



Agricultural & Biological
Engineering
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**POSITION ANNOUNCEMENT # 00012894
REQUISITION # 70569**

Title: Assistant/Associate Professor in Biosensors and Artificial Intelligence (AI)

Location: Agricultural & Biological Engineering
University of Florida
Institute of Food and Agricultural Sciences (IFAS)
Gainesville, Florida

Salary: Commensurate with Qualifications and Experience

Review Date: For full consideration, candidates should apply and submit additional materials by April 3, 2021. The position will remain open until a viable applicant pool is determined.

Duties and Responsibilities

The [Institute of Food and Agricultural Sciences](#) is committed to creating an environment that affirms diversity across a variety of dimensions, including ability, class, ethnicity/race, gender identity and expression. We particularly welcome applicants who can contribute to such an environment through their scholarship, teaching, mentoring, and professional service.

This is a 9-month, tenure track position (60% research 40% teaching) in the Agricultural and Biological Engineering Department (ABE), Institute of Food and Sciences (IFAS). This position will work closely interfacing ABE with others in IFAS, Herbert Wertheim College of Engineering (HWCOE), and UF Artificial Intelligence thriving community.

The successful candidate is expected to establish an applied research program focused on the development, integration and use of biosensors and AI tools in agricultural and environmental (biological) applications to improve decisions and policies at the local, regional, and international level. The appointee is expected to develop biosensors to complement or replace existing analytical methodologies to measure biological, physical and chemical parameters in biological systems. Biosensor development is anticipated to consider big data and AI-based optimization of noisy/interacting readings, price, size, safety, and biodegradable qualities for different applications. Biosensor application examples in biological systems include precision agriculture, harmful algal blooms, water and soil pollutants,

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biological indicators, climate change, and food safety. Integration of biosensor networks and AI in rapid early warning systems related to these applications are also desired.

The teaching portion of this position will include development of a successful undergraduate and graduate education program which will introduce students to cutting-edge biosensor technology and techniques in the context agricultural and biological engineering and will include AI components. The 40% FTE commitment will typically be fulfilled by teaching one undergraduate and one graduate course per year as assigned by the department chair. In addition, the candidate will be expected to participate in co-teaching courses related to senior design and cross-cutting topics. Potential topics in the ABE curriculum might be an undergraduate-level course in ***Biosensors*** and a graduate-level course in ***Biosensors with AI***, while other topics based upon candidate's expertise and interests are welcome.

The successful candidate is expected to build a nationally and internationally recognized research program supported by a strong graduate research group and extramural funding from state and federal agencies. The candidate is expected to develop and promote his/her research activity and leadership in professional societies, supported by a sustained publication activity in top scientific journals. The candidate will have the opportunity to collaborate with other faculty and research partners, creating synergy both inside and outside of the University of Florida academic community. The candidate will be also expected to participate in all activities of departmental academic life such as research groups, mentorship of undergraduate and graduate students, and academic service activities; and work closely with other faculty in IFAS, the Herbert Wertheim College of Engineering, UF Research Computing, UF Institutes (Informatics, Water, Florida Climate, Food Systems) and the new UF - NVIDIA flagship collaboration in AI.

The ABE department contributes to several department, college, and university efforts related to sensors, control systems, and AI through coursework, certificates, and interdisciplinary M.S. degrees. The successful candidate will participate, integrate, and provide leadership in these efforts to increase AI topic diversity with context-specific applications for biological systems, ensure that the curriculum is relevant and innovative, and expand biosensor curriculum options for undergraduate students.

Because of the IFAS land-grant mission, all faculty are expected to be supportive of and engaged in all three mission areas—Research, Teaching and Extension—regardless of the assignment split specified in the position description. Candidates must be supportive of the mission of the Land-Grant system. Candidates must also have a commitment to IFAS core values of excellence, diversity, global involvement, accountability and a deep commitment to ethical dignity. The position is expected to provide appropriate levels of service to the department, college, university and/or discipline. Specific expectations are described in department, college and university policy statements regarding evaluation and promotion.

Qualifications

Required

Ph.D. (doctorate) or foreign equivalent is acceptable in agricultural and biological engineering, electrical engineering, chemical engineering, or a closely related engineering field.

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An Equal Opportunity Institution

Understanding and/or interest related to some of the fields of biological engineering, agriculture, natural resources, food engineering, food science, chemistry, physics, microbiology, virology, biotechnology, and nanotechnology is required.

Candidates are expected to possess strong ability in verbal and written communication skills.

Candidates are expected to have demonstrated experience through research and refereed publication track-record in the area of biosensors and AI.

Preferred

Demonstrated experience with grants and funding, interdisciplinary collaborations, and leading research projects.

Previous teaching experience related to biosensors, AI and systems modeling and analysis at the undergraduate and/or graduate level.

