University of Cincinnati recently launched the new research institute: UCRI

Overview

University of Cincinnati Research Institute (UCRI) is an independent not-for-profit 501(c)(3) which serves three primary needs for the University of Cincinnati (UC). The first is to serve industrial clients who need the services of the internationally recognized technical experts at UC in a timely and efficient manner. In this capacity, UCRI will serve its most important function of attracting local, national and international industries to partner with faculty and students in performing sponsored research at UC. The second is to provide an efficient mechanism for commercialization of a wide range of intellectual property originating at UC by faculty and students from all colleges and units through industry/commercial partnerships. It is essential to the university to expand opportunities to all colleges for the commercialization of their own intellectual property. The third is to provide cooperative learning experiences and opportunities for UC students with industry partners.

Mission

UCRI will be able to “move at the speed of business” in addressing these needs. In addition, it will provide the proper environment to promote commercialization of intellectual property (IP) from the university. David Linger, President and CEO of UCRI, talks about the opportunity UCRI has to significantly grow our industrial research funding base and provide synergisms that will undoubtedly reach into the classroom. Establishing such industry partnerships is an essential element for overall growth of our research base which will provide future opportunities for innovation at UC.
UCRI was developed to connect UC experts to industry partners, to facilitate the commercialization of IP from all of UC’s Colleges through collaboration, consulting and services but more importantly, UCRI was shaped to enhance experiential learning for UC students by aligning industry to access and coach students. Chris Solomon, CFO and COO of UCRI says that “in the last 6 months alone UCRI collaborated with over 43 companies, 33 Faculty members and over 50 students on 56 different projects”.

While UCRI will enhance commercialization opportunities for university intellectual property, the real value of the organization is to enhance industry partnerships as a means of expanding our research expenditures throughout the university system. Commercialization of intellectual property is best served through a vigorous and sizable research base. That base must not only be maintained, it must grow by both expanding federal funding and by expanding our industry research funding base.

Collaborations

GE Aviation (GEA) has announced three focus areas for UC to further their gas turbine technology. Those areas are advanced lean burn combustion, Integrated Power and Thermal Management (IPTM), and ceramic matrix composites (CMC) advanced high temperature materials. These three technology areas are key for future leadership in gas turbine areas. UCRI is increasing the partnership by developing a lab whose focus is to cycle test the advanced CMC materials.

Another area of collaboration with GE Aviation includes a metal additive manufacturing lab or 3D metal printing. GEA is donating a machine to UCRI to help with the new lab creation. UCRI has already been performing research in additive manufacturing for both GE Aviation and GE Power and Water based in Atlanta.

The partnership with GE Aviation includes curriculum development from GE’s perspective. This refers to the skills and training that students need to have when graduating in order to make a positive impact to the business immediately upon hire. GE’s previous chief engineer is working closely with UC professors to help develop the class work.

UCRI is also increasing the research performed with P&G. “Both P&G and GE are embracing advanced manufacturing technologies as well as the simulation that supports
the innovation that is placed into production” states David Linger. This includes the ability to scale technologies originally developed in the lab and mature the application development. This directly supports job growth by getting the technology up the Technology or Manufacturing Readiness Level and from lab to the production environment.

UCRI serves more than just the traditional lab-bench research scientists many think of when they consider innovation and discovery. It also works to help faculty commercialize their intellectual property through consulting and service agreements with industry. The Criminal Justice Institute—one of the five centers already established through UCRI — is focused on servicing the needs of the law enforcement community through collaborative grant agreements, research projects and planning.

Faculty Comments

1. **What lab facilities or equipment has value to industry?**

“The chemistry department operates four core instrumentation facilities that can be beneficial to industry: Chemical Sensors and Biosensors, Nuclear Magnetic Resonance (NMR) Spectrometry, Mass Spectrometry, and Single Crystal X-Ray Crystallography.” - Dr. William Heineman, UC

2. **What do you see as UCRI’s greatest value or advantage?**

“UCRI’s greatest advantage from my viewpoint is the flexibility it offers to have friendlier and more appropriate contractual agreements with industry.” - Dr. Kelly Cohen, UC

3. **How can UCRI help you grow your research activities with industry?**

“I see UCRI assisting me in reaching out and connecting to industries through enhanced marketing, helping me develop and access more opportunities for my student based research effort.” - Dr. Kelly Cohen, UC

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