

History of Cosmology from Ancient Greece to the Modern Era

01:090:295:04 Index# 17326

Jeremy Sellwood, SAS - Physics & Astronomy

TTH 03:20-04:40P

Allison Road Classroom Room 207

Busch Campus

For centuries, mankind has attempted to understand the universe in which we find ourselves. The motions of the Sun, Moon and planets have intrigued some of the most powerful minds throughout history. The astronomical foundations laid by Aristarchus, Aristotle, Ptolemy and others contained both surprising insights and profound misconceptions. Most errors were dispelled in the Renaissance by Copernicus, Kepler, Galileo and Newton. The true scale of the universe was not grasped until the work of Einstein and Hubble in the early the 20th century and our understanding of the universe is still developing today.

The seminar will trace this history, focusing both on the scientific concepts and the characters behind them. We will review the observational data that demand explanation and the development of the scientific process. We will conclude with an assessment of our current picture and ask in what ways it may still be wrong. Students will not need any college level math or science, but competence in high school math, including geometry and science will be assumed.

JERRY SELLWOOD completed his PhD in Astronomy at Manchester University, England in 1977. He has held positions at the European Southern Observatory, Groningen University (The Netherlands), Cambridge University (England), and the Space Telescope Science Institute in Baltimore. He has been on the Faculty at Rutgers University since 1991. He is the 2012 winner of the Brouwer Prize, awarded by the American Astronomical Society for excellence in dynamical astronomy. His research was also recognized in the 2013 Rutgers Board of Trustees Award for Excellence in Research. He received the 1999 Graduate Teaching Award from Rutgers Graduate School and is a Life Member of Clare Hall Cambridge. He is a member of the International Astronomical Union and of the American Astronomical Society. His main interests are structure and evolution of galaxies, their formation and their dark matter content. He is an expert on disk dynamics, bars and spirals in galaxies, and uses state-of-the-art N-body simulations to learn about these systems. He has published four major reviews, over 100 research papers, edited three volumes of conference proceedings, and delivered more than 40 invited lectures at international conferences.