

**Subject:** Monday Matters: Innovative Research Award Winners

**Date:** Monday, April 4, 2022 at 8:00:03 AM Eastern Daylight Time

**From:** Dodge, Gail

**To:** Dodge, Gail

**CC:** Harvey, Rodger, Whitfield, Tiffany L.

Dear Colleagues:

Every day faculty make strides in pursuing original research and creating knowledge. Faculty scholarship drives this process, and investment in new ideas is where the College tries to catalyze progress. I'm pleased to announce the recipients of two COS awards that encourage faculty research and innovations.

The first is the Cheng Fund for Innovative Research, which was created through a generous endowment from Dr. Richard Cheng. Its purpose is to provide support for faculty to conduct original and innovative research which might lead to future federal funding. **The 2022-2023 award will go to Dr. Xiang Xu from the Department of Mathematics and Statistics** for his proposed work on liquid crystals (*Mathematical study of a singular potential in the Q-tensor theory modeling liquid crystals*). Dr. Xu's award supports a complement of graduate and undergraduate students and will use mathematical simulations to better understand the physics of liquid crystals, which continue to revolutionize advances in engineering for future applications, both scientific and practical.

The second award in the college is new and provides seed funding for research in data science, a growing discipline at ODU and elsewhere. This award encourages collaborative interactions of faculty across departments to apply data science and analytics to research problems. Faculty were asked to develop a team that paired someone well versed in data science tools with someone who has an application that might benefit from those techniques to address an important research problem. Among many excellent proposals, **the team of Drs. Sophie Clayton (Ocean and Earth Sciences) and Lucia Tabacu (Mathematics & Statistics) was chosen to receive this award** for their proposed work to develop approaches to predict the onset of harmful algal blooms (*"Using diel patterns in chlorophyll to predict the onset of harmful algal blooms in the lower Chesapeake Bay: a data-driven approach"*). Taking advantage of a large database of field data collected for over a decade, the team will use functional data analysis and other techniques to identify the characteristic signals that a harmful algal bloom (HAB) might produce before it becomes an environmental concern. This project also has important links to the College educational goals with support of undergraduate interns as part of the research plan.

These are but two examples of the innovative research going on every day in the college of sciences.

Please join me in congratulating Xiang Xu, Sophie Clayton, and Lucia Tabacu!!

Best Regards,  
Gail

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