



Ph.D. Opportunities in Industrial Engineering

Dr. Zhuoli Yin's research lab is seeking highly motivated Ph.D. students to join the [Department of Mechanical Engineering](#) at the University of South Carolina (USC). Qualified students will receive full funding that covers a stipend and tuition. Applications are welcome for Spring and Fall 2027. Students will apply to the [Mechanical Engineering Ph.D. program](#) and pursue industrial-engineering-oriented research. Learn more about the lab at <https://zhuoliyin.github.io/>.

Research Areas: The research lab is goal-driven and students will conduct cutting-edge research at the intersection of operations research and machine learning to advance decision intelligence and sustainable computing for complex systems. Specific areas include:

- Learning-augmented combinatorial optimization;
- Reinforcement learning and stochastic decision-making;
- Emerging transportation and logistics systems modeling and optimization;
- Sustainable AI systems

Basic Qualifications: B.S. or M.S. in an engineering or science discipline, including electrical, industrial, civil, mechanical or systems engineering, or in applied mathematics, statistics, computer science, operations research, or a related field. Applicants should have a strong quantitative foundation, proficiency in Python or a comparable programming language, an interest in rigorous methodology and real-world applications, and strong written and oral communication skills.

Preferred Qualifications: Research or project experience in one or more of the following areas:

- Mathematical optimization, including integer and stochastic optimization, and optimization solvers such as Gurobi, CPLEX, and OR-Tools;
- Agent-based simulation and data-driven modeling;
- Machine learning, deep learning, and reinforcement learning, with frameworks such as PyTorch or JAX;
- Large language model inference and deployment, including tools such as vLLM;
- Machine learning systems, computer architecture, and parallel or distributed computing; and
- High-performance computing and computational performance optimization.

How to Apply

Complete the prospective graduate student [interest form](#) (<https://forms.gle/Lg4sTxABPZPB3X9B9>) with the following materials:

- CV/resume
- Unofficial transcript(s)
- A brief research-interest statement of no more than one page
- Contact information for three references (Letters of recommendation will be requested from finalists)
- (Optional) Links to publications, code repositories, or a portfolio
- Questions may be sent to zyin@sc.edu with the subject "Prospective PhD student".

Deadlines

- Spring 2027: International applicants (September 20, 2026); domestic applicants (October 5, 2026).
- Fall 2027: International applicants (January 1, 2027); domestic applicants (January 15, 2027).

Shortlisted candidates will be contacted for a virtual or in-person interview.

Application References

Candidates selected through the lab's preliminary review must also apply through the USC application portal and submit all materials required by the program.

- [Mechanical Engineering Ph.D. required documents](#)
- [Graduate School application and opening schedule](#)
- [Graduate admission policies and general deadlines](#)