation). Virtual technologies for the design of future cities: Promoting restorative quality in residential neighborhoods. *Journal of Environmental Psychology*.

Workshop papers and other publication

- Valdimarsdottir, H. B., Jóhannsdóttir, K. R., Hoffman-Peterson, A., Ladd, M., Rini, C., Peshkin, B., Graves, K., & Schwartz, M. D. (2018). Intrusive thoughts, social constraints and the efficacy of genetic counseling for breast cancer susceptibility. Symposium to be presented at: *International Congress of Behavioral Medicine*; Santiago, Chile.
- Oddsóttir, J., Sigurðardóttir, T. Þ., Jóhannsdóttir, K. R., Sveinbjörnsdóttir, B., & Vilhjálmsson, H. H. (2016). Virtual training for discrete trial trainers. In *Proceedings of the workshop on graphical and robotic embodied agents for therapeutic systems (GREATS16) at the 16th international conference on intelligent virtual agents, Los Angeles*.
- Tashiro, J., Jóhannsdóttir, K., Vargas Martin, M., Reynaga, G. B., & Thorpe, J. (2011). The users' manual to the unconscious mind. *E-Mentor*, 2(39).
- Johannsdottir, K. R., Tashiro, J., Martin, M. V., & Reynaga, G. (2011). The unconscious mind as a mean for authentication. *The APA Newsletter on Philosophy and Computers*. 10, 7-10.

Public presentations and posters

- Valdimarsdottir, H. B., Jóhannsdóttir, K. R., Hoffman-Peterson, A., Ladd, M., Rini, C., Peshkin, B., Graves, K. & Schwartz, M. D. (2018). Intrusive thoughts, social constraints and the efficacy of genetic counseling for breast cancer susceptibility. Symposium to be presented at: *International Congress of Behavioral Medicine*; Nov 14-18; Santiago, Chile.
- James, J. J., Jóhannsdóttir, K. R., Baldursdóttir, B., & Tähtinen, R. (2012). Adolescent Life Stress: Some Initial BioBus Findings. Ungt Fólk 1992 – 2012, Reykjavik, October 4.
- Cafaro, A Vilhjálmsson, H. H., Bickmore, T., Heylen, D., Johannsdottir, K. R., and Valgarðsson, G. S. (2012). First Impressions: Users' Judgments of Virtual Agents' Personality and Interpersonal Attitude in

First Encounters. Presented at the 12th International Conference on Intelligent Agents. Santa Cruz, California, US. (September, 12-14).

- Olafsdottir, I. and Johannsdottir, K. R. (2012). The impact of warning and stress on memory and false recall. Presented at the 4th Annual Meeting of the Icelandic Psychological Association, Reykjavik, May 24-25.
- Schmidt, C., and Johannsdottir, K. R. (2011). Simulating Self in Artifacts. Paper presented at *Philosophy and Theory of Artificial Intelligence Conference*. Thessaloniki, 3-4 October.
- Samsonovich, A. V., Jóhannsdóttir, K. R., Stocco, A., and Chella, A. (2011). Biologically Inspired Cognitive Architectures (BICA) Society: Bridging neuroscience, cognitive science and artificial intelligence. In: 2011 Neuroscience Meeting Planner, online. Washington, D.C.: Society for Neuroscience.
- Heenan, A., Johannsdottir, K., Brown, M., & Herdman, C. (2010). The effects of conversation on working memory and situation awareness in simulated driving. Poster presented at the *Annual Meeting of the Canadian Society of Brain, Behaviour and Cognitive Science*. Halifax, NS.
- Johannsdottir, K. R. & Herdman, C. M. (2008). The role of working memory in perceptuomotor tracking. Poster presented at the *Annual Meeting of the Canadian Society of Brain, Behaviour and Cognitive Science*. London, Ontario.
- Herdman, C. M. & Johannsdottir, K. R. (2006). Working memory and driver situation awareness in automobiles: The role of spatial and phonological subsystems. Paper presented at the *16th Annual Meeting of the Canadian Society for Brain, Behaviour and Cognitive Science*.
- Johannsdottir, K. R., LeFevre, J.-A., & Herdman, C. (2005). The role of working memory in maintaining situation awareness. Paper presented at the *Thirteenth International Symposium on Aviation Psychology*, Oklahoma City, Oklahoma.
- Johannsdottir, K. R., LeFevre, J.-A., & Herdman, C. (2003). Cognitive system engineering (CSE) framework for evaluating cockpit interfaces. Paper presented at the *Twelfth International Symposium on Aviation Psychology*, Columbus, Ohio.
- Johannsdottir, K. R., Herdman, C. M., Lessard, L., Churchill, L. L., Wellwood, M., Gamble, M., Armstrong, A., & Farrell, P. S. E. (2001). The impact of a direct voice input (DVI) system on flight safety and mission performance in the CH-146 Griffon helicopter. Paper presented at the *Eleventh International Symposium on Aviation Psychology*, Columbus, Ohio.
- Johannsdottir, K. R., Herdman, C. M., & Jarmasz, J. (2000). Development of an attitude recovery task for rotary aircraft in a simulator environment. Paper presented at the *Third International Conference on Engineering Psychology and Cognitive Ergonomics*. Edinburgh, Scotland.

