

James Bullock

Dean, School of Physical Sciences, Professor Physical Sciences, Physics & Astronomy at UC Irvine

Irvine, CA, US

James Bullock studies how galaxies and their constituent dark matter halos have formed and evolved over billions of years of cosmic time.

Biography

Professor Bullock received a B.S. in both Physics and Math from The Ohio State University in 1994 and a Ph.D. in Physics from the University of California, Santa Cruz in 1999. After postdoctoral positions at The Ohio State University and Harvard University, he came to UC Irvine as an Assistant Professor in 2004. He was elected Fellow of the American Association for the Advancement of Science in 2008. Professor Bullock served as the 17th Chair of the UCI Physics and Astronomy Department from 2017-2019 before becoming the 9th Dean of the UCI School of Physical Sciences in 2019. Aided by super-computer simulations and analytic models, Professor Bullock studies how galaxies and their constituent dark matter halos have formed and evolved over billions of years of cosmic time. By analyzing data that astronomers have collected using the Hubble Space Telescope, the Keck Observatory, and other ground and space telescopes, he works to understand how galaxies, including the Milky Way and its Local Group of galaxies, emerged from the primordial universe. One of his long-standing interests has been the use of astrophysical observations to constrain the microphysical nature of dark matter. Professor Bullock currently serves as Chair of the James Webb Space Telescope User's Committee. Previously he was Chair of the working group that recommended the Hubble Frontier Fields Program, which is responsible for galaxy cluster image on the top of this page. He is passionate about science outreach and appears regularly on the Science Channel's How the Universe Works.

Areas of Expertise

Dark Matter, Star Formation, Astronomy, Galaxy Dynamics, Physics

Education

University of California, Santa Cruz
PhD Physics

The Ohio State University
BS Physics and Math

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