



**Kyle Gwartz** (Applied Mathematics) has won a prestigious NASA Earth System Science (ESS) Fellowship. Kyle's advisor is Assistant Professor Matthias Morzfeld (Mathematics).

A total of 424 applications were received in Earth Science, of which 54 were funded. Many of the previous recipients of the NASA Earth System Science Fellowship Program since 1990 have emerged as leaders in our community. Thus, being selected for an NESSF award is a real mark of distinction. The purpose of the NESSF is to ensure continued training of a highly qualified workforce in disciplines required to achieve NASA's scientific goals. Awards resulting from the competitive selection are made in the form of training grants to the respective universities and educational institutions, with the faculty advisor serving as the principal investigator.

The project title is "Reduced-Scale Modeling and Data Assimilation for Decadal-Scale Forecasts of the Geomagnetic Field". Data assimilation describes the mathematical, numerical and computational framework of combining numerical models with data and is used on a daily basis in numerical weather prediction. The project is the first of its kind to study in a systematic way what data assimilation techniques are most useful in Geomagnetism. To reach this goal, they will create new reduced order models of the Earth's magnetic field that can be used to test the various data assimilation algorithms.

[Full list of selected projects can be viewed here.](#)