



Imaging Physics Residency Program

THE UNIVERSITY OF TEXAS
MDAnderson
Cancer Center

Making Cancer History®

Program Overview

The Residency Program is a two-year clinical training experience at The University of Texas MD Anderson Cancer Center for medical physicists who intend to work in Imaging Physics and wish to qualify for examination by the American Board of Radiology, the American Board of Medical Physics, or the American Board of Science in Nuclear Medicine.

The program is accredited by the Commission on Accreditation of Medical Physics Education Programs, Inc. (CAMPEP).

Program Objective

The objective of the residency program is to provide structured clinical medical imaging physics training and experience to those wishing to practice professional imaging physics. Residents, working under the supervision of Board Certified medical physicists, will participate in the breadth of routine clinical duties of a medical imaging physicist. The resident will gain experience with the full range of state-of-the-art medical imaging equipment. At the conclusion of the program the resident will demonstrate competency in:

- Evaluating radiological and medical nuclear imaging equipment performance
- Developing quality control procedures
- Estimating and monitoring patient radiation doses
- Monitoring a radiation safety program
- Investigating abnormal radiation exposures
- Providing consultation on MRI safety
- Consulting on imaging problems, quality, and artifacts
- Providing consultation regarding technical aspects of equipment purchase
- Planning for the purchase of equipment, site preparation and testing
- Providing in-service instruction regarding radiation safety and imaging physics
- Performing clinical investigation in medical imaging physics

Residents also participate in seminars, colloquia, clinical rounds, and other educational opportunities.



Admissions

Preference is given to candidates who graduated from CAMPEP-accredited medical physics graduate programs. However, candidates from related fields who graduated from a CAMPEP-accredited certificate program are also encouraged to apply.

- For the Hybrid Pathway, a PhD. or equivalent degree is required.
- On average, two residents will be recruited each year
- Once accepted, candidates must obtain a temporary license to practice professional medical physics from The State of Texas.



Hybrid Pathway

We are recruiting highly motivated young scientists who aspire to be among the best academic medical physicists, able to complete their clinical residency training while simultaneously pursuing a focused research program.

Medical Physics Fellow resident positions (hybrid pathway) are available in our CAMPEP approved Residency Program in the Department of Imaging Physics at The University of Texas M.D. Anderson Cancer Center.

This 3-year program is a unique opportunity for high-caliber, promising medical physics Ph.D. graduates to continue a trajectory toward becoming a Qualified Medical Physicist (QMP) working in an academic environment. The goal of the program is to create the next generation of leaders in medical imaging physics.

During the 3-year appointment, the Fellow will receive 2 years of full-time equivalent clinical training while performing 1 full-time equivalent year of research. This will meet the American Board of Radiology requirement for Parts II and III of the examination process while the Fellow continues to advance as a scientist academically.

The Program provides structured clinical medical imaging physics training and experience. Fellows participate in the routine clinical duties of a medical imaging physicist, through rotations including general radiography, angiography and fluoroscopy, CT, nuclear medicine/PET, MR, Ultrasound, breast imaging, and imaging informatics, as well as outside rotations in renowned hospitals in the Texas Medical Center (TMC). Fellows will work under the supervision of 26 board-certified medical physicists, including 20 physicists at the MD Anderson and 6 physicists at the TMC (for outside rotations), on a wide variety of state-of-the-art imaging equipment and procedures. Other support includes attendance at scientific meetings and participation in specialized training opportunities. For research, each Fellow is matched with a dedicated member of the MD Anderson faculty who serves as their research mentor. This relationship is based upon a mutual interest in an area of research in biomedical imaging.



Dr. Jimenez inspecting a state-of-the-art biological irradiator that permits image-guided radiation therapy of small animals using built-in CT and bioluminescence imaging.

MD Anderson Fellows in Medical Physics (3 year hybrid program)

Year 1

Year 2

Year 3

1/3 research
2/3 clinical

1/3 research
2/3 clinical

1/3 research
2/3 clinical

Total clinical time = 24 months in 3 years

Medical Physics Residents (2 year clinical program)

Year 1

100%
Clinical
Training

Year 2

100%
Clinical
Training

Program Faculty Department of Imaging Physics



Moiz Ahmad, Ph.D.
(1)



Dianna Cody, Ph.D.
(1)



William Erwin, M.S.
(4)



William Geiser, M.S.
(1)



John Hazle, Ph.D.
(1, 2, 3)



Ping Hou, Ph.D.
(1)



Kyle Jones, Ph.D.
(1)



Cheenu Kappadath, Ph.D.
(1,4)



Rick Layman, Ph.D.
(1)



Anthony Liu, Ph.D.
Program Director



Xinming Liu, Ph.D.
(1)



Jingfei Ma, Ph.D.
(1)



Osama Mawlawi, Ph.D.
(1, 4)



Thomas Nishino, Ph.D.
(1)



Tinsu Pan, Ph.D.
(1, 4)



John Rong, Ph.D.
(1)



Jason Stafford, Ph.D.
(1)



Richard Wendt, III, Ph.D.
(3, 4)



Joshua Yung, Ph.D.
(1)

BOARD CERTIFICATIONS

- (1) ABR Diagnostic Radiologic Physics
- (2) ABR Therapeutic Radiologic Physics
- (3) ABMP Magnetic Resonance Imaging Physics
- (4) ABSNM Nuclear Medicine Physics & Instrumentation

PROGRAM FACULTY OUTSIDE OF MD ANDERSON

- Ben Archer, Ph.D.
- Charles W. Beasley, Ph.D.
- Janet Ching-Mei Feng, Ph.D.
- Edwin R. Giles, M.S.
- Armen Kocharian, Ph.D.
- Bahadir Ozus, Ph.D.
- Benton P. Pahlka, Ph.D.

ADMINISTRATION

Questions about the program should be directed to the Program Director:

Ho-Ling Anthony Liu, Ph.D.
Department of Imaging Physics
MD Anderson Cancer Center
1400 Pressler Street, Unit 1472
Houston, TX 77030
hlaliu@mdanderson.org

Inquiries should be directed to the Program Manager:

Anne Baronitis, M.Ed.
aibaronitis@mdanderson.org 713.563.2548

Additional Information

* Applicants will be required to meet all visa and documentation requirements

* Drug and tobacco testing will be administered upon arrival to MD Anderson Cancer Center

* The University of Texas MD Anderson Cancer Center is a smoke-free EEP/AA environment.

<http://mdanderson.org/imaging-physics-residency-program>

The University of Texas MD Anderson Cancer Center in Houston ranks as one of the world's most respected centers focused on cancer patient care, research, education and prevention. As one of the comprehensive cancer centers designated by the National Cancer Institute (NCI), MD Anderson's sole mission is to end cancer for patients and their families around the world. MD Anderson Cancer Center again has ranked No. 1 for cancer care by U.S. News & World Report's annual "Best Hospitals" rankings. We are ranked as one of the top two hospitals in cancer care every year, since U.S. News & World Report began its annual "America's Best Hospitals" survey, in 1990.