

Winton Award (A) 2021 - Dr Cassandra Hall

Full citation

Dr Cassandra Hall's research is focussed on the earliest stages of star and planet formation. In her PhD, Dr Hall used theoretical models and synthetic imaging techniques to identify observational signatures of gravitational instabilities in discs around young stars. Since completing her PhD in 2017, she has significantly extended her research, taking a broader view of planets and their formation, exploring disc-planet interactions and considering the observable signatures of young planets.

Dr Hall currently holds a tenure-track position as an assistant professor at the University of Georgia, USA, where she is building a new research group. Her current research combines state-of-the-art numerical hydrodynamics and detailed radiative transfer modelling with sophisticated synthetic observations, and is already yielding important new insights into the planet formation process.

Dr Hall's numerical models have played a leading role in the development of the science case to extend the functionality of the Square Kilometre Array (SKA) to allow it to place constraints on the distribution and morphology of the raw material for building planets. By connecting the theory of protoplanetary discs to observations, Dr Hall is building a distinctive research programme at the forefront of the quest to understand how planets form. For these reasons Dr Cassandra Hall is awarded the Winton Award.

Short citation

By connecting the theory of protoplanetary discs to observations, Dr Hall is building a distinctive research programme at the forefront of the quest to understand how planets form.