

Invited Talks

Project Halo: Towards a Digital Aristotle

Noah S. Friedland, *Vulcan, Inc.*

Vulcan Inc. has launched a multistaged effort towards the creation of a digital Aristotle, an application capable of answering and providing cogent explanations to arbitrary questions in an ever-growing number of domains. The pilot phase was a six-month effort intended to investigate the state-of-the-art in question answering, with an emphasis on deep reasoning. Friedland's talk will discuss the Halo vision and methodology and provide an overview of the pilot phase and its challenge. He will also outline a roadmap for future phases of Vulcan's initiative.

AI & Molecular Biology: A Growing Success Story

Lawrence Hunter, *University of Colorado Health Sciences Center*

Applications of artificial intelligence in molecular biology have long been scientifically important, and are now growing in industrial significance as well. In application areas as diverse as drug discovery and healthcare cost containment, AI techniques from machine learning, knowledge representation, and now natural language processing are becoming increasingly part of mainstream commercial practice. In this lecture, Hunter will describe some current success stories and describe the potential for future growth.

CAPTCHA: Telling Humans and Computers Apart Automatically

Luis von Ahn, *Carnegie Mellon University*

A CAPTCHA is a program that can tell whether its user is a human or a computer. More specifically, a CAPTCHA is a program that can generate and grade tests that humans can pass but current computer programs cannot. CAPTCHAs have several applications in practical security and some results of this project are currently in use by Yahoo, Hotmail, and other major websites. CAPTCHAs also provide concrete, well defined challenges to the AI community. Luis von Ahn will describe the CAPTCHA project in detail and survey the many issues related to artificial intelligence.