Postdoctoral and other professional experience, including academic, government R&D, and industry experience, are positive attributes.

Evidence of effective working in trans-disciplinary groups or consortia between academia and outside stakeholders.

Involvement in professional societies or other entities related to the discipline.

Mentorship experience with undergraduate or graduate students.

If an accommodation due to a disability is needed to apply for this position, please call 352-392-2477 or the Florida Relay System at 800-955-8771 (TDD) or visit [Accessibility at UF](#).

Background Information:

The Agricultural and Biological Engineering Department is a unit in the Institute of Food and Agricultural Sciences (IFAS) at the University of Florida and has diverse teaching, research and extension education programs. The Department is comprised of 35 faculty members located on the Gainesville campus, 5 faculty located across the state at research and education centers, and 20 support personnel (see website <http://abe.ufl.edu>), and consistently ranks in the top 10 Agricultural and Biological Engineering programs nationwide. Instilling excellence in research, leadership, innovation, and entrepreneurship are ABE's highest priorities. At ABE, the candidate will join a dynamic, cross-disciplinary group of researchers, and will enjoy broad opportunities for collaborations with existing teams, including those studying biofilm systems and biosensors, biofuels, coupled natural and human ecosystems, nanotechnology and nanomaterials, climate variability and change, crop modeling, hydrology and water quality.

The University of Florida (<http://www.ufl.edu>) is a Land-Grant, Sea-Grant, and Space-Grant institution, encompassing virtually all academic and professional disciplines, with an enrollment of more than

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53,000 students. UF is a member of The Association of American Universities. The Institute of Food and Agricultural Sciences (<http://ifas.ufl.edu>) includes the College of Agricultural and Life Sciences (<http://cals.ufl.edu>), the Florida Agricultural Experiment Station (<http://research.ifas.ufl.edu>), the Florida Cooperative Extension Service (<http://extension.ifas.ufl.edu>), the College of Veterinary Medicine (<http://www.vetmed.ufl.edu>), the Florida Sea Grant program (<http://www.flseagrant.org/>), and encompasses 16 on-campus academic departments and schools, 12 Research and Educational Centers (REC) located throughout the state, 6 Research sites/demonstration units administered by RECs or academic departments, and Florida Cooperative Extension Service offices in all 67 counties (counties operate and maintain). The School of Natural Resources and Environment is an interdisciplinary unit housed in IFAS and managed by several colleges on campus. IFAS employs over 2500 people, which includes approximately 900 faculty and 1200 support personnel located in Gainesville and throughout the state. IFAS, one of the nation's largest agricultural and natural resources research and education organizations, is administered by a Senior Vice President and four deans: the Dean of the College of Agricultural and Life Sciences, the Dean for Extension and Director of the Florida Cooperative Extension Service, the Dean for Research and Director of the Florida Agricultural Experiment Station, and the Dean for the College of Veterinary Medicine. UF/IFAS also engages in cooperative work with Florida A&M University in Tallahassee.

Employment Conditions

This position is available **Fall 2021** and will be filled as soon thereafter as an acceptable applicant is available. Compensation is commensurate with the education, experience, and qualifications of the selected applicant.

Nominations

Nominations are welcome. Nominations need to include the complete name and address of the nominee. This information should be sent to:

Please refer to Requisition # 70569
Rafael Munoz-Carpena, PhD
Chair, Search and Screen Committee
University of Florida
Agricultural & Biological Engineering
P.O. Box 110570
Gainesville, FL 32611

Telephone: (352)-294-6747
Electronic Mail: carpena@ufl.edu

Application Information

- The Search and Screening Committee will begin screening applications on **April 3, 2021**.
- Individuals wishing to apply should go online to <http://explore.jobs.ufl.edu/cw/en-us/job/> and submit:
 - Application
 - Cover letter that highlights applicant's interest in the position and qualifications relative to the credentials listed above
 - Research statement (up to 2 pages)

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- Teaching and mentoring statement (up to 2 pages)
- Diversity statement (up to 1 page)
- Curriculum vitae
- Contact information (including email addresses) for 4 individuals willing to provide a verbal (phone) reference and write letters of recommendation.
- Unofficial transcripts

Final candidate will be required to provide official transcript to the hiring department upon hire. A transcript will not be considered “official” if a designation of “Issued to Student” is visible. Degrees earned from an education institution outside of the United States are required to be evaluated by a professional credentialing service provider approved by National Association of Credential Evaluation Services (NACES), which can be found at <http://www.naces.org/> .

The University of Florida is an Equal Opportunity Institution dedicated to building a broadly diverse and inclusive faculty and staff. The selection process will be conducted in accord with the provisions of Florida’s ‘Government in the Sunshine’ and Public Records Laws. Persons with disabilities have the right to request and receive reasonable accommodation.