



Royal
Astronomical
Society

Professor Douglas Heggie – Eddington Medal (A)

Professor Douglas Heggie is a world-renowned applied mathematician, who has made outstanding contributions to the field of dynamical astronomy over the past four decades.

Prof Heggie has conducted pioneering theoretical research on the topic of the classical gravitational N-body problem, with a particular focus on the three-body problem, and related applications to the dynamical evolution of globular star clusters and high-performance computing. The article in which he presented the theory of binary evolution in stellar dynamics -- often referred to as "Heggie's law" -- has found an outstanding spectrum of applications in many astrophysical domains.

Prof Heggie also set the foundational knowledge regarding the formation and evolution of tidal streams from small galactic satellites and pioneered the early investigations of the existence of planetary systems in dense stellar environments. These areas of study are instrumental for our growing understanding of the nature of dark matter and the habitability of exoplanets.

Prof Heggie has been an exceptional mentor to early-career scientists and has played a pivotal role in the establishment and development of his research field -- not only through his rigorous mathematical approach, but also by promoting a strong message of scientific collaboration, by advocating for the importance of scientific and personal diversity, and by embodying a spirit of decency towards others. Heggie's unique combination of extraordinary scientific achievement and attitude has made him universally admired.