Jeffrey Lagarias

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Packing Space with Regular Tetrahedra

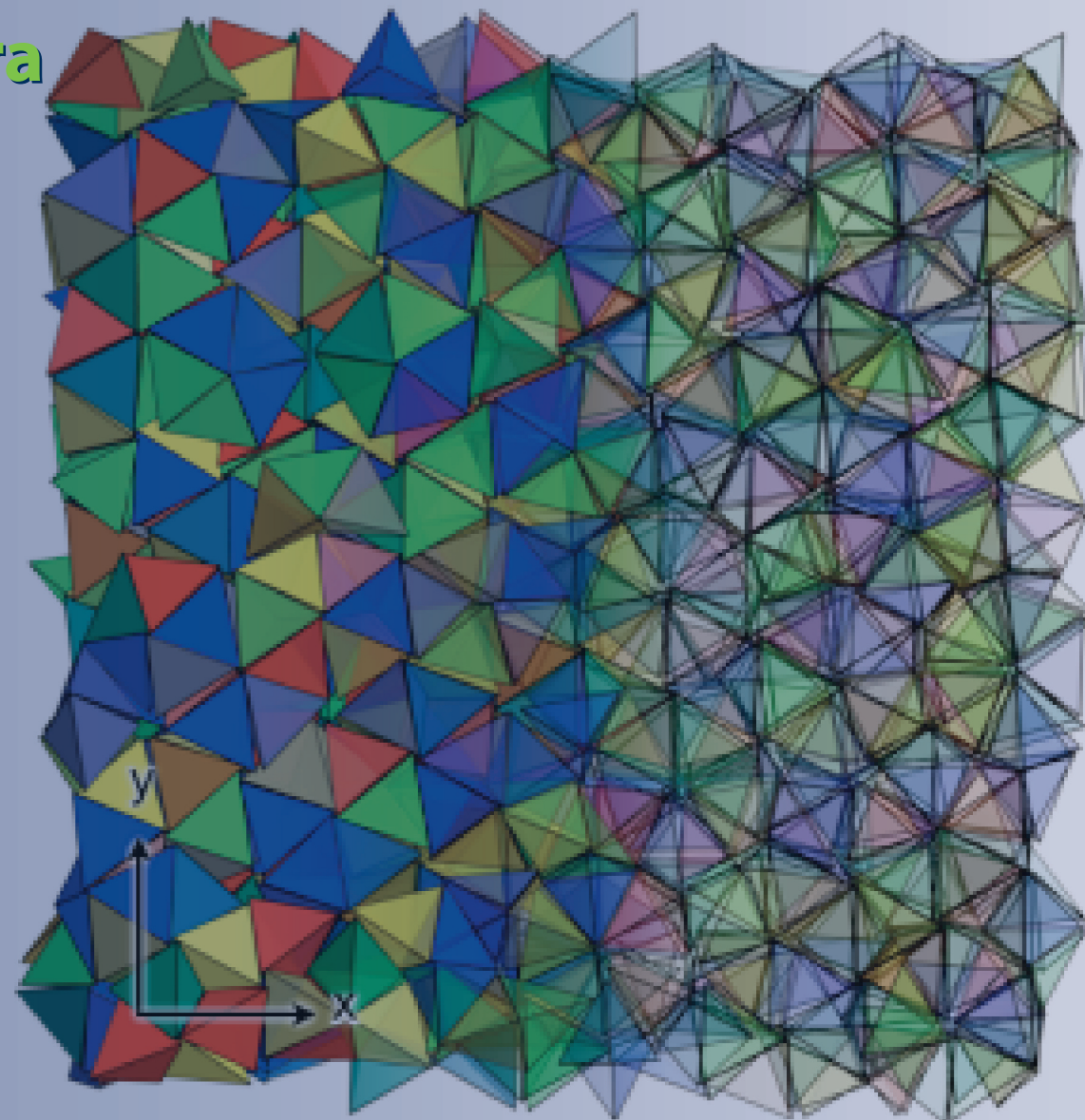## Friday, Dec. 4, 4 pm, Salisbury Labs 104

The problem of packing space with regular tetrahedral has a 2000 year history. This talk surveys the history of the problem. It includes work by mathematicians, computer scientists, physicists, chemists, and materials scientists. Much progress has been made on it in recent years, yet there remain many unsolved problems.

Jeffrey C. Lagarias was born in Pittsburgh, Pennsylvania, in 1949. He obtained the S.B./S.M. in 1972 and the Ph.D. in 1974 from the Massachusetts Institute of Technology with a thesis in number theory under the direction of Harold M. Stark. He worked at AT&T Bell Laboratories from 1974–95 and at AT&T Shannon Laboratories from 1995–2003. Since that time he has been professor of mathematics at the University of Michigan. He has held visiting positions at the University of Maryland, Rutgers University (computer science), University of Paris VII (physics), and Stanford University. His research spans many fields, including number theory, optimization, discrete geometry, and computational topology. He has given AMS invited addresses in each of the fields above.

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Levi Leonard Conant, 1857–1916, was a mathematician and educator who spent most of his career as a faculty member at Worcester Polytechnic Institute; he served as head of the Mathematics Department and as acting president from 1911 to 1913. An outstanding teacher, and an active scholar, published many articles in scientific journals and wrote four textbooks. His large bequest to the American Mathematical Society established the Levi L. Conant Prize, awarded annually to recognize the best expository paper published in either *Notices of the AMS* or *Bulletin of the AMS* in the previous five years. • The 2015 Conant prize was awarded to Jeffrey Lagarias and Chuanming Zong for their paper "Mysteries in Packing Regular Tetrahedra," which appeared in Notices of the AMS, Volume 59, No. 11, (2012), 1540–1549.

Sponsored by the Department of Mathematical Sciences

A. H. Akbari et al., *Nature* 2009