Carnegie Mellon University

Enabled by a grant from the R.K. Mellon Foundation
MFI Request for Proposals (RFP) Information Session

Agenda

• Introductions (5 min – 3:00-3:05 pm)

• 2019 MFI RFP Overview (10 min – 3:05–3:15 pm)

• Q&A (45 min – 3:15-4:00 pm)

April 17, 2019
MFI Leadership

Gary Fedder
Faculty Director, MFI
Howard M. Wilkoff Professor, Electrical and Computer Engineering
Courtesy Faculty in Biomedical Engineering, Mechanical Engineering and The Robotics Institute

Sandra DeVincent Wolf
Executive Director, MFI
Executive Director, NextManufacturing Center
Director of Research Partnerships, College of Engineering
Manufacturing Futures Forum

Monday April 29

8:30 am – 6:00 pm
President’s welcome
Keynote – Ray Betler, Wabtec
Three panels: Additive Manufacturing, AI & Robotics, Workforce for Manufacturing
Reception and Research Showcase

Sunday April 28

4 pm – 6:30 pm Tour and reception at Mill19

Please contact Kelly McQuoid if interested in attending!
MFI - Catalyzing the convergence of R&D in manufacturing technologies, machine intelligence and human values

**Machine Intelligence**
- AI
- IloT
- Augmented Reality
- Cybersecurity
- Cloud Computing
- Big Data Analytics
- Virtual Modeling

**Manufacturing Technologies**
- Design
- Robotics
- Additive Manufacturing
- Materials
- Micro/Nanofabrication

**Human Intelligence**
- Learning Science
- Polic
- Ethics

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MFI Goals

• Sustain academic leadership and excellence
  • Thought leadership in the future of manufacturing
  • Generate high impact research results with national visibility
• Blaze paths to attract substantial new federal funding
  • Nurture convergent research teams and foster new thrusts
  • Raise awareness of expertise and opportunities
• Scale and broaden our impact
  • Expand hands-on partnerships with industry and workforce development organizations
  • Scale R&D at the new Mill19 advanced manufacturing facility
  • Accelerate translation of R&D to energize regional activity
MFI RFP - Program Details

MFI plans to fund up to 10 projects with a combined budget of up to $2.0M for 1 year Proposals due Friday, June 7, 2019

Proposal evaluation criteria:

- Innovative objective that integrates multiple MFI thrust areas and indication of expected outcomes
- Teaming across different disciplines (cross-college and/or interdepartmental)
- Quality and fit of the expertise of the team to the project
- Prospects of winning subsequent externally sponsored awards from the federal government, industry or elsewhere
- Regional impact (e.g. as measured in terms of connectivity to regional industry and/or potential for startup generation)
- Potential to impact future activities at the Mill 19 at Hazelwood Green facilities
- Budget reasonableness (e.g. can the proposed work and outcomes be accomplished within the budget?)

Any proposal that fits the MFI mission is encouraged and welcomed.
MFI RFP – Examples of Convergence of Disciplines

Robotics to advance additive manufacturing integration in production environments

Artificial intelligence and machine learning applied to advanced manufacturing

Science of learning, augmented reality, and other areas accelerating workforce skill development

Internet-of-things-informed virtual modeling of advanced manufacturing workcells and/or workflows

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MFI RFP - Application Overview

• Brief Proposal
  – 3 pages, 1 inch margins, 11 pt Times New Roman font, single spaced, 4th page for Budget

• Follow Proposal Template – blank Proposal template was provided
  – Sections: Project Summary, Expected Outcomes, Impact, Leverage, Mill 19 at Hazelwood Green, & Expertise

• Use the Budget Template – blank template was provided

• Application must be submitted via MFI website using the jotform. Proposals due Friday, June 7, 2019

• Awards are expected to be announced Friday July 19, 2019

Note: Proposals for a next phase of existing MFI-funded projects must place the project narrative in the context of the current project effort, distinguishing between the current effort and the proposed new effort.
Proposal Development

- Nine weeks allocated for proposal formation
  - April 5 – June 7
- No “black out” period: We are here to help with partnering and connectivity
  - Internal teaming
  - Industry connectivity
  - Ideas related to Mill19
Mill19 @ Hazelwood Green

Revolutionizing manufacturing with a unique and powerful innovation ecosystem

Open June 2019
58,000 sf facility
Co-location:
  • Carnegie Mellon
  • ARM Institute
  • Catalyst Connection (MEP)
  • Embedded industry partners
Mill19 Advanced Manufacturing Facility

• Execute ARM & industry sponsored projects
• Collaborate on federally sponsored R&D
• De-risk technology through maturation
• Integrate and transfer technologies with partners
• Consign equipment for shared workcells
• Embed personnel on site
• Develop and execute workforce training
• Recruit students
• Leverage infrastructure and personnel
Thank you!

Questions?