



The Math/Stats Colloquium  
Department of Mathematics and Statistics  
San José State University



# Jeff Scargle

NASA Ames Research Center

*Structure and Topology of the Universe*

JANUARY 29, 2014, MH320

**Abstract:** Astronomers are beginning to understand the origin, structure, and future of the Universe, thanks to the application of advanced analysis to huge amounts of data obtained in surveys from observatories in space and on the Earth. The distribution of galaxies in the nearby Universe has been obtained by applying remarkable methods developed in previous CAMCOS projects with Brad Jackson to data from the Sloan Digital Sky Survey. Astronomers are now applying abstract Morse theory to such data to examine the topological structure of the Universe. A new CAMCOS project with Slobodan Simic on discrete Morse theory aims to yield similarly useful cosmological results.

(This talk is Part 1 of our CAMCOS double feature.)

*Background:* No particular background is necessary.

**About the speaker:** Jeff Scargle has an undergraduate degree in astronomy from Pomona College and a Ph.D. in astrophysics from the California Institute of Technology. He is in the Space Science and Astrobiology Division of the NASA Ames research center, and a member of the Fermi Gamma Ray Space Telescope collaboration.

SNACKS IN MH331B AT 2:30 PM

TALKS START AT 3 PM

For more information, see our full schedule at:

<http://www.math.sjsu.edu/~hsu/colloq/>