

Technology is changing how we look at the world. All areas have been affected- science, liberal arts, humanities, the health professions, communications, business and the fine arts have all experienced significant technology induced change. These changes are blurring and erasing traditional disciplinary boundaries and creating new interdisciplinary areas of study. Work in these emerging areas requires interdisciplinary teams that bring very different skill sets to the same problem. However, interdisciplinary collaboration is filled with difficulties, especially in its early stages. Finding the right people and the right external support structure is often much harder when one moves outside of the traditional disciplinary boundaries. To that end, the SET will support teams of interdisciplinary faculty in the early phases of collaborative projects. Three kinds of projects are of particular interest:

Projects that facilitate interdisciplinary research and creative collaborations that focus on the study and application of emerging and emergent technologies in addressing public, social and individual needs, including quality-of-life enhancements.

Projects that offer innovative and transformative theoretical perspectives toward understanding societal, ethical, and potentially beneficial implications of emerging and emergent technology

Projects that foster the development of new innovative, interdisciplinary courses and degree and non-degree programs in fields involving emerging technologies. These projects could address the anticipated technical workforce needs of the region and/or integrate the study of social/cultural, environmental and ethical issues as well as specific technologies.

The purpose of this funding is to support faculty at the very first stages of a collaborative effort and/or faculty with nascent collaborations that are ready to grow into a larger effort. The seed money is meant to enable these collaborations to blossom into larger, self-sustaining projects capable of competing for external support. Such collaborations could be both internal and external.

Projects should be in the area of emerging technologies. We take an expansive view of emerging technologies, and the Appendix contains both a list of previously funded projects as well as an illustrative list of promising project areas.

A key area of interdisciplinary research is being solicited sustainability. Sustainability – what does it mean? How can it be achieved? Sustainability is a critical topic in the current global socio-economic and environmental situation. Sustainability lends itself very easily to interdisciplinary investigations. For

- i. It should clearly explain how the project will continue beyond the initially supported period, including a plan describing how the project will become self-supported through external funding.
- i. All proposals must be supported by references to appropriate peer reviewed literature (this is not included in the 8 pages).
- a. This should describe how the funds will be used and provide appropriate justification. If equipment or supplies are to be purchased, then the narrative should provide an itemized list.
- b. If the project is receiving funding from another source, or if the proposers are applying for funding from another source, then the proposal should provide complete details. This should include the total project budget, the component to be provided by the SET, and a justification why the contribution from SET is essential to the project's success.
- c. In addition to the budget narrative included in the [Project Proposal](#) (.docx), the application should provide the budget using the [budget template](#) (.xlsx) available on the SET [website](#).
- a. Curriculum Vitae for each faculty member or external principal on the project. Faculty should include their history of external grant proposals.
- a. Proposers should provide names and contact information for five potential reviewers for their proposal. These reviewers can be internal or external. These should ideally be an academic with relevant qualifications and expertise and should be free of potential conflicts of interest. If the context project demands it, the investigators can suggest Industrial experts who have no conflicts of interest. Proposed reviewers cannot have collaborated with the personnel on the proposed project within the past three years on a paper or a grant proposal. Proposed reviewers cannot have served as an advisor or a student of any of the personnel on the proposal.

The project proposal should be submitted using the form provided on the SET [website](#).

The SET Director and the SET Faculty Advisory Committee will select two anonymous reviewers for each proposal. These reviewers will be content experts in the area of the proposal. The reviewers may be faculty from Towson, faculty from other institutions, or experts from industry or government. Reviewers will be free from potential conflicts of interest. No one will be selected as a reviewer who has collaborated with the personnel on the proposed project within the past three years on a paper or a grant proposal. Reviewers will not have served as an advisor or a student of any of the personnel on the proposal.

Reviewers will be asked to evaluate the proposal on each of the following criteria:

Are the proposed activities interdisciplinary and related to emerging technologies?

What is the intellectual merit of the proposed activities?

What is the broader impact of the proposed activities?

Is the budget appropriate for the project and does it make the best use of available resources?
What is the potential for the proposed activities to become self-supported through external funding?

There is also an expectation that the intellectual merit of proposals designed to improve teaching includes

Developing an Interdisciplinary Immersive Fulldome Media Lab, Lynn Tomlinson (Electronic Media and Film), Christian Ready (Physics, Astronomy and Geosciences), 2022-2024.

TU Performance Analytics Camp, Stella Tomasi (Business Analytics and Technology Management), Justin Lima (Football Athletics), Lisa Custer (Kinesiology), 2021-2022.

DSSAC: The Data Science and Sports Analytics Camp, Mahnaz (Kim) Moallem (Educational Technology & Literacy), 2021-2022.

Science of Solitude, Amanda Jozkowski (Occupational Therapy and Occupational Science), 2021-2022.

Weight Loss Program for Adults with Low Vision, Gerald Jerome (Kinesiology), Adam Conover (Computer and Information Sciences), 2021-2022.

Redesigning the US Consumer Recycle Experience, Kim Hopkins (Art + Design, Art History, Art Education), Sungchul Hong (Computer and Information Sciences), 2021-2022.

Photonic Hypercrystal in the Visible Frequency Range, V. Smolyaninova (Physics, Astronomy and Geosciences), M. Davadas, Ellen Hondrogiannis (Chemistry), 2020-2022.

Muscle Oxygen Consumption, Physical Function and Health Related Quality of Life in Older Adults, Rian Landers-Ramos (Kinesiology), Hyunjeong Park (Nursing), 2020-2021.

Influence of auditory and visual attention on higher order cognition, Laura Hicken (Music), Jared McGinley, Blaire Weidler (Psychology), 2020-2022.

Digital Stoops Along Networked Streets: Youth, Community Technology and the future in Baltimore, Samuel Collins, Matthew Durlington (Sociology, Anthropology and Criminal Justice), Suranjan Chakraborty (Computer and Information Sciences), Jennifer Ballengee (English), 2020-2021.

Developing Makerspace Activities to Help Improve Preservice Teachers' Technology Integration Competency, Liyan Song, Suzanne Obenshain (Educational Technology and Literacy) Doug Elmendorf (Baltimore County Public School System), 2019-2020.

Career effects of health shocks during the Great Recession, Juergen Jung (Economics), 2019-2020.

Critical GIS for Social and Environmental Justice, Nicole Fabricant (Sociology, Anthropology and Criminal Justice), Paporn Thebpanya (Geography and Environmental Planning), 2019-2020.

Expert Elementary teachers' small group discussion strategies in post-investigation science and post-testing engineering discussions with Avatars, Pamela Lottero-Perdue (Physics, Astronomy, Geoscience), Laila Richman (Special Education), 2018-2020.

efficient and effective software applications may be developed for different industries. Furthermore, the adoption of RFID technology is currently limited to high-value items, so research into lowering the unit cost through RFID chip development or software solutions could be revolutionary.

Technologies for Sustainability: technology can play a vital role in both understanding and

