THE INTERFACES PROGRAM
GRADUATE PROGRAM IN BIOMEDICAL IMAGING AND INFORMATIONAL SCIENCES

A NEW APPROACH TO TRAINING IMAGING SCIENTISTS

The HHMI-NIBIB Interfaces Program in Biomedical Imaging and Informational Sciences at the University of Pennsylvania was established under the auspices of a partnership between the Howard Hughes Medical Institute (HHMI) and the NH National Institute of Biomedical Imaging and Bioengineering (NIBIB) to catalyze development of innovative new programs in interdisciplinary graduate education.

- Builds on the world-class imaging research environment at Penn
- Trains scientists with the knowledge and vertically integrated skill set to conduct research at the interface between clinical imaging and the biomedical, physical, chemical, engineering, and computational sciences.

Curriculum integrates quantitative and technical training with a systematic and immersive exposure to biomedical and health sciences through concurrent coursework in medicine and imaging sciences, taught by faculty from the Schools of Medicine, Engineering and Arts and Sciences.

We are seeking exceptional interdisciplinary candidates with both the potential and motivation to become the next generation of leaders in hypothesis driven, clinically focused, quantitative biomedical imaging research.

HOW TO APPLY

Dr. James Gee, Director (gee@mail.med.upenn.edu)
Kathleen Venit, Grad Program Coordinator (kvenit@seas.upenn.edu).

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PROGRAM CURRICULUM

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<th>YEAR</th>
<th>FALL</th>
<th>SPRING</th>
<th>SUMMER</th>
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<tr>
<td>1</td>
<td>Medical School Module 1</td>
<td>Medical School Module 2</td>
<td>Research Rotation</td>
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<tr>
<td></td>
<td>Anatomy, Genetics, Biochemistry, Cell &amp; Tissue Biology, Immunology, Microbiology</td>
<td>Mechanisms of Disease, Brain &amp; Behavior, Reproduction, Endocrinology, Gastrointestinal Imaging Labs</td>
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<td></td>
<td>Imaging Principles</td>
<td>Imaging Labs</td>
<td>BE545/547 Fund. Techniques of Medical Imaging I and II</td>
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<td>BE533 Molecular Imaging</td>
<td>BE557 Biomedical Image Analysis</td>
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<td>Capstone Course</td>
<td>Image Reconstruction</td>
<td>Research Rotation(s)</td>
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<td>BE650 Adv Biomedical Imaging Applications</td>
<td>MATH584 Mathematics of Medical Imaging and Measurement</td>
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<td>3</td>
<td>FALL</td>
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<td>Preliminary Examination</td>
<td>Thesis Research</td>
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selected PROGRAM FACULTY

Dr. Andrew Maidment* (Radiology) Breast imaging and tomosynthesis
Dr. Andrew Tsourkas (Bioengineering) Molecular imaging
Dr. Felix Wehrli (Radiology/Biochem&Biophys) Quantitative characterization of tissue microarchitecture
Dr. Jason Burdick (Bioengineering) Degradable polymeric biomaterials
Dr. Jim Gee* (Radiology/Comp&Inf Science) Image computing, informatics and analysis
Dr. Ravinder Reddy (Radiology) Musculoskeletal imaging
Dr. Robert Gorman (Cardiovascular Surgery) Pathophysiology and treatment of structural heart disease, cardiac imaging

PROGRAM BENEFITS

Individuals will be awarded a 2-year fellowship to cover didactic training and access to opportunities, including:

- Multidisciplinary faculty mentorship
- Professional development workshops, events, and networking opportunities specifically designed for Interfaces program students
- Travel and training materials funding