The CMI Faculty‐Industry Applied Research Opportunities Program



FOR INTERNAL USE:



BACKGROUND: ANNUALLY, THE NEW YORK STATE CENTER OF EXCELLENCE IN MATERIALS INFORMATICS (CMI) SUPPORTS INDUSTRY‐FOCUSED RESEARCH PROJECTS THROUGH ITS CMI FACULTY‐INDUSTRY APPLIED RESEARCH OPPORTUNITIES (“FIAR”) PROGRAM. THE FIAR PROGRAM FOCUSES ON OPPORTUNITIES FOR APPLIED RESEARCH THAT HAVE COMMERCIAL VALUE TO BUSINESSES IN NEW YORK STATE.

# The Process:

Faculty share their “intent to apply” via [this link](https://www.buffalo.edu/partnerships/about/contact/cmi.html). The intent to apply should be received by April 29, 2022. Invited full proposals are due by May 20, 2022. Awards will be made by June 24, 2022.

The performance period will be from July 1, 2022 ‐ June 30, 2023. Awards can range from

$25K to $50K. In the past, the competitive process has yielded up to 40 proposals, with 4‐7 projects being awarded per year over the past five years. For this current period, up to 7 awards are anticipated.

Preference will be given to applications that demonstrate a collaboration with a New York State company that has shown substantial commitment to the proposed project. While there is no formal cost‐share requirement for this support, evidence of commitment from the company (e.g. current, recent, or promised financial support of the work; in‐kind commitment of resources) will weigh heavily in the decision process.

This year we will also begin to emphasize areas of key societal, economic, and technological interest to UB and New York State. Accordingly, we will look kindly on projects in the following topic areas:

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| **Energy** | Clean energy, generation, harvesting, storage (electrical, thermal, kinetic), delivery |
| **Environment** | Recycling polymers, rare earth, critical materials, electronics, water/waste purification, waste-to-energy, radiant cooling |
| **Wireless Technology** | 5G and 6G |
| **Sensors** | Wireless, printed, medical, IoT, IIOT, wearables, flexible electronics |
| **Semiconductors and related** | 2D, quantum materials, optoelectronics… |

The CMI reports annually using New York State economic development metrics. Industry partners are required to contribute to our economic reporting to New York State. The focus of this program is on materials informatics – the use of data driven methods to enhance decision‐ making on materials development, utilization, processing and recycling.

UB and the CMI are committed to the principles of diversity, equity and inclusion and deem these as central to the programs, projects, and activities it considers and supports. Our mission calls for the broadening of opportunities and expanding participation of groups that are underrepresented in STEM disciplines, which is essential to the health and vitality of science and engineering. In alignment with UB’s Diversity, Equity and Inclusion initiatives, a diverse team will be beneficial to a proposal’s strength.

**The Proposal**: A brief (~2‐3 page) summary outlining the justification for CMI contribution to a faculty investigator’s industry collaboration opportunity. All proposals must include:

1. **Summary:** Summarize, in layman’s terms, how the project is impactful/innovative/interesting to the commercial interests of companies, manufacturing, or industries in New York State in solving materials and related data analytics challenges and including the effort’s specific aims, duration and milestones.
2. **Relevance to Materials Informatics:** A statement showing the specific relevance of the work to materials informatics (broadly defined).
3. **Relevance to Economic Impact:** A demonstration of its relevance of the work to economic development (ex. the expected or potential commercial value to the company or industry, the potential for creating jobs in WNY).
4. **Budget:** A preliminary budget (up to $50k) – note that there is a 15% IDC charge on Salary and Fringe; please take this into account when developing the budget. Questions and a preliminary review of budgets (IDC charge on salary and fringe) should be directed to Kathryn Helfer at [kehelfer@buffalo.edu](mailto:kehelfer@buffalo.edu) or 716‐881‐8938.
5. **Intellectual Property: L**ist any relevant intellectual property considerations. State here if the faculty investigator has previously submitted a New Technology Disclosure concerning an invention that will be used during the project. Likewise, state here if the faculty investigator will be using intellectual property owned by the partner company. Also indicate if it is likely or unlikely for new IP to be generated as part of the project.
6. **Industry Partner Support:** A letter of interest or support from the industry partner detailing its commitments to the Project, if awarded, including the amount of any financial commitment from the industry partner. For all funded projects, the industry partner will be required to report any economic impact (jobs, investment, etc.) that might be attributed to the FIAR project on an annual basis for a five (5) year period. The economic impact statements are considered public domain information. The letter should confirm the company’s acceptance of this provision.
7. **DEI Alignment:** Describe how you, your team, the industry partner and the proposal effort will align with UB’s and the CMI’s commitment to the principles of diversity, equity and inclusion. Our mission calls for the broadening of opportunities and expanding participation of groups that are underrepresented in STEM disciplines, which is essential to the health and vitality of science and engineering.

# Criteria Include:

1. How impactful/innovative/interesting is the science/technology to the commercial interests of the industry partner and or the relevant manufacturing domain? (Technology Novelty)
2. What is the level of involvement/engagement/commitment of the industry partner, including the ability of the company to generate economic impact? (Company Involvement – including financial)
3. What is the potential impact of the award on the advancement of the technology? (Funding Impact – NYS)
4. How closely does the proposed work align with the theme of materials informatics? (Relevance to CMI – Informatics)

Other considerations include:

1. Intellectual property – status, considerations for patent/royalties, potential challenges
2. Is the industry partner operating in NYS?
3. Relative impact of the funding on the industry partner’s business goals
4. Potential for attraction of the industry partner to NYS

We are here to help and appreciate your consideration.

Kind regards,

Chris Janson

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