Multiple $50,000 Seed Grants – College of Engineering Cross-cutting Initiative

Stage 1 proposals due: October 1, 2018 (one-page max), $5,000; identifies possible nucleus team, and focal area of research. Intent to complete application is implied. Funds transferred to originator’s IRAD account (or split as desired); in support of travel, logistics, etc.

Stage 2 proposals due: November 1, 2018 (up to 5 pages, elaborates on plan, includes budget justification, the team, their qualifications and track record for pursuing and receiving funding (past funding not required, but relevant). This document refines the focal area and identifies intended funding targets. Include a section that explains how your project is transdisciplinary. Up to $45,000 available; your budget can be intermediate or full level (which does not affect funding likelihood). The intent in this call is to create an incentive for new connections, for example with scientists/engineers who you have not extensively collaborated with already. If you have already collaborated with a proposed team member, explicitly state how this effort is different or new. Please include an appendix (can go beyond 5 pages) that delineates your funding track record (grants received) and that of your collaborators.

Formatting for this appendix section should please include title of grant, funding level received, funding source, amount of funds, and co-collaborators on the grant. This section must also include prior track record of seed grants from Michigan Tech (for example, REF), if any, and subsequent grants obtained as a result of the investment, as appropriate.

**Purpose:** To provide seed funding to tackle a research problem that requires an interdisciplinary team to address, and to foster new connections between and across faculty members, both within Michigan Tech and beyond.

**Aim:** To promote new collaborations between researchers with a focus on transdisciplinary initiatives that are aggressively forward-looking. Where is your field going, and how can you position yourselves with seed funding so as to be ready for current and future major federal RFPs? Within the surety of being in the Fourth Industrial Revolution (think digital, and for reference refer to Klaus Schwab’s book, The Fourth Industrial Revolution), how can you align your research strengths within the fourth industrial revolution, with forward-looking transdisciplinarity, collaborative thrusts, using these seed funds?

**Motivation:** Increasingly, federal agencies such as NSF, NIH, etc. are funding research that involves experts from multiple disciplines to solve complex problems. The reason for this is that “The grand challenges of today – protecting human health; understanding the food, energy, water nexus; exploring the universe at all scales –will not be solved by one discipline alone. They require convergence: the merging of ideas, approaches and technologies from widely diverse fields of knowledge to stimulate innovation and discovery.” [https://www.nsf.gov/news/special_reports/big_ideas/index.jsp]

**Required:** A team of individuals (3 or more) who commit to working together to develop at least one full proposal submission within 18 months (by 5/1/2020). These team members may be at Michigan Tech, across the nation and across the world. Including a social scientist enhances an NSF submission.

Stage 1 funding may be used for needed travel or meetings (e.g. to meet in person – you might invite a collaborator here to give a talk, meet with your research group, etc.). Funding may not be used for summer salary. Funding may be used in support of a graduate student or other needed staff to develop preliminary data.
Stage 1: $5,000 for a one-page short proposal identifying the potential nucleus team (which may not have yet agreed to the proposition), and outlining the plan for developing the stage 2 proposal. How is this team new, cross-cutting, transdisciplinary, etc.?

Stage 2: Up to $45,000 in support of preliminary research associated with the project (to show proof of concept, support students, preliminary data, needed travel, etc.) Funding period “ends” Nov. 15, 2019.

Final Report is required, due May. 15, 2020. This report will consist of a short one-page summary of your activity, and an official copy of the grant or grants you submitted, via email to Associate Dean Leonard Bohmann, ljbohman@mtu.edu

How do I submit? Email your stage 1 proposal with the subject heading: Stage 1 (or 2) Seed Grant SHORTNAME to Associate Dean Leonard Bohmann, ljbohman@mtu.edu

FAQ:

1. Does the team have to include someone from the college of engineering? Yes
2. If my team involves external people, does the grant we submit have to be submitted through Michigan Tech? Yes, as the aim is to foster Michigan Tech research! At least a significant portion of the grant should come to Michigan Tech.
3. I am a research professor, can I apply? Yes.
4. I am a senior faculty, can I apply? Yes.
5. I am an assistant professor, can I apply? Yes.
6. How is the selection made? A panel of researchers from at least five research-active departments at the university, including departments external to the college of engineering, will review the proposals and recommend final selections.
7. How many total seed grants will be awarded? Between 2 and 5, depending on the quality of submissions.
8. Do I have to submit a Stage 1 proposal in order to be eligible for a Stage 2 award? No.
9. Will all Stage 1 awards be awarded Stage 2 awards? We envision picking about six stage 1 awards, and then awarding between 2 and 5 Stage 2 awards, depending on the quality of the Stage 2 submissions.
10. Any other questions? Please address any other questions to Associate Dean Leonard Bohmann, ljbohman@mtu.edu.