Prof. Dr. rer. nat. Dipl. Phys. Thomas P. Trappenberg

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Academic Background

Education:	1982-1992	University of Aachen (RWTH), Germany Physics with computer science as subsidiary subject
Degrees:	Vordiplom	(1985) Physics
	Dipl. Phys	(1989) Physics (CS as subsidiary subject)
	Dr. rer. Nat.	(1992) Natural Sciences (with excellence)

Academic and Professional Experience

Positions held:	1986-1987:	Teaching Assistant, Department of Experimental Physics, Aachen University, Germany
(academic)	1987-1989:	Teaching Assistant, Department of Theoretical Physics, Aachen University, Germany
	1989-1992:	Research & Teaching Assistant Department of Theoretical Physics Aachen University, and High Performance Computer Centre HLRZ, Jülich, Germany
	1992-1994:	Postdoctoral Fellow, Department of Mathematics, Statistics, and Computer Science, Dalhousie University, Canada
	1994-1997:	Part time Assistant Professor, Department of Mathematics, Statistics and Computer Science, Dalhousie University, Canada
	1995-1999:	Adjunct Professor, Department of Psychology, Dalhousie University, Canada
	1997-1999:	Research Scientist, RIKEN Brain Science Institute Laboratory for Information Synthesis, Japan
	2000-2001:	Senior Research Officer, Centre for Cognitive Neuroscience & Department of Experimental Psychology, Oxford University, England
	2001-2006:	Associate Professor, Faculty of Computer Science Dalhousie University, Canada
	2003-2006:	Director of Electronic Commerce, Dalhousie University
	since 2006:	Full Professor, Faculty of Computer Science, Dalhousie University
	since 08/26:	Assistant Dean, Innovation, Dalhousie University

Positions held:	1989-1992:	Library Manager, High Performance Computer Centre HLRZ, Jülich, Germany
(industrial)	1993-1995:	Research Director, Optimax Software Inc., Canada
	1995-1997:	Director of Development, Salter Street Interactive Inc., Canada
	2017-2018:	CEO, Nexus Robotics
	since 2022:	Director of Research, Alentic Microscience Inc.

Positions held:	since 2002:	President, Hakodate-Halifax Friendship Association
(Voluntary)	2009-2020:	Principal Instructor, Prospect Road Karate Dojo
	2016-2021:	Leader, Green Party of Nova Scotia
	Since 2024:	Governor and VP external, International Neural Network Society

Editorial Board: Frontiers in Cognitive Science, Cognitive Neurodynamics, Brain Informatics

Awards

2022	Queen's Platinum Jubilee Award for community environmental causes
2020	Best Paper Award, IEEE/CVF Conference on Computer Vision and Pattern
2018	Winner, Weed and Feed Agbot competition, Indiana, USA
2014	Faculty Research Award
2013	Psychonomic Society Best Paper award for Connors, Lolordo, Trappenberg
1999	Best paper award, International Joined Conference on Neural Networks, IJCNN'99, Washington DC

Selected Recent Publications

Books:

T. Trappenberg, (2020) Fundamentals of Machine Learning, Oxford University Press

T. Trappenberg, (2022) Fundamentals of Computational Neuroscience, 3rd edition, Oxford University Press

Selected recent peer reviewed publications:

H.M. Gillis, I. Xu, B. Misiuk, C.J. Brown, T. Trappenberg (2026) Last-layer committee machines for uncertainty estimations of benthic imagery, Neural Networks, 108819

T. Trappenberg (2025) Position Paper: Foundation models are not the brain, International Joined Conference on Neural Networks (IJCNN)

S. Lowe, B. Misiuk, I. Xu, ... & Trappenberg, T. (2025). BenthicNet: A global compilation of seafloor images for deep learning applications. Scientific Data, 12(1), 230.

Scott C Lowe, Robert Earle, Jason d'Eon, Thomas Trappenberg, Sageev Oore. (2022). Logical Activation Functions: Logit-space equivalents of Probabilistic Boolean Operators. NeurIPS

Abraham Nunes, Martin Alda, Timothy Bardouille and Thomas Trappenberg. (2020). Representational Renyi Heterogeneity. Entropy. 22(417): 1-30.

Andre Pacheco, Chandramouli S. Sastry, Thomas Trappenberg, Sageev Oore, Renato A. Krohling. (2020). On Out-of-Distribution Detection Algorithms With Deep Neural Skin Cancer Classifiers (Best Paper Award). Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern.

F. Sheikhnezhad Fard and T. Trappenberg. (2019). A novel model for arbitration between planning and habitual control systems. Frontiers in Neurorobotics. 13: 1-13.