RAS Eddington Medal 2022
Professor Alan Heavens

Professor Alan Heavens has been a highly prominent researcher in the field of theoretical astrophysics. The Eddington Medal is awarded in this field for an investigation of outstanding merit in a specific area. Professor Heavens has developed advanced methods of analysis of large-scale structure and weak lensing data and has used these to test cosmological theories and in the measurement of cosmological parameters through applying them to observations. Recently, Professor Heavens has reformulated theoretical weak lensing as a complete Bayesian Hierarchical Model allowing the analysis of data from both Euclid and LSST, which has implications for both Dark Energy properties and further work beyond Einstein gravity. The career of Professor Heavens has spanned more than four decades. Following his PhD work at the University of Cambridge with Dr Scheuer, he moved to the University of Edinburgh in the 1980s, starting first as a Research Fellow and remaining there until 2012 as a Professor of Theoretical Astrophysics and the Director of Research.

Since 2012, Professor Heavens has moved to Imperial College London where he is the founding Director of the Imperial Centre for Inference and Cosmology, Head of Astrophysics, and Professor of Astrostatistics. His distinguished career means that he has more than 255 publications, numerous research teams and has been awarded many prestigious prizes. Most recently, he (along with the Planck Team) was awarded the 2018 Gruber Prize. The work of Professor Heavens has not only been wide reaching and influential, but has enabled significant progress in a number of scientific areas, in particular, his work is proving to play a vital role in the ever increasing volume of data from the latest cosmological experiments.

For these reasons that Professor Heavens is awarded the Eddington Medal 2021.