SLAC COLLOQUIUM SERIES

Artificial intelligence meets basic research

The SETI Institute and NASA's Frontier Development Lab

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Abstract:

Artificial Intelligence and Machine Learning have emerged as essential tools for the deployment of applied technologies such as self-driving cars, security, robotics and even consumer electronics. The fundamental physical and biological sciences, however, have not fully embraced AI/ML to leverage these tools for what they can offer in advanced data analytics, modeling and forecasting and anomaly detection. In partnership with NASA Ames Research Center, NASA Headquarters and private industry, the SETI Institute is host to a graduate-level summer research accelerator with the goal to change that paradigm and demonstrate the efficacy of AI/ML applied to basic research. Now in its fourth year, the Frontier Development Lab (FDL) has demonstrated breakthrough results in NASA research priorities ranging from planetary defense and space resources, to exoplanets, astrobiology and heliophysics. In 2019, new programs are anticipated addressing space medicine and cellular biology. FDL is also demonstrating the power of public/private partnership where companies such as Google, Intel, IBM, Lockheed and NVIDIA, are active partners, providing human, technological and financial resources. SETI Institute CEO, Bill Diamond will describe the FDL program, including key results and discuss opportunities for expanded research domains.

March 18, 2019, Kavli Auditorium, refreshments start at 3:15 and colloquium at 3:30 pm