

Mini Biographies

- ***Sebastian Eastham***: is a Senior Lecturer in Sustainable Aviation in the Department of Aeronautics, and a member of the Brahmaj Vasudevan Institute for Sustainable Aviation. His research is dedicated to understanding how the aerospace sector affects the environment, and identifying new ways to mitigate those impacts so that we can continue to enjoy the benefits of the sector without the environmental costs. This work can range from trying to understand how aircraft condensation trails (contrails) interact with natural cloud, to looking at the potential benefits of cleaner rocket fuels. Other areas of interest include local and regional air quality effects of aviation, aerospace-induced changes in the ozone layer, CO₂ and non-CO₂ climate impacts resulting from aerospace emissions, and investigating new ways to deploy aerospace assets so that we can more closely and accurately observe the environmental effects of the aerospace sector. Seb's work is mostly computational, relying on the development and application of computational models of Earth's atmosphere such as the GEOS-Chem global atmospheric chemistry transport model and the APCEMM aircraft plume physics model. However this is complemented by the use of observations from both Earth observation platforms (e.g. geostationary satellites) and aircraft measurement campaigns, and by the development and application of machine learning techniques to interpret those observations.