



Seminar Hora Informaticae

Institute of Computer Science, Prague

Tuesday, March 3, 2026, 13.30 – 15.30 (1.30 – 3:30 PM) CET

Meeting Room 318, Address: Pod Vodárenskou věží 2, Prague 8

Meeting ID: 914 0834 4018, Passcode: 668534



<https://cesnet.zoom.us/j/91408344018?pwd=x2Qlz4F42BxlMSmWc1HOwHHA7Uw7PN.1>

Věra Kůrková (Institute of Computer Science, CAS, Prague).

From artificial neurons to artificial intelligence.

This year marks the 70th anniversary of the Dartmouth Research Project on Artificial Intelligence, held in the summer of 1956. It offers an opportunity to reflect on the remarkable journey artificial intelligence has taken since then. In this lecture, we will review the major milestones in its development from the McCulloch–Pitts artificial neuron to its today form. We will recall Turing’s ideas about thinking machines, Rosenblatt’s Mark I Perceptron, the discovery of the backpropagation learning algorithm, the emergence of artificial neural networks as a distinct scientific field in the early 1990s, breakthroughs in image recognition using deep convolutional networks, the introduction of Word2Vec word representations, and the rise of large language models and generative AI.

References:

- [1] Dilli Hang Rai, Artificial Intelligence Through Time: A Comprehensive Historical Review, October, 2024, DOI: [10.13140/RG.2.2.22835.03364](https://doi.org/10.13140/RG.2.2.22835.03364)
- [2] B. Delipetrev, C. Tsinaraki, U. Kostić, AI Watch - Historical Evolution of Artificial Intelligence, European Commission, Joint Research Centre, doi:10.2760/801580
- [3] A. S. Alalaq, The History of the Artificial Intelligence. Revolution and the Nature of Generative AI Work, DS Journal of Artificial Intelligence and Robotics, Vol. 2 Issue 4, 2024, <https://doi.org/10.59232/AIR-V2I4P101>

Věra Kůrková (www.cs.cas.cz/~vera) is a senior scientist from the Department of Artificial Intelligence, Institute of Computer Science of the Czech Academy of Sciences. She received PhD. in mathematics from the Charles University, Prague, and DrSc. (Prof.) in theoretical computer science from the Czech Academy of Sciences. She has been affiliated with the Institute of Computer Science since 1990 (in 2002-2008 she was the Head of the Department of Theoretical Computer Science). In 2010, she received the Bolzano Medal for her contribution to mathematical sciences from the Czech Academy of Sciences.

Her main research interests are mathematical theory of neurocomputing and machine learning. Her work includes analysis of capabilities and limitations of shallow and deep networks, dependence of network complexity on increasing dimensionality of computational tasks, connections between theory of inverse problems and generalization in machine learning, and nonlinear approximation theory.

She has been a member of the Board of the European Neural Network Society since 2008 (in 2017-2019 she was its president) and of the editorial boards of the journals Neural Networks, Neural Processing Letters, and Applied and Computational Harmonic Analysis. She has been involved in organization of conferences ICANN and EANN in various roles (general chair, co-chair, or honorary chair).

HORA INFORMATICAЕ (meaning: TIME FOR INFORMATICS) is a broad-spectrum scientific seminar devoted to all core areas of computer science and its interdisciplinary interfaces with other sciences and applied domains. Original contributions addressing classical and emerging topics are welcome. Founded by Jiří Wiedermann, the seminar is running since 1994 at the Institute of Computer Science of the Czech Academy of Sciences in Prague.

<https://www.cs.cas.cz/horainf>