LSU Chemical Engineering Professor Receives NSF CAREER Award

Assistant Professor of Chemical Engineering Bhuvnesh Barti has been awarded the National Science Foundation’s CAREER Award for his research, “Helical propulsion for tunneling through porous membranes.”

The award is $556,200 over five years.

The aim of the research is to better understand the underlying mechanisms of active particle transport through complex environments. This knowledge would then influence a diverse array of research fields. It could also effect the treatment of tumors and subsurface mapping of geological rocks to detect fossil fuels.

“Most tumor sites are surrounded by an interstitium; it is a cross-linked, gel-like porous structure composed of collagen, microfibrilla, elastics, and other biomolecules,” Bharti said. “Currently used particles for targeted delivery [of tumor treatment] are inefficient in penetrating through this media. Development of new nanoparticles based on the principles [in this project] may enable efficient navigation of the interstitium.

Read the full story.

Learn About NSPE’s New Strategic Plan
Join NSPE Executive Director Mark Golden as he shares NSPE’s recent strategic planning process in a new animated video. The NSPE Strategic Plan—including our vision, mission, values, and goals—is developed by the NSPE Board of Directors in collaboration with NSPE’s representative House of Delegates. It is not a static document. Rather, it is a commitment to ongoing, open, and transparent strategic planning and execution.

Access NSPE’s Who We Are and What We Do page.

**Diversity, Equity, and Inclusion and NSPE**

Diversity is a major theme in NSPE’s Strategic Plan, and it recently gained a place in the NSPE Code of Ethics. For any future-focused, proactive profession or professional society, diversity is increasingly a strategic imperative. But there needs to be an acknowledgement of the missed opportunities created by the biases in our personal, professional, and societal lives.

Learn more about how NSPE is making strides toward its goal of diversity, equity, and inclusion.

---

**Can You Meet the 2020 Ethics Challenge?**

How should ethics factor into the development of artificial intelligence or in guiding the future of the profession? These are just two of the issues that professional engineers and engineering students can address in this year’s NSPE Milton F. Lunch...
Ethics Contest.

NSPE members can participate through their state societies and local chapters (including student chapters). State societies and local chapters are encouraged to consider using this contest as a state or chapter activity to generate member discussion and spur greater interest in engineering ethics.

Participants can select from one of four issues to develop a submission (video, photo essay, poster, essay, or PowerPoint presentation) that demonstrates an understanding of the ethical issues involved. Participants are encouraged (but not required) to consider and cite in the submission the NSPE Code of Ethics and previous NSPE Board of Ethical Review opinions.

NSPE will award the author of the winning entry $2,000, a certificate, and recognition in PE magazine. All submissions must be received by April 20.

Boost Your Professionalism With These Upcoming Webinars!

Develop your skills and earn continuing education credits with NSPE’s webinars. Stay current on a variety of topics from the comfort of your home or office. Don’t miss the Ethics Forum each month, presented by NSPE Deputy Executive Director and General Counsel Arthur Schwartz. Register for individual ethics webinars or get a special bundle price until March 17. All webinars are held 2 p.m. – 3 p.m. Eastern.

March 4
The 2020 EJCDC Engineering Agreements

March 18
Engineering Ethics – Disclosure, Payment, Expert Testimony and Conflicts of Interest

March 25
Emotional Intelligence at Work

April 15
Check Out the New 15 Free Courses

Included with your NSPE membership are 15 free on-demand webinars. Take advantage of the courses to further your professional development and meet your continuing education requirements.

Access the 2020 courses.