American Made Challenges
Solar Desalination Prize

Katz Water Technologies
Houston, TX 77082
www.katzwater.com

TECHNICAL ASSISTANCE REQUEST

Katz Water Technologies is seeking a recent post-doctoral candidate for a 1+ year NSF sponsored fellowship. The focus of the position will be CFD modeling and simulations for the redesign of our X-VAP technology from its first-generation natural gas configuration to the new solar thermal energy source.

Postdoc Mechanical Engineer

About the IPERF Program

Funded by the National Science Foundation (NSF), the Innovative Postdoctoral Entrepreneurial Research Fellowship (I-PERF) recruits, trains, mentors, matches, and funds early-career Science and Engineering (S&E) doctoral degree recipients to participate in innovative entrepreneurial activities at some of the nation's most promising startup companies.

I-PERF addresses a national need to accelerate small business innovation in support of federal government research by providing small businesses with doctoral level expertise at a reduced cost and training the next generation of S&E PhDs in high-tech entrepreneurship.
I-PERF Fellows receive an annual base stipend of $78,000 per year, optional individual health and life insurance benefits, relocation assistance to the approved host company, a professional conference travel allowance, and scripted professional development training funded by the National Science Foundation. Learn more about the benefits of the IPERF program here: https://iperf.asee.org/

About the Company

Katz Water Technologies (KWT) is an early-stage startup that will utilize waste energy, renewable energy, and energy recapture to purify water and work toward our mission of solving the worlds water problems. Our enabling patented technology is the ability to perform the entire thermal distillation process in one piece of equipment, drastically reducing the footprint and cost required for desalination. We are developing additional technology for process energy recapture and recycling of wastewater components. Our equipment can run on any type of heat energy including solar thermal, waste gas and industrial waste heat energy. We take the most contaminated water industry can create and recycle it into fresh water. We are working on incorporating pre-treatment systems both physical and biological into our thermal distillation to create a comprehensive water recycling system.

About the Position

The focus of the position will be to perform cutting edge research in multi-phase fluid flow in tight confined spaces. The candidate will be expected to publish their work as patents are filed for additional breakthroughs in the technology development. They will be responsible for redesigning and modeling the existing technology for different thermal inputs such as synthetic oil in a closed loop solar thermal system and assist in redesigning system components as needed for new markets including military applications and agriculture. Mentorship and technical guidance will be available throughout the fellowship by a KWT PhD advisor with extensive experience in CFD modeling. The candidate will be expected to run the project internally while

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working with an external contract team, like Argonne National Labs, to develop computational models and optimize the efficiency of the X-VAP technology.

Qualifications

We are looking for mechanical engineers with experience in metal designs, prototypes and CFD, thermal, and FEA simulations. Preference would be given to mechanical engineers that have used SolidWorks and ANSYS Fluent but would consider engineers experienced with other simulation programs. A creative, entrepreneurial mindset is a must!

Eligibility

Applicants must:

- Hold an earned doctoral degree in an NSF-supported STEM discipline from a recognized Ph.D. granting institution,
- Earned their relevant doctoral degree within 7 years of their application to the I-PERF research opportunity, and
- Be a United States Citizen, National, or Permanent Resident of the United States at the time of application to the I-PERF program.

Emphasis will be placed on the participation of persons who are:

- Members of socio-economic disadvantaged groups, **
- Members of underrepresented groups in science and engineering,
- Persons with disabilities,
- Veterans of the U.S. Armed Forces, and
- First generation college graduates. **

**Socio-economic disadvantage and first-generation college status will be validated through documented proof of participation in federally funded programs for students with such status during their college education.

Apply

- Email CV to erin.picton@katzwater.com
- Complete an applicant profile at https://iperf.asee.org/