

The Sustainable Manufacturing and Advanced Robotics Technology Community of Excellence (SMART CoE) is launching a new program, **SMART Start**, to support interdisciplinary collaboration. The mission of SMART is to research and develop the next generation of technologies, products, processes and expertise for achieving global leadership in economic and ecological sustainability for design and manufacturing across scales of time, size, and complexity. The SMART Start program is focused on funding innovative, interdisciplinary projects with community-related themes.

This year's SMART Start theme is the *Human-Technology Frontier*. This includes how artificial intelligence, rapid prototyping, and materials design are transforming the relationship between people and technology, whether in creating innovative partnerships between robots and people, creating customized materials, and generating insight into complex system outcomes. White papers in this broad area of interest are welcome.

Program Overview

- Projects must make use of SMART equipment and/or facilities (e.g., Motion Lab - Vicon motion tracking system; Automation Sandbox – UR3 robot arm, Baxster robot, pneumatic controls, conveyors, and vision system; Fabrication Factory – OMAX water jet cutter, laser cutter, and kiln)
- Projects with industrial partners and/or those leading to large scale proposals will receive higher priority.
- Phase I: Teams can initially request funding up to \$25,000 from SMART. Phase I requests are due by **5pm, May 7, 2018**.
- Phase II: Additional funding can be requested by those selected in Phase I or funded in earlier SMART Exploratory project calls. Phase II requests (including receipt of industrial contribution, if applicable) are due by **5pm, September 28, 2018**.
 - Projects with an industrial partner that contributes resources can request additional funds to match (1:1) the cash component of the contribution (up to \$25,000).
 - Projects with no industry involvement can request up to an additional \$25,000 to cover some of the costs of grant preparation for large scale proposals. The amount provided will be commensurate with the size and scope of the proposal. The funds can be used to support any aspect of the proposal development phase (but not to replicate the support provided by the Office of Research Advancement). Funds will be disbursed after a letter of intent is submitted and/or full details of the proposal are provided (i.e., copy of the RFP, proposal due date, PI team, partnering institutions, size of the proposal, budget).

Considerations

- The SMART Start is open to teams of scholars in all disciplines. Teams shall include at least 3 investigators, one of whom can be from industry.
- The funds cannot be used for extending existing, externally funded projects, or for projects with sufficient preliminary results for funding by external agencies (e.g., NIH, NSF).
- Teams requesting Phase II funds to support large proposal development should submit their external proposal through SPS within 12 months of funding disbursement.
- The review of the white papers will be streamlined by ad hoc panels of faculty who will make a recommendation to the Director of SMART, who will then make the final recommendation to the OVPRED.
- Any questions can be sent to smart-coe@buffalo.edu.
- All white papers must be submitted via email as a single PDF by **5pm, May 7, 2018** to smart-coe@buffalo.edu.

Submission Requirements

Submissions (single spaced using 12 point font and 1-inch margins) shall include:

- 1) **3-page white paper** (maximum) plus references describing the topic of interest, intellectual contributions, and relevance to SMART themes. The paper must include sufficient detail to convince reviewers of the project's merit, and written in language understandable to non-specialists. The white paper should stress the merit of the project and potential impact, including the following:
 - a) A clear research question that defines the purpose of the project and background/rationale that addresses the significance and relationship to the theme of the Human-Technology Frontier.
 - b) Describe the research/scholarly methods that will be used to conduct the project and how SMART equipment and/or facilities are expected to be used in the execution of the project.
 - c) If the project includes industrial partners and/or is expected to lead to large scale proposals, provide a description of the plan for collaboration and envisioned outcomes for the project.
 - d) If there is an intention to submit a Phase II request, include a brief description of the intended outcomes. Phase II will be a separate process, but this is an opportunity to convey the intent of the longer term effort.
 - e) Include a brief line item budget and justification including a description of other resources or cost-sharing that will be applied to the project. The budget justification is important since budget reasonableness will be considered.
- 2) **Key Personnel:** Attach a 2-page biographical sketch/vitae summary for each investigator participating in the project