

Biography of Brenda Frye

Dr. Brenda Frye is a Professor in the Department of Astronomy at the University of Arizona (tenured in June, 2020). She currently has a one-year sabbatical appointment at the Institute for Advanced Study in Princeton, New Jersey. Before taking on these positions, she was a Tenure-track Professor of Physics & Astronomy at the University of San Francisco in California, and Lecturer in the School of Physics at Dublin City University in Dublin, Ireland.

Before that she took on the following postdoctoral positions: the National Science Foundation Astronomy & Astrophysics Postdoctoral Fellowship and the Princeton Council on Sciences & Technology Fellowship both held at Princeton University, and Research Scientist at the Lawrence Berkeley National Laboratory. She completed her Ph. D. in Astrophysics at the University of California, also at Berkeley.

She earned dual B. S. degrees in physics and astronomy at the University of Arizona, where she also won the awards of Outstanding Senior in the Department of Astronomy, and Outstanding Senior in the College of Science, all under the direction of her undergraduate thesis advisor, Professor Jill Bechtold.

Dr. Frye is interested in extragalactic astronomy and cosmology. She is making a concerted effort to understand how massive structures of galaxies form and evolve over time. This research is relevant to know, for example, how a galaxy such as the Milky Way came to be, our own massive home. She is investigating the physics driving the assembly of these massive structures of galaxies, and controlling the buildup of their stellar mass.

There are many different approaches to explore this fundamental problem of astrophysics. The approach that Dr. Frye has chosen is gravitational lensing. Her research interests include, but are not limited to, gravitational lensing by galaxy clusters, high spatial resolution studies of the predecessors of galaxy clusters or protoclusters, and studies of the cluster galaxy members and the images of the objects in the background that are lensed, or giant arcs.

Dr. Frye enjoys teaching Astronomy and Astrophysics courses at the university. These courses range from introductory astronomy for the nonmajor to astrophysics majors courses and a course on the structure and dynamics of galaxies at the level of the Ph. D. student.

She also is keen to travel, is an avid runner in the Tucson Parkrun events, and has three very active and inquisitive children.