Faculty Member Contact Information

Name	Siqi Zhang
Contact Info	
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Department	Industrial Engineering

1 Funded, Unfunded URCA Assistant

	This position is **ONLY** open to students who have declared a major in this discipline.	**M**
	This project deals with social justice issues.	💙
	This project deals with sustainability (green) issues.	🌿
	This project deals with human health and wellness issues.	➕
	This project deals with community outreach.	✋
	This mentor's project is interdisciplinary in nature.	**I**

Are you willing to work with students from outside of your discipline? If yes, which other disciplines?

Yes

How many hours per week will your student(s) be required to work in this position?
(Minimum is 6 hours per week; typical is 9)

9

Will it be possible for your student(s) to earn course credit?

Location of research/creative activities:

no restriction

Brief description of the nature of the research/creative activity?

This research involves the analysis and modeling of additive manufacturing data to improve process monitoring and control of laser powder bed fusion. In my previous work, a process-informed adversarial learning framework is developed to make real-time prediction of process dynamics. In this work, this framework will be extended to study layerwise images and investigate how it can be used for quality monitoring of this metal AM process.

Brief description of student responsibilities?

Students will be responsible for pre-processing AM data and modifying the existing codes to investigate the extended problem. The above activities will involve skills like Python programming and data science.

URCA Assistant positions are designed to provide students with *research or creative activities* experience. As such, there should be measurable, appropriate outcome goals. What exactly should your student(s) have learned by the end of this experience?

Students will gain invaluable experience in working on an interdisciplinary problem. They will also acquire practical skills in programming and data analytics.

Requirements of Students

If the position(s) require students to be available at certain times each week (as opposed to them being able to set their own hours) please indicate all required days and times:

To be discussed.

If the location of the research/creative activities involves off campus work, must students provide their own transportation?

Not applicable

Must students have taken any prerequisite classes? Please list classes and preferred grades:

NO

Other requirements or notes to applicants:

It will be preferrable if students have basics programming skills. If not, having interest in learning is also sufficient.