

ISTVÁN CSABAI



Professor of Physics at the Department of Physics of Complex Systems at ELTE Eötvös Loránd University and Corresponding Member of the Hungarian Academy of Sciences

ACADEMIC AND PROFESSIONAL CAREER

Prof. István Csabai is doing research in several multidisciplinary fields where the new technologies make it possible to collect and analyze large amounts of data. His research focus is to understand complex systems, be it the living cell, the manmade Internet, or the large-scale structure of the Universe. Complex systems can be described only by complex models, and to create and validate these models, collection and analysis of huge amounts of data is required. Beyond the standard domain knowledge of the traditional disciplines, methods of modern statistical analysis, data mining, machine learning and other computational techniques gain a bigger and bigger role. Prof. Csabai has solid background knowledge in these topics and has experience in multidisciplinary research working together with researchers in astronomy, complex network research and genomics. During his post-doc research at The Johns Hopkins University, he earned the “builder” status in the Sloan Digital Sky Survey project, which was one of the first scientific big-data projects and produced the first large scale 3D map of the Universe. He was part of the team that created the first multi-terabyte science database and Virtual Observatory. Building on this experience with large scientific databases, data mining and artificial intelligence technologies, Prof. Csabai was part of several European ICT and genomics projects and has a long collaboration history with several international institutions, including Harvard Medical School, The Johns Hopkins University, ELIXIR, EBI ENA (European Nucleotide Archive), Erasmus Medical Center, Technical University of Denmark.

AWARDS AND HONORS

- 2023 President of Section of Physical Sciences at Hungarian Academy of Sciences
- 2019 Corresponding member of Hungarian Academy of Sciences
- 2016 Jubilee Silver Medal – Eötvös Loránd University
- 2015 Academic Award – Hungarian Academy of Sciences
- 2008 Doctor of Sciences, Hungarian Academy of Sciences
- 2006 Detre Award of Eötvös Physical Society
- 2000-2003 Széchenyi Professor Award
- 1995 Member of Eötvös Loránd Physical Society