The IMA Data Science Lab is driven by the need to develop tools for the analysis of big data. At the same time, the directive of the lab is to gain rigorous understanding of the capabilities, advantages, and limitations of these methods so that certainty in the knowledge extracted can be quantified. Industry is invited to explore what the lab has to offer and discover more about the lab’s cutting-edge academic research.

About

MISSION

To provide business and industry with scientific research and tools for data analysis.

The low cost of collection, ubiquity of sensors, and abundance of storage have created an enormous amount and diversity of data. From scientific and medical to business, traffic, and social, all of these sources generate data that is high dimensional and high in volume. The ability to generate and store vast quantities of data far outpaces the ability to analyze, process, and understand it. There is an unmet need to analyze data as efficiently as possible in order to extract valuable insights for decision making.

Leadership

DIRECTOR Gilad Lerman

Lerman is professor of mathematics and director of the Minnesota Center for Industrial Mathematics in the School of Mathematics at the University of Minnesota, Twin Cities. He received his Ph.D. in Mathematics at Yale University in 2000 under the direction of Ronald Coifman and Peter Jones. His postdoctoral experience included Courant Instructorship (2000-2003) at New York University’s Courant Institute of Mathematical Sciences and training in bioinformatics as a research scientist in Bud Mishra’s Lab (2003-2004) at the same institute. He was a recipient of an NSF CAREER award in 2010 and the Feinberg Foundation Visiting Faculty Fellowship at the Weizmann Institute in 2013.

Lerman has extensive experience working with industry both as a consultant and collaborator. His areas of research and expertise include high dimensional data, machine learning, algorithm design, and mathematical foundations of data analysis. As director of the Data Science Lab, his goal is to provide industry with access to academic research and tools for analysis of data.