

# **I** ILLINOIS ENGINEERING PHOTOSYNTHESIS

## TWO OPEN RANK FACULTY POSITIONS – APPLICATION DEADLINE 20 MARCH 2020

The Grainger College of Engineering at the University of Illinois at Urbana-Champaign invites applications for up to two full-time tenured or tenure-track faculty positions across all ranks in the broad area of photosynthesis engineering. Photosynthesis is the direct and indirect source of all food, most of our energy and key to the growing market for bio-renewables. The University of Illinois is, and has been a world leader in photosynthesis research for six decades, and contributed some of the most seminal discoveries in photosynthesis in the modern era. Here we seek faculty hires to expand this leadership into engineering a future in which improving photosynthetic efficiency and its resilience to global change will be crucial to managing ecosystems, sustainably increasing the productivity of food and bioenergy crops, and maintaining global food, water and environmental security. The University of Illinois is uniquely positioned to capitalize on the traditional strengths in photosynthesis with the emerging engineering/technological capabilities associated with genomics and DNA editing and modeling whole plant environment interactions. We invite applications from a broad range of candidates who are interested in applying their expertise to photosynthesis particular using an engineering approach. This could include the following areas, but not limited to: (i) Synthetic biology with considerations ranging from synthetic assembly of new photosynthetic processes, to engineering microbial pathways into higher plants or algae, to systems engineering of the existing photosynthetic pathways, to in silico modeling of molecular networks, to designs that are yet to be conceived; (ii) Gene editing and genetic transformation that takes advantage of, or develops, emerging technologies to improve photosynthetic efficiency and understanding at all biological levels from protein function, biochemical pathways, and systems regulation; (iii) Computational biology to scale from genome to phenome through big data and systems engineering. Research could exploit opportunities created by high-throughput phenotyping, rapid genotyping, computer sciences, AI, and statistics to improve crop photosynthesis, water and nutrient use, and productivity for crop species and algal systems. All of these areas will have the potential to increase sustainability and resilience to climate change.

Depending on the background, expertise and interest, the successful candidate could fit in any one of several departments including Civil and Environmental Engineering, Agricultural and Biological Engineering, Computer Science, and Bioengineering. Joint appointments between these departments or others such as Plant Biology and Crop Science can also be explored for senior ranks. The candidate is expected to have a joint affiliation with Carl R. Woese Institute of Genomic Biology.

The successful candidate is expected to develop and maintain an internationally recognized research program, to contribute fully to teaching of undergraduate and graduate courses, and to provide service to the profession and University. Ideal candidates include those who demonstrate evidence of a commitment to diversity, equity, and inclusion through research, teaching, and/or service endeavors. Qualified senior candidates may also be considered for endowed professorships or chair as part of the Grainger Engineering Breakthroughs Initiative. Over the next few years, more than 35 new endowed professorships and chairs will be established in areas of strategic interest to The Grainger College of Engineering. More information about the Grainger Initiative can be found at <https://grainger.illinois.edu/research/grainger-breakthroughs>.

The University of Illinois is an Equal Opportunity, Affirmative Action employer. Minorities, women, veterans and individuals with disabilities are encouraged to apply. For more information, visit <http://go.illinois.edu/EEO>. To learn more about the University commitment to diversity, please visit: <https://engineering.illinois.edu/about/diversity.html>.

To ensure full consideration, create your candidate profile through <https://jobs.illinois.edu> and upload your application cover letter (addressed to Professor Praveen Kumar, Chair Search Committee, Department of Civil and Environmental Engineering, 205 North Mathews Avenue # 3215 DCL, Urbana, IL 61801. Telephone: 217-333-4688) together with curriculum vitae, a concise summary of past research accomplishments and any teaching experience, a statement of future research and teaching plans, statement on commitment to diversity, and complete contact information of at least three references by March 20, 2020. The statement on diversity should address past and/or potential contributions to diversity, equity, and inclusion through research, teaching, and/or service. Only complete applications will be considered. Application evaluations will begin on February 16, 2020 and the position will remain open until filled. The starting date is negotiable, but is preferred to be August 16, 2020. The University of Illinois offers competitive salary and benefits program. Salary is commensurate with experience and qualifications. Information about the Grainger College of Engineering and its various departments may be found at our website at:

The Grainger College of Engineering: Open Rank Faculty Position in Photosynthesis Engineering, University of Illinois at Urbana-Champaign (126961) – Closing Date: 20 March 2020

**APPLY:** <https://jobs.illinois.edu/?jobID=126961>

Or search on above job title

Questions: Search Chair [kumar1@illinois.edu](mailto:kumar1@illinois.edu); Search Committee Member: [slong@illinois.edu](mailto:slong@illinois.edu)