Record Nr. UNINA9910373933603321 Autore Malik Karim A Titolo How Cosmologists Explain the Universe to Friends and Family / / by Karim A. Malik, David R. Matravers Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2019 **ISBN** 3-030-32734-5 Edizione [1st ed. 2019.] Descrizione fisica 1 online resource (XIV, 258 p. 77 illus., 65 illus. in color.) Collana Astronomers' Universe, , 1614-659X Disciplina 520 Soggetti Astronomy Cosmology Popular Science in Astronomy Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Preface -- Introduction -- How does science work? -- What Nota di contenuto observations do we use? -- What do we observe? -- What is the universe made of? -- What are the forces that shape the universe? --How does the structure in the universe form? -- Going Back in Time --How did it all begin?. What lies beyond? -- What didn't fit - more technical and side issues -- Glossary. This fascinating book provides an accessible and up-to-date overview Sommario/riassunto of modern cosmology. In particular, the book discusses the formation of the Cosmic Microwave Background and the evolution of large scale structures in the universe, the distribution of galaxies and clusters of galaxies on very large distance scales. Following a brief introduction, the authors describe the scientific method – how science is done. They then discuss observational cosmology, the instruments and what observations can be done with them, and what is derived from those observations. After discussing the constituents of the universe, including dark matter and dark energy, the authors provide an outline of the forces that shape the universe, with particular emphasis on gravitation. Following this, the reader is taken on a journey in time from the present day back to the very beginning of the universe, a

period called inflation, which sets the initial conditions for the subsequent evolution of the universe. The book ends with a brief

chapter on what lies beyond. Written by two experts, the book is aimed at the interested lay-person with little or no physics background, but an interest in modern cosmology.