Data Science Seminar Series

ExaScale: More Than I Ever Imagined

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Time: 4:00 PM – 5:00 PM EDT
Location: Zoom Virtual Room
Web Link: https://njit-institute-for-data-science.eventbrite.com

Computation has increased 17 orders of magnitude over the sixty years I have been visiting and celebrating gains in computational environments. The first "supercomputers" ran at a million ops per second and in 2021 the fastest computers operates at exa-ops or 1018ops with gains of 10 million occurring in the last twenty-five year by exploiting parallelism. The relatively small community who have produced these gains through parallelism. Gains must be discovered at every level of the hardware and compilers to the applications and supporting algorithms. In the beginning, the challenge was to obtain enough computing resources to solve some small aspect of a scientific or engineering problem, not the problem is really imagining the problems that can exploit these potentially infinite resource computing environments.

Gordon Bell is a Microsoft Researcher Emeritus He spent 23 years at Digital Equipment Corporation as Vice President of R&D, responsible for the first mini- and time-sharing computers and DEC's VAX, with a 6 year sabbatical at Carnegie Mellon. In 1987, as NSF's first, Ass't Director for Computing (CISE), he led the National Research and Education Network panel that became the Internet. In 1987 he established the Gordon Bell Prize to recognize the extraordinary efforts to exploit modern highly parallel computers. Bell maintains three interests: computers: their evolution and use, technology-based startup companies, and lifelogging. He is a member or Fellow of the American Academy of Arts and Sciences, ACM, IEEE, the National Academy of Engineering, National Academy of Science, the Australia Academy of Technological Sciences and Engineering and received The 1991 National Medal of Technology. He is a founding trustee of the Computer History Museum, Mountain View, CA. and lives in San Francisco. http://gordonbell.azurewebsites.net/