

Colin Wayne Gurganus

Graduate Institution: Michigan Technological University

Graduate Discipline: Atmospheric Physics

Hometown: Ypsilanti, MI

Relevant SC Research: Biological and Environmental Research



Research Interest:

My current research interests are in the field of cloud microphysics, particularly ice nucleation pathways. Additionally, I am interested in turbulent mixing problems and digital holography. Over the past four years I have built an experiment chamber to examine the roles of contact and immersion nucleation on a homogenous medium. In order to more accurately model the complex surface features of tropospheric aerosol particles we have begun to use lithographic techniques to apply uniform surface roughness to silicon wafers. The overall purpose of this research is to help improve short and long range climate and weather models, and

improve remote sensing retrievals. While my main focus involves mineral dust surrogates, I am also very interested in the role of organic compounds and structures in nucleation pathways.



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