**FOR IMMEDIATE RELEASE:**

**October 30, 2017**

**Contact:**
Joe Steele
313-309-9132
jsteele@lift.technology

# New LIFT Internship Program to Provide Area College Students Hands-On Experience In Cutting Edge Advanced Lightweight Manufacturing

**DETROIT** – LIFT – Lightweight Innovations For Tomorrow announced a new internship program for local college students, providing them with real-world, hands-on experience in the cutting edge advanced manufacturing industry.

The internship program is designed for three levels of students - initially undergraduate juniors and seniors in phase one and then first year graduate students in phase two.

In the first phase of the program, January 2018 through April 2018, LIFT will provide paid internships to selected undergraduate students from the University of Michigan and Wayne State who will spend up to 25 hours a week for a 16-week hands-on research experience at the new LIFT lightweighting research and development facility in Detroit.

“Providing students with work-and-learn opportunities is critical to their attainment of the knowledge, skills and abilities they will need to succeed in both education and the workplace,” said Emily DeRocco, education and workforce development director, LIFT. “These internships are being designed to help students gain foundational employability skills as well as the theory and technical skills in demand across all sectors in advanced manufacturing today.”

The students will be mentored by in-house LIFT engineers. They will work on ongoing lightweighting technology research and development projects underway at the institute.

The initial two internship opportunities are focused on Material Science and Mechanical Engineering and Thermo-Mechanical processing with an introduction to Integrated Computational Materials Engineering (ICME).

The Material Science and Mechanical Engineering/Engineering Mechanics (ME/EM) internship is open to juniors in a relevant undergraduate program and will expose the student to concepts of equipment certification, standards, and statistical variation. The

student will have the opportunity to apply these concepts by performing testing on materials derived during the LIFT Metrology Lab's melt processing and joining and assembly projects.

The Thermo-Mechanical Processing and ICME internship is open to seniors in a relevant undergraduate program and will afford the student opportunities to become familiar with LIFT manufacturing capabilities in Thermo-Mechanical Processing (TMP) by participating on teams working on TMP related research. The TMP programs will also introduce the student to the use of ICME as a component of advanced research.

Undergraduate junior level (Level 3) and undergraduate senior-level (Level 2) students from U of M and WSU who are interested in applying for a phase one internship can learn more at: http://orau.org/lift/.

LIFT has partnered with the Oak Ridge Associated Universities [ORAU] to help manage the program due to the organization's expertise in bringing together university faculty and students from its 121-member consortium to collaborate on major scientific initiatives that help keep America on the leading edge of science and technology.

LIFT, operated by the American Lightweight Materials Manufacturing Innovation Institute (ALMMII) and one of the founding Manufacturing USA institutes, is a public-private partnership dedicated to developing and deploying advanced lightweight metal manufacturing technologies, and implementing education and training programs to better prepare the workforce today and in the future.

"Our goals as an institute are twofold," said Larry Brown, executive director, LIFT. "We are to not only enable lightweight solutions from the technology side, but also expose students to the world of advanced manufacturing to help move the industry forward here in the U.S."

# # #

**ABOUT LIFT**

*LIFT is a Detroit-based, public-private partnership committed to the development and deployment of advanced lightweight metal manufacturing technologies, and implementing education and training initiatives to better prepare the workforce today and in the future. LIFT is one of the founding institutes in the National Network of Manufacturing Innovation (NNMI), and is funded in part by the Department of Defense with management through the Office of Naval Research. Visit www.lift.technology to learn more.*

# BUILDING 21ST CENTURY MANUFACTURING TALENT

## LIFT Learning Lab Internship Pathway Development – Phase 1

An Education & Workforce Development Initiative for LIFT...Lightweight Innovations for Tomorrow

## THE PROBLEM

A major skills gap exists across the country and in the state of Michigan for a wide range of advanced manufacturing disciplines including lightweighting manufacturing. For many post-secondary students, there are few work-and-learn opportunities to provide the hands-on experience and exposure to advanced manufacturing which will help them progress in their education and, later, in their careers.

Internships and other work-and-learn experiences better prepare students for engineering careers in in-demand fields, including lightweighting, particularly in Michigan.

While Michigan is home to the highest concentration of manufacturing and industrial engineers in the country, the demand for more talent is still high and expected to grow. For example, there are currently 1,300 materials engineers in Michigan with demand expected to grow by nearly 10 percent by 2024.

## THE SOLUTION

LIFT is launching an internship program pathway for undergraduate and graduate students to provide them with the opportunity to gain exposure to lightweight manufacturing technologies and get hands-on experience in the industry. The internship experience will be built around projects that support the education of the students in the areas of interest to LIFT members.

The LIFT internship program includes three levels of internships that will allow students to take on progressively complex tasks and develop specific knowledge and expertise in LIFT's technology pillars.

All three levels will be designed in coordination with academic partners to ensure that learning outcomes are defined and measured and that students are engaged in projects aligned with their academic work to provide a pathway to a career in lightweight metals manufacturing.

### LIFT Internship Levels

| LEVEL 3 INTERNS | LEVEL 2 INTERNS | LEVEL 1 INTERNS |
|---|---|---|
| Undergraduate Juniors | Undergraduate Seniors | First Year Graduate Student or Recent BS Graduate |

## ABOUT THE PROJECT

LIFT has contracted with the Oak Ridge Associated Universities (ORAU) to design and administer the internship program during Phase I.

**PHASE 1** (August 2017- December 2018)

- Designing all three levels of the internship program
- Hiring two students to complete a Level 3 internship
- Hiring three students to complete a Level 2 internship during the Fall 2018 term

ORAU is a 121-member nonprofit university consortium which brings together university faculty and students to collaborate on major scientific initiatives that help keep America on the leading edge of science and technology.

LIFT and ORAU will also work in collaboration with Wayne State University (WSU) and the University of Michigan (U of M) to recruit students, develop learning outcomes, and align the internship with academic programs of study at each respective institution.

In future phases, recruitment will be opened to additional partnering LIFT universities.

lift LIGHTWEIGHT INNOVATIONS

## DELIVERABLES

Phase I of the LIFT Internship Pathway program will establish a program model that can be replicated beyond the initial pilot phase to cultivate a pipeline of engineering talent for the lightweight industry. Specific outcomes will include:

- Program development including a standard logic model that includes defining program inputs (resources dedicated to the program), activities (what the program does with the inputs to fulfill the mission), outputs (the direct products of the activities), and outcomes (learning and programmatic).
- Two students completing Level 3 internships
- Three students completing Level 2 internships

## PROJECT PARTNERS

Lightweight Innovations for Tomorrow (LIFT)

Oakridge Association of Universities (ORAU)

Wayne State University

University of Michigan

## ALIGNMENT TO STRATEGIC FOCUS AREAS

Attracting students and workers to educational pathways and careers in manufacturing

Ensuring students gain STEM foundational skills for success in manufacturing

Expanding work-and-learn opportunities

For more information, please see lift.technology or contact LIFT Education & Workforce Director Emily DeRocco at ederocco@lift.technology.

LIGHTWEIGHT INNOVATIONS