Invited talks

- Johannsdottir, K. R. (2009, March). *Alan Turing: The Turing Machine and its influence on cognitive science*. Talk given as a part of the lecture series: Science revolutionaries in the 20th century. (In Icelandic). University of Iceland, Reykjavik.
- Johannsdottir, K. R. (2008, April). *On balancing motherhood and academic life*. Talk given at Women in Science and Engineering End of Term Event. Carleton University, Ottawa, Canada.
- Johannsdottir, K. R. (2007, February). *Are there any limits to what the driver is capable of? The role of working memory in maintaining drivers' situation awareness* (in Icelandic). Talk given at Félagsvísindatorg. University of Akureyri
- Johannsdottir, K. R. (2005, October). *Conscious computers: What are the minimum requirements?* Talk given as a part of the lecture series: Does the matter know about the mind? (in Icelandic). University of Iceland, Reykjavik.
- Herdman, C. M., Jarmasz, J., & Johannsdottir, K. R. (1999, January). *Designing symbologies for head-up and helmet-mounted displays: The impact of object-based attention on the perception and tracing of elements in complex displays*. Talk given at DCIEM, Toronto, Canada
- Johannsdottir, K. R. (1999, August). *Monovision: The effect of monocularly blurred images*. Communication Research Canada, Ministry of Industry, Ottawa, Canada

Experience:

- Guest lecturer, 2006, ERASMUS seminar: *Cognition, Motivation, and Action*, University of Akureyri, Iceland
 - Cognition, motivation and action: The role of emotion in cognition

- Action and virtual reality: The requirements for simulating emotion in a cognitive system
- Guest lecturer, 2005, ERASMUS seminar: *Mind, Language and Cognitive Science*, University of Iceland, Reykjavík, Iceland
 - Classical cognitive science I: The computer metaphor and levels of explanation
 - Classical cognitive science II: Symbolic systems and representations
 - Cognitive theory and virtual reality
- Researcher 2000-2004, Centre for Applied Cognitive Research, Carleton University, Ottawa, Canada
 - Testing and evaluation for the Tactical Aviation Mission System Simulation project, experiments I, II and III
 - Evaluation and development of Heads Up Displays (HUDs) for Night Vision Goggles (NVG) for the Canadian Forces
 - The development of HUD symbology for the TTCP Allied Nations Technical Panel 2
 - The development of a direct voice input system for CH146 Griffon helicopters
- Courses taught 2000-present
 - Elements in Cognitive Science 07301
 - Sensation and Perception HSYK-E-215
 - Cognitive Psychology HUG017, HUMT-E-414
 - Cognitive Neuroscience E-601-HUTA
 - Experimental Psychology E-313-SATI
 - General Psychology ALM0175/0176
 - Biological Psychology SAL0173
 - Research Methods in Psychology RAS0175
 - Seminar in Cognitive Psychology, HUG0273
 - Quantitative Research Methods (master level) MER155

Simulator-Based and Basic Research Skills:

- Cognitive science and aviation psychology - focus on working memory and situation awareness
 - Experimental design
 - Programming of cognitive experiments using E-Prime (windows-based psychology experimental software program)
 - Basic training course in Vection/Hyper Drive v1.6.1
 - Administration (scheduling participants, briefing/debriefing, administering tests)
 - Designing and administrating questionnaires
 - Data analysis (SPSS v. 8, 9, 10, 11; Excel)
 - The development of a Cognitive System Engineering framework for conducting cockpit research

Other professional activities:

- 2017-2018 Editor, the Icelandic Journal of Psychology.
- 2017 Program committee for IJCAI workshop on Architectures for generality and autonomy. Held in Melbourne August, 2017.
- 2013-present Ethics committee, Reykjavik University
- 2013-2015 Editorial Board and Organizational Committee Member for the Icelandic Psychology Association, Annual Meeting
- 2012-2013 Editorial Board Member for the journal of Biologically Inspired Cognitive Architecture
- 2011 Program Committee for The Fourth Conference on Artificial General Intelligence, 3-6 August, Mountain View, California, USA
- 2011 Co-Chair: The Second International Conference on Biologically Inspired Cognitive Architectures, (November 5-6, 2011). Arlington, Virginia
- 2010-present Board of Directors for the BICA Society
- 2010 Co-founder of the BICA Society
- 2010 Co-Chair: The First International Conference on Biologically Inspired Cognitive Architectures, (November 13-14, 2010). Arlington, Virginia.

- 2009 Chair: Special Session on Self in Artifacts. AAAI Fall Symposium Series (November 2009): Biologically Inspired Cognitive Architectures. Arlington, Virginia.
- 2009-2011 Evaluation Committee for Women in Defence and Security Scholarship, Ottawa, Canada (2010-2011)
- Ethics committee (2004-2006), Department of Law and Social Sciences, University of Akureyri, Akureyri, Iceland