

Postdoctoral Scholar
Case Western Reserve University

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Posted Mar. 12, 2024, set to expire Jul. 12, 2024

Job Title Postdoctoral Scholar

Department Mechanical and Aerospace Engineering

<https://engineering.case.edu/mechanical-and-aerospace-engineering>

Institution Case Western Reserve University
Cleveland, Ohio

Date Posted Mar. 12, 2024

Application Open until filled

Deadline

Position Available Immediately

Start Date

Job Post-Doc

Categories

Academic Field(s) Mechanical Engineering

Engineering Physics

Aerospace/Aeronautical/Astronautics

Job Website https://engineering.case.edu/sites/default/files/Postdoctoral_Job_Desc_2023.pdf

Apply By Email chirag.kharangate@case.edu

Job Description

Date: March 2024

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Title: Postdoctoral Scholar

Department: Mechanical and Aerospace Engineering

School: Case School of Engineering

Location: 10900 Euclid Ave Cleveland OH 44106

Supervisor Name and Title: Chirag Kharangate, Assistant Professor

Contact information: Email: chirag.kharangate@case.edu; Phone: (216) 368-2029

POSITION OBJECTIVE

Postdoctoral position in the Two-Phase Flow and Thermal Management Lab at Case Western Reserve University to do research in two-phase flows with focus on machine learning application to phase-change thermal management systems, including autonomous vision and Physics-informed neural networks (PINNs).

ESSENTIAL FUNCTIONS

1. Develop computer vision tools to investigate flow boiling imaging data from experiments (20%)
2. Develop physics-informed machine learning modeling tools and validate with experiments performed in the lab (20%)
3. Perform experiments in two-phase flows for boiling and condensation (15%)
4. Perform CFD simulations in two-phase flows for boiling and condensation (15%)
5. Publish peer-reviewed journal papers and attend international conferences to disseminate and share research (20%)
6. Coordinate with sponsors for meeting research project deliverables (10%)
7. Advise graduate and undergraduate students at the Two-Phase Flow and Thermal Management Lab in conducting their research projects relating to boiling and condensation experiments and modeling (10%)

NONESSENTIAL FUNCTIONS

Attend department and school education and outreach activities

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CONTACTS

Department: continuous (66+%)

University: infrequent (up to 5%)

External: moderate (16-30%)

Students: moderate (16-30%)

SUPERVISORY RESPONSIBILITY

None

QUALIFICATIONS

Experience: 0+

Education/Licensing: PhD in Engineering or Computer Science

REQUIRED SKILLS

1. Machine Learning/ Neural Networks/ Computer Vision

RECOMMENDED SKILLS

1. ANSYS Fluent/COMSOL multiphasic Solver
2. C, Matlab
3. Experimental design and thermal-fluidic testing experience in lab setting

WORKING CONDITIONS

No special working conditions.

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Please submit your CV and names of three references to crk91@case.edu.

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact Chirag Kharangate
Mechanical and Aerospace Engineering
Case Western Reserve University
10900 Euclid Ave
Cleveland, OH 44106

Phone Number (216)368-2029

Contact E-mail chirag.kharangate@case.edu