



Royal  
Astronomical  
Society

## **RAS Group Award (A) 2022**

### **The EAGLE (Evolution and Assembly of GaLaxies and their Environments) team**

EAGLE (Evolution and Assembly of GaLaxies and their Environments) is a suite of cosmological gas-dynamical simulations that follow the formation and evolution of over 10,000 galaxies in a representative volume of a  $\Lambda$ -CDM universe. EAGLE's flagship simulations were the first to yield a population of galaxies whose properties closely resemble those of real-world counterparts.

The impact of the simulations is demonstrated by the impressive citation rates of the reference papers (including the second most-highly cited MNRAS paper for the decade 2010–2019), and the large number of papers and spin-off projects that have made direct use of the results. Studies based on EAGLE data have explored areas including (but not limited to) the growth of galaxies, black holes, and cosmic large-scale structure; the origin of the Hubble sequence; the relationship between galaxies and the gaseous cosmos; predictions for gravitational-wave events; and both direct and indirect dark-matter detection experiments.

The project has also had notable impact outside academia. Visualisations of EAGLE results were featured in the IMAX feature film *Voyage of Time*, and at the UK's *Lumiere* festival in both 2015 and 2017 (~200,000 visitors). EAGLE was the centrepiece of the popular Galaxy Makers interactive exhibit at the 2016 Royal Society Summer Science Exhibition (~15,000 visitors), an adapted version of which, titled "Your place in the Universe", features in the 2021 online version of the Exhibition.

For these reasons, the EAGLE team is awarded the Group Achievement award in Astronomy.