

For Internal Use

The Center of Excellence in Materials Informatics (CMI) annually supports Faculty-Industry Applied Research (FIAR) opportunities. The FIAR Program focuses on opportunities to foster applied research efforts that drive economic growth and impact with commercial value to manufacturing businesses in New York State.

The Process: Submit a **Letter of Intent (LOI)** via this [link](#). The LOI is due on or before COB March 1, 2023. After review (to be completed by the CMI no later than COB March 6, 2023), the CMI will invite faculty-company teams to submit their Full Proposal. Full Proposals are due on or before March 24, 2023.

CMI FIAR Awards will be announced by April 7, 2023. UB Technology Transfer will prepare CMI FIAR agreements by May 8, 2023. The FIAR agreements must be executed by the company partner in a timely manner and returned to UB Technology Transfer. Failure to or delays in signing the agreement will result in the award being rescinded. The CMI will host FIAR Project Kick-off meetings to be completed by mid-June.

The target date for setting up project accounts is by July 1, 2023. The performance period will be from July 1, 2023 - June 30, 2024. Awards can range from \$25K to \$50K. Typically, the CMI receives approximately 20 proposals. The CMI expects to award up to 6 proposals in this period. The number and amounts are contingent on several factors such as, for example, the availability of funds from NYSTAR, the CMI’s funding agency.

Preference will be given to applications that tangibly demonstrate a strong economic collaboration with a New York State manufacturing company that has substantial commitment to the proposed project outcome in terms of translating the engagement results into commercial practice (new products, processes, product improvements, new materials, new manufacturing methods, and so forth). 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 factor in the decision process.

Focus Areas: The CMI’s mission emphasizes impact in areas of key societal, economic, and technological interest to UB and New York State. Accordingly, projects in the following areas are favorable, but not exclusive:

Energy	Clean energy, generation, harvesting, storage, grid, delivery, transmission
Environment	Recycling polymers, rare earths, water/waste purification, waste-to-energy
Wireless Technology	5G, 6G, RFID, CBRS, IoT, IIoT
Sensors	Printed, medical, IoT, IIOT, wearables, flexible electronics, quantum
Semiconductors & related	2D, quantum, optoelectronics, power electronics, transistor technologies

Proposal: Provide a summary (up to 3 pages, Calibri or Times Roman, 11 pt.) that outlines the faculty-industry collaboration. The proposal must include each of the following nine sections, as listed:

1. **Proposal Team:**

- a. **Principal Investigator(s)** – name, department, phone, email, link to UB profile page
- b. **Company** – primary point of contact, name, address, phone, email
- c. **Company** - legal signatory (for executing the FIAR agreement), name, address, phone, email

2. **Objective Statement:** Using non-scientific, layman’s terms, succinctly summarize the project objective(s) in 1-3 sentences.

3. **Summary:** Summarize the details related to how the project is impactful, innovative and related to the commercial interests of the specific company partner, and the broader sector of manufacturing industries in New York State in terms of solving materials, process, product and related data analytics challenges. Why? Who? What? When? How?

The summary should include the proposal’s specific tasks as milestones (Milestone 1, 2, 3, etc. and provide dates or periods over which each will be accomplished - such as Months 1-4, or by October 31, a Gantt chart would be helpful, for example), and the intended results (what, when, who) to be accomplished by each Milestone.

4. **Relevance to Materials Informatics:** A statement showing the specific relevance of the project to materials informatics (broadly defined). Include any reference to the use of UB CCR High Performance Computing Center resources or other related resources.

5. **Relevance to Economic Impact:** Describe the relevance of the project to economic development (ex. the expected or potential commercial value to the company partner, the potential for creating jobs in New York State, increasing sales revenue, enabling the company partner to break into a new market, securing new funding or investment, and so forth). It is important that the company partner participate in describing the prospective economic impact to their company in this section and in their letter of support.

6. **Intellectual Property:** List any relevant intellectual property (IP) considerations. State here if the faculty investigator intends to use a previously developed technology during the course of the project. If so, please list the New Technology Disclosure or patent information. Likewise, state if the project requires use of intellectual property owned by the partner company or a third party. Also indicate if it is likely, possible, or unlikely that new IP will be generated as part of the project.

7. **DEI Alignment:** 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. The CMI’s 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.

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.

8. **Budget:** Provide a standard, preliminary budget (up to \$50k) that will be the basis for a full SPS approved budget, if awarded. 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 Kim Kohl @ 716.645.8135, krohring@buffalo.edu . An official, SPS approved budget will be required if awarded.

9. **Industry Partner Support:** A separate, signed, PDF letter of commitment on company letterhead from the industry partner is required detailing the company’s commitments to the project, if awarded, including the amount of any financial commitment from the industry partner.

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

The industry partner will be required to agree to the terms of the UB CMI FIAR agreement that includes their obligation to report economic impact (jobs, investment, etc.) that can be attributed to the FIAR project on an annual basis via an on-line survey portal for a period of five (5) years. Note that the economic impact statements that the company will be asked to provide are considered public domain information. The letter should confirm the company’s acceptance of this provision.

Scoring Criteria (0 – 5):					
Company Alignment	Company Involvement	Technology Novelty	Potential Impact to NYS	Relevance to Materials and Informatics	DEI Alignment
Does the technology, project, outcome align with the company’s core technology, mission, industry?	What is the company’s level of involvement, engagement, commitment, including the ability of the company to realize and demonstrate economic impact in New York State?	How impactful, innovative, interesting is the research area and technology to the commercial interests of the company and the relevant manufacturing domain?	What is the potential economic impact of the award on the advancement of the technology, from a commercialization perspective?	How closely does the applied research align with the theme of materials informatics?	Does the proposal clearly indicate alignment with UB and the CMI’s DEI initiatives from the faculty, student and company’s perspectives?

Proposals will not be funded that:

- a. Do not have manufacturing operations in NYS;
- b. Exhibit an excessive delay in the execution of the UB CMI FIAR agreement;
- c. May result in significant, major issues related to any intellectual property or agreement to participate in the annual survey obligation that may preclude an effective project outcome or long-term win-win relationship; or
- d. Do not show a tangible connection to or involvement with data (materials data, modeling, simulations, data sets, analysis of, and so forth).