

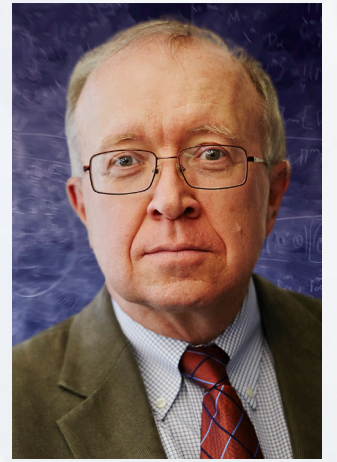


Comets, unseen planets, and the outer fringes of the solar system

Date: November 14, 2023 (Tuesday)

Time: 2:00 p.m.

Venue: CPD-LG.10, Centennial Campus, HKU



*Prof. Scott D. TREMAINE
Institute for Advanced Study, Princeton*

Abstract:

Comets have inspired awe since prehistoric times, but even today there are only a few thousand comets with well-determined orbits. Nevertheless, the analysis of this limited sample yields a compelling model for the formation, evolution and present distribution of comets. This model implies that the primary source of comets is the Oort cloud, containing over 100 billion comets at 5,000 to 100,000 times the Earth-Sun distance. I will review our current understanding of the history and structure of the Oort cloud, and what comets can tell us about possible undiscovered planets beyond Neptune.

Biography:

Prof. Scott D. Tremaine has made seminal contributions to understanding the formation and evolution of planetary systems, comets, black holes, star clusters, galaxies, and galaxy systems. He received his BSc degree from McMaster University and PhD degree from Princeton University. He was Associate Professor at Massachusetts Institute of Technology, University Professor at the University of Toronto, Charles A. Young Professor at Princeton University, and Richard Black Professor at the Institute for Advanced Study, and he is currently Professor Emeritus at the Institute for Advanced Study. He was the first Director of the Canadian Institute for Theoretical Astrophysics and the Chair of the Department of Astrophysical Sciences of Princeton University. Prof. Tremaine has received many awards and honours, including the Dirk Brouwer Award and the Henry Norris Russell Lectureship of the American Astronomical Society, the Tomalla Foundation Prize for Gravity Research, and fellowship of the Royal Society of London, the Royal Society of Canada, the US National Academy of Sciences, and the American Astronomical Society.

Anyone interested is welcome to attend!

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