

2021 CAMEE Student Research Spring Showcase

Date: Friday, March 5, 2021

Time: 9:00 – 11:00 a.m. CDT

Zoom: <https://utsa.zoom.us/j/97718264659>

I. Welcome from CAMEE

by Dr. Alberto Mestas-Nuñez, CAMEE PI

II. Welcome from the College of Sciences

by Dr. Jose Lopez-Ribot, Associate Dean for Research

III. Student Research Showcase Presentations

(see the following pages for student presentation listing)

IV. Final Adjudication by Judges

Dr. Daniel Pineda, Assistant Professor, Dept. of Mechanical Engineering

Dr. Harshad Vijay Kulkarni, Postdoctoral Fellow, Dept. of Geological Sciences

V. Closing Remarks

by Dr. Hongjie Xie, CAMEE Lead PI & Director

Acknowledgements

CAMEE would like to thank the College of Sciences and Dean Silva, the College of Engineering, the Office of the Vice-President for Research, and all members who serve and support the mission and goals of CAMEE. We would also like to thank all attendees whose participation contributes to the success of this event.



The material contained in this document is based upon work supported by a National Aeronautics and Space Administration (NASA) grant or cooperative agreement. Any opinions, findings, conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of NASA.

2021 CAMEE Student Research Spring Showcase Presentations (Undergraduates=5)

Presenter: Jaydne Blomfield (University of Texas at San Antonio)
CAMEE Research Advisor: Dr. Alberto Mestas-Nuñez
Research Title: *Sentinel-6 Michael Freilich Satellite Mission and SWOT Satellite Mission*

Presenter: Finn Burmeister-Morton (University of Texas at San Antonio)
CAMEE Research Advisor: Dr. Kiran Bhaganagar
Research Title: *Use of Multipurpose Data Science Toolkits for Experimental Data*

Presenter: Elizabeth Hebel (University of Colorado, Boulder)
CAMEE Research Advisor: Dr. Hongjie Xie
Research Title: *Evaluating Ice Production of Ross Ice Shelf and Terra Nova Bay Polynyas during 2019 using Sentinel-1 SAR Images and ICESat-2*

Presenter: Joshua Le (University of Texas at San Antonio)
CAMEE Research Advisor: Dr. Kiran Bhaganagar
Research Title: *Using Lidar for Mapping Terrain*

Presenter: Zach Riddle (University of Texas at San Antonio)
CAMEE Research Advisor: Dr. Kiran Bhaganagar
Research Title: *UTSA Mars Rover Team*

2021 CAMEE Student Research Spring Showcase Presentations (Graduates=13)

Presenter: Daniel Brun (University of Texas at San Antonio)
CAMEE Research Advisor: Dr. Kiran Bhaganagar
Research Title: *Use of UAV Multirotor for ABL Measurements and Plume Studies*

Presenter: Matt Garcia (University of Texas at San Antonio)
CAMEE Research Advisor: Dr. Christopher Combs
Research Title: *Experimental Diaphragm Design for the UTSA Mach 7 Ludwig Tube*

Presenter: Eugene Hoffman (University of Texas at San Antonio)
CAMEE Research Advisor: Dr. Christopher Combs
Research Title: *Modal Analysis of Shock-Wave/Boundary-Layer Interactions*

Presenter: Mansi Joshi (University of Texas at San Antonio)
CAMEE Research Advisor: Dr. Hongjie Xie
Research Title: *Estimation of supraglacial lake depth on Antarctica using ICESat-2*

Presenter: Young-Hyun Koo (University of Texas at San Antonio)
CAMEE Research Advisor: Dr. Hongjie Xie
Research Title: *Application of Google Earth Engine (GEE) for automated tracking of iceberg B43 in the Southern Ocean*

2021 CAMEE Student Research Spring Showcase Presentations (Graduate)-con't

Presenter: Elijah LaLonde (University of Texas at San Antonio)

CAMEE Research Advisor: Dr. Christopher Combs

Research Title: *Development of High-Speed Data Acquisition Triggering Systems for Hypersonic Wind Tunnel Applications*

Presenter: Karen Mendiondo (University of Texas at San Antonio)

CAMEE Research Advisor: Dr. Alberto Mestas-Nuñez

Research Title: *Processing Glider-based Ocean Velocity Observations*

Presenter: Thomas Nordstrand (University Texas at San Antonio)

CAMEE Research Advisor: Dr. Yongli Gao

Research Title: *Determination of Large Hailstone Growth Using Stable Isotope*

Presenter: Jesse Slaten (University of Texas at San Antonio)

CAMEE Research Advisor: Dr. Kiran Bhaganagar

Research Title: *Unsteady Entrainment in Thermally Buoyant Plumes*

Presenter: Christian Sustayta (University of Texas at San Antonio)

CAMEE Research Advisor: Dr. Alberto Mestas-Nuñez

Research Title: *Comparisons of Geostrophic Current Observations from Buoyancy Gliders and OSCAR Data*

Presenter: Thanh Tran (University of Texas at San Antonio)

CAMEE Research Advisor: Dr. Kiran Bhaganagar

Research Title: *The four-stage development of Turbulent Thermal Buoyant Stating Plumes*

Presenter: Elina Valkonen (University of Colorado, Boulder)

CAMEE Research Advisor: Dr. John Cassano

Research Title: *Arctic cyclones and their interactions with the declining sea ice*

Presenter: Jullian Williams (University of Texas at San Antonio)

CAMEE Research Advisor: Dr. Hongjie Xie

Research Title: *Sea ice lead detection in the Arctic ocean*