REQUEST FOR PROPOSALS (ver. 231208)

Michigan Tech Manufacturing Grants ROUND 3

Mission: Develop and strengthen the materials processing and manufacturing capabilities at Michigan Tech to meet **next-generation research opportunities**.

Strategy: Provide **materials and manufacturing grants** to assist university researchers in demonstrating unique and enabling capabilities related to advanced materials and manufacturing

Description: The Advanced Materials and Manufacturing Tech Forward initiative **seeks proposals** from university researchers that will advance its mission. Proposals from faculty and/or staff with relevant interests and expertise across all university units are welcomed and encouraged.

All manufacturing-relevant topics are welcomed. The initiative has particular interest in developing capabilities in the following contemporary and emerging areas:

- Manufacturing for a circular economy, i.e., eco- or sustainable manufacturing
- Data-driven manufacturing and materials synthesis
- Future manufacturing technologies as defined by a recent solicitation by the National Science Foundation (https://www.nsf.gov/attachments/304116/public/future-manufacturing-2022-webinar-slides-508.pdf)
- Cyber manufacturing (manufacturing enhanced by the advanced application of computing, networking, sensing, and/or artificial intelligence)
- Manufacturing process controls derived from massive data streams
- Biomanufacturing (bio-inspired fabrication/manufacturing)
- Any new capabilities or facilities that are available to university researchers

Of less interest would be proposals that are substantially

- Supplies, maintenance, repair, or incremental improvements of existing facilities that do not significantly extend nominal research capabilities
- Undergraduate project support that does not lead to a strong and significant faculty research proposal
- Projects that are primarily data collection that do not extend current knowledge or discovery
- Project budgets that contain summer salary

Proposal Information, preparation, and formatting: **Seed grants** will be funded at a ≈ **$10K level** for up to a 6-mo. period of performance and are intended to provide proof-of-concept, incremental or partial capability improvements that can be shown to be enhance competitiveness for follow-on external funding. **Capability enhancement grants** will be funded at a level up to ≈ **$50K** with a 1-year period of performance and are intended to provide extended benefits in terms of establishing unique capabilities that can be accessed by multiple investigators for present and future grant opportunities.

Both proposal types should be limited to 2 pages in length. Proposals should contain a summary description of the project, a discussion of the return-on-investment opportunities in service to the mission (above), and a brief description of budget items. Proposals that explicitly and convincingly describe specific return-on-investment opportunities in the form of external follow-on funding involving several investigators and units will be favorably reviewed.

Proposals are due **COB 1/12/2024**; email to iamm@mtu.edu. Deliverables will be negotiated with the AMMTF WG during the final project discussion.

For more information, contact Steve Kampe, MSE: kampe@mtu.edu or other members of the IAMM working group:

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