Royal Astronomical Society

Professor Mathew Owens – Chapman Medal (G)

Professor Mathew J. Owens research has had broad and critical impact on the fields of heliophysics research and space weather forecasting. He is a world leader in the application of meterological techniques in space weather, including forecast validation, diagnostics, data assimilation and cost/loss analysis.

In particular, Professor Owens is awarded the Chapman Medal for his pioneering development and application of his HUXt model to rapidly forecast space weather conditions at any planet in the solar system.

The predictions of the HUXt model often out-perform those made using more complex MHD models, and run much faster than equivalent magnetohydrodynamic models. The model has been widely adopted in the in the scientific community and in space weather operations, both nationally and internationally, demonstrating Professor Owen's impact on the field.

In addition to furthering space science and the exploitation of several NASA and ESA heliophysics missions, Professor Owen's work has considerable applications in protecting operational systems such as satellites, navigation and communication systems, power distribution grids, pipelines, and early-warning radars as well as in the health of astronauts and passengers and crew in high-altitude aircraft.

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