

# **Abstract: Nucleation and growth of aerosols with the UK Unified Model, Y1**

The UK Unified Model is the official weather forecasting model both of the United Kingdom Met Office and of the US Air Force, and it is a climate model extensively used by the IPCC for future climate prediction. Aerosol-cloud interactions are responsible for the largest uncertainty in radiative forcing of climate. I have integrated a new interactive aerosol-cloud interaction microphysics scheme (specifically, I coupled double-moment aerosol with double-moment cloud microphysics) into the UK Unified Model and I have a project funded by NASA in the CMU Chemical Engineering Department to develop and evaluate aerosol formation in the model against NASA aircraft measurements. To that end I would like to try to install and run the Unified Model on Bridges, over Korea. This will be moderately challenging but once done the door will be open to further research by multiple institutes with the Unified Model on Bridges.