

Cosmological Implications from Gravitational Lensing

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I will discuss three areas in which gravitational lensing plays a role in our cosmological understanding: 1) Strong lensing by galaxy clusters and the matter density in the Universe; 2) Lensing by galaxies and the Hubble constant; 3) Microlensing by small bodies in galaxies and their role in the matter budget. Each of these presents some interesting bits of computational analysis.

Wes Colley received a B.A. in astronomy and physics at the University of Virginia in 1993, then a Ph.D. in astrophysical sciences at Princeton University in 1998. His graduate work focused on cosmology and gravitational lensing. He continued his work as a post-doctoral fellow at the Harvard-Smithsonian Center for Astrophysics, and as a lecturer at U.Va. He is now a senior research scientist at the Center for Modeling, Simulation and Analysis at UAH, where he dabbles in astronomy and, more famously, sports rankings.