Citation for the 2017 RAS 'G' Fowler Award
Dr Christopher Chen

The Fowler Award for Geophysics is awarded to Dr Christopher Chen.

Dr Chen is an outstanding early-career space physicist specialising in space plasmas. He is already a world expert on the turbulence of magnetised plasmas and how this operates in the solar wind, and he has made significant contributions to our understanding of the three-dimensional nature of magneto-hydrodynamic turbulence, and the physics of turbulent plasma heating and energy dissipation. By using spacecraft measurements in the solar wind, Dr Chen has shown how properties of turbulent magnetic fluctuations differ in directions parallel and perpendicular to the heliospheric magnetic field, and solved a long-standing basic question by distinguishing between two competing mechanisms for the turbulent cascade at small scales.

His work is characterised by its combination of innovative measurement and data analysis ideas with an excellent understanding of the theoretical framework of plasma turbulence. His scientific excellence has already been recognised by the award of prestigious fellowships and many high profile invited talks, while his research has been highly influential not only for space physics, but also for the whole range of solar system, astrophysical and laboratory systems in which turbulence operate.

For these reasons, Dr Christopher Chen is awarded the Royal Astronomical Society’s Fowler Prize.