

Tenure-track Assistant/Associate Professor in Medical Physics

School of Health Sciences, Purdue University

Description

The School of Health Sciences in the College of Health and Human Sciences at Purdue University invites applications for a full-time, academic-year, tenure-track Assistant or Associate Professor position in Medical Physics with a focus on magnetic resonance imaging (MRI) methodology or image-guided radiotherapy. The successful candidate will lead an independent and funded research program either in the area of MRI physics and its application to studies on human health, developing and using advanced MRI methodology complementing and adding to the MRI expertise on Purdue campus; or a research program in image-guided radiotherapy, focused on adaptive radiotherapy and personalized medicine, contributing to the development of innovative cancer treatment technologies, such as nanoparticle/nuclear medicine theragnostic. In both cases, Purdue University seeks to attract candidates with expertise and interest in the integration of AI/machine learning and imaging sciences.

The CAMPEP-accredited Medical Physics program in the School of Health Sciences at Purdue University offers M.Sc., Ph.D. and Certificate degrees and a B.Sc. in pre-MP, as well as a highly diverse and collaborative research environment. Aligned with Purdue's *One Health initiative*, the candidate is expected to play a key part in translating basic science into clinical applications at Purdue, with access to a wide variety of research facilities, including the *Purdue MRI facility*, the new *Institute for Physical AI*, the *Purdue Institute for Cancer Research*, the *Bindley Bioscience Center*, the *Birck Nanotechnology Center* and the *Institute for Integrative Neuroscience*. Extensive possibilities for collaborative research exist with various departments and colleges at Purdue, including the many units in the *College of Health and Human Sciences (HHS)*, *Veterinary Medicine*, *Biomedical Engineering*, *Nuclear Engineering*, *Physics*, and *Pharmacy*. Furthermore, joint programs and collaborative opportunities also exist with the clinical departments of *Radiology and Imaging Sciences* and *Radiation Oncology* at Indiana University School of Medicine (IUSM) in Indianapolis. The position will also address critical teaching needs within our CAMPEP-accredited Medical Physics graduate program, as well as the Radiological Health Sciences and Biomedical Health Sciences undergraduate programs.

Qualifications

Applicants must possess a Ph.D. in medical physics, imaging sciences, physics, biomedical engineering, or a closely related discipline, along with a proven track record of research excellence, as evidenced by a strong publication record and/or prior research funding, commensurate with their career stage. Candidates being considered at the rank of Associate Professor with immediate tenure should have active extramural funding and meet the *School of Health Sciences other criteria for this rank*. Additionally, candidates should demonstrate a commitment to teaching, including experience in classroom instruction or mentoring student researchers. The successful candidate will be expected to conduct research in their area of expertise; advise graduate students; teach courses in medical/health physics, imaging sciences or biomedical health sciences; and engage in departmental and university activities. The position is competitive with regard to salary, start-up funds, and laboratory space.

The School of Health Sciences: The School of Health Sciences is home to over 20 core faculty members, approximately 50 graduate students and over 1000 undergraduate students, and has internationally recognized research and educational programs in Biomedical Health Sciences, Medical Physics, Health Physics, Imaging Sciences, Occupational and Environmental Health Sciences, Toxicology, and Medical Laboratory Sciences. Faculty lead active research programs in these areas, with substantial funding from NIH and other agencies. The School is an integral part of the College of Health and Human Sciences, which aims to bring together scholars in the health sciences and human sciences to strategically address issues vital to enhancing quality of life. More information is available online about the *School of Health Sciences*, *RHS undergraduate program*, and the *Medical Physics and Imaging Sciences* graduate programs.

Purdue University is one of the nation's leading land grant universities with a full range of academic majors, over 50,000 students, more than 10,000 employees, and ranked among the leading research institutions in the country. Purdue is located in West Lafayette, Indiana within easy driving distance of both Indianapolis and Chicago. The diverse greater Lafayette/West Lafayette community (<http://www.homeofpurdue.com>) has a population of approximately 200,000, and a low cost of living.

Purdue University MRI Facility: The *Purdue University MRI facility* is a Purdue Core facility as well as an Indiana CTSI Core Facility and houses three MRI scanners dedicated purely to research: a 3T Siemens PRISMA, a 3T GE MR750 and a 7T small animal Bruker scanner. All three scanners are available 24 hours a day for research. The *Life Sciences MRI Scanner (Siemens 3T)*, managed by the College of Health and Human Sciences, gives priority to NIH-funded research. Users of the Purdue MRI facility have access to ample pilot funding opportunities, as well as to support by the facility's staff members, an MRI physicist and a research MRI technologist. *Affordable and easy access to MRI research scan hours for research* is a major asset of the Purdue MRI facility.

Purdue Institute for Cancer Research: The *Purdue Institute for Cancer Research (PICR)* is one of only seven National Cancer Institute (NCI)-designated *Basic Laboratory Cancer Centers* in the United States (since 1978), focused on laboratory research and preclinical translation. The Institute is comprised of over 110 Purdue faculty devoted to cancer research. The Institute includes shared resources such as a preclinical PET/SPECT/CT scanner (MiLabs VECTor+) for nuclear medicine studies. It also houses an X-rad 320 preclinical x-ray machine for cell and rodent-based radiotherapy studies.

The Purdue University College of Veterinary Medicine and Veterinary Hospital is home to the *Comparative Oncology Program*, which includes research on invasive urinary bladder cancer, lymphoma, and brain cancer. The program participates in the NIH's Comparative Oncology Trials Consortium performing clinical trials in dogs and cats with cancer. The Veterinary Hospital includes a dedicated 1.5T MRI (GE) scanner and a CT scanner for veterinary patients as well as four veterinary technicians and two radiologists. In addition, there is a Varian linear accelerator (LINAC) used for external beam radiotherapy of canine tumors. Radiation oncology staff consists of a board-certified veterinary radiation oncologist, radiation oncology residents in training, as well as technicians who specialize in radiation therapy.

Community: Greater Lafayette Indiana is home to Purdue University and is one of the fastest growing communities in the Midwest. Subaru of Indiana Automotive, Caterpillar, Dow AgroSciences, Rolls-Royce, GE Aviation, Schweitzer Engineering Laboratories, Wabash National, Saab Global Defense and Security Company, high tech firms and small businesses all call Greater Lafayette their home. Conveniently located between Chicago and Indianapolis, Greater Lafayette is also near several other major metropolitan cities. '*Visit Lafayette-West Lafayette*' and '*Greater Lafayette Commerce*' are resources that highlight our great community.

Application Process: Applications must be submitted as a single PDF through SuccessFactors https://careers.purdue.edu/job/Assistant-or-Associate-Professor-Medical-Physics/34573-en_US/ and need to include (1) a cover letter, (2) a complete curriculum vitae, (3) a statement of current and future research interests (maximum 3 pages), (4) a teaching philosophy statement (maximum 1 page), and (5) contact information for three references. Inquiries and materials will be treated confidentially. References will only be contacted at the final stage when campus visits occur.

A background check is required for employment in this position. For more information, contact Dr. Ulrike Dydak (udydak@purdue.edu).

Submission and start date: Priority deadline for review of applications will begin December 1, 2024, and will continue until the position is filled. The appointment is set to begin in August 2025.

Equal opportunity: *Purdue University is an EOE/AA employer. All individuals, including minorities, women, individuals with disabilities, and veterans are encouraged to apply.*