

Citation for the 2018 RAS Price Medal: Professor Stuart Crampin

The 2018 Price Medal for Geophysics is awarded to Professor Stuart Crampin.

Professor Crampin's singular achievement was to move seismic anisotropy to the mainstream of modern seismology. The theory was known, but he was in the right place at the right time to observe the effects of anisotropy as high-frequency local and downhole seismic monitoring proliferated, and match, and provoke others to match, the observations computationally.

Above all, he persuaded the scientific and industrial communities to look for anisotropy due to aligned cracks and pores, and to relate these to stress and fluids in the Earth's crust, in the formulation of anisotropic poro-elasticity (with Sergei Zatsepin).

Both shear-wave splitting, which he advocated as an efficient detector of anisotropy, and velocity variation with direction, are now routinely observed and incorporated into modelling of fractured subsurface reservoirs, as well as the Earth's deep interior.

For these reasons, Professor Crampin is awarded the Royal Astronomical Society's Price Medal.