A note from the Director and Assistant Director:
Welcome to the Oregon Medical Physics Program – a graduate program in medical physics administered at Oregon Health & Science University (OHSU).

This resource guide is intended to help you get settled and answer some of the questions you might have as a new graduate student in our program. If, after reading the contents, you have unanswered questions, please feel free to ask me for help. The staff, faculty, and fellow graduate students are available and willing to help solve any issues as they arise.

Additional information on course descriptions, procedures, requirements, and deadlines are provided by the current Medical Physics Program Guidelines, and the School of Medicine Graduate Studies Academic Regulations of the Graduate Programs, as well as the Graduate Student Handbook available here: https://www.ohsu.edu/school-of-medicine/graduate-studies/student-handbook

Graduate students in the Oregon Medical Physics Program (OMPP) are responsible for complying with the rules of the University, the School of Medicine, and the Program. Policies, deadlines, and other pertinent items can be found at: http://www.ohsu.edu/xd/education/schools/school-of-medicine/academic-programs/graduate-studies/admin-resources.cfm

In some instances, the requirements of the Program are more restrictive than those of the School of Medicine. In such cases, the departmental and programmatic requirements specified in the Medical Physics Program Guidelines document will apply.

The program requirements that an OMPP student must satisfy for the degree are those contained in the MP Program Guidelines and Graduate Student Handbook.

The faculty hopes that your time in the OMPP will be rewarding, memorable, and the beginning of a fruitful career in the medical physics field.

We are glad you are here!

- Thomas Griglock, Ph.D., DABR, Graduate Program Director, Oregon Medical Physics Program
- Lindsay DeWeese, Ph.D., DABR, Assistant Graduate Program Director, Oregon Medical Physics Program
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OHSU Office of Graduate Studies

This office supports graduate program activities including admissions, progression and degree completion. The office is located in the Dean’s Office for the School of Medicine on the fourth floor of Mackenzie Hall.

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Office Staff

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Faculty in the OMPP
Oregon Health & Science University Medical Physics Faculty

Christopher Aguilera (aguilera@ohsu.edu)
Radiation Therapy Physicist
B.S. General Science, Health Physics Concentration (1988), Oregon State University; M.S. Medical Physics (1989), Georgia Institute of Technology.

Isaac Bailey (baileyi@ohsu.edu)
Instructor and Diagnostic Imaging Physicist
Member of: American Association of Physicists in Medicine (AAPM).
Fields of interest: Optimizing the quality of diagnostic imaging and practices.

Raghavendiran Boopathy (boopathy@ohsu.edu)
Assistant Professor and Radiation Therapy Physicist
B.S. Applied Sciences (2002), Periyar University; M.S. Medical Physics (2004), Anna University; Ph.D. Medical Physics (2010), Anna University.
Ross Brody (brodyr@ohsu.edu)
Radiation Therapy Physicist
Member of: American Physical Society (APS), American Association of Physicists in Medicine (AAPM), American Brachytherapy Society (ABS)
Fields of interest: Optimized linear accelerator quality assurance; Radiotherapy of benign conditions; Stochastic processes.

Richard Crilly (crilly@ohsu.edu)
Associate Professor and Radiation Therapy Physicist
B.S. Physics (1979), University of Saskatchewan, M.S. Biophysics (1987) University of Alberta (Edmonton), Ph.D. Medical Physics (1995), Wayne State University.
Member of: American Association of Physicists in Medicine (AAPM).
Certified by ABMP in Radiation Oncology (American Board of Medical Physics).
Fields of interest: Small Field Dosimetry, Ion Chamber Design, Helical Tomotherapy Planning, Helical Tomotherapy QA.

Lindsay DeWeese (sinclail@ohsu.edu)
Assistant Director of the Medical Physics Graduate Program; Assistant Professor and Diagnostic Imaging Physicist; Director, Diagnostic Imaging Physics Residency Program
B.S. Nuclear Engineering (2007), University of Florida; M.S. Nuclear Engineering (2009), University of Florida; Ph.D. Medical Physics (2013), University of Florida.
Member of: American Association of Physicists in Medicine (AAPM), Diplomate of the American Board of Radiology (DABR®), Society of Directors of Academic Medical Physics Programs (SDAMPP)
Fields of interest: Computed Tomography Dosimetry, Enhancing clinical impact of emerging imaging technology, dose monitoring in fluoroscopy, quality improvement initiatives utilizing dose monitoring software in CT.

Thomas Griglock (griglock@ohsu.edu)
Director of the Medical Physics Graduate Program, Associate Professor and Chief Diagnostic Imaging Physicist
B.S. Physics (2003), University of Scranton; M.S. Physics (2005), Lehigh University; M.S. Medical Physics (2009), University of Florida; Ph.D. Medical Physics (2012), University of Florida.
Member of: American Association of Physicists in Medicine (AAPM), Diplomate, American Board of Radiology (DABR®), Society of Directors of Academic Medical Physics Programs (SDAMPP), Eagle Scout
Fields of interest: Computed Tomography Dosimetry, practical approaches to radiation dose management.

Malcolm Heard (heardma@ohsu.edu)
Assistant Professor and Radiation Therapy Physicist
B.S. Physics (2001), Southern University and A&M College; M.S. Medical Physics (2005), University of Texas Graduate School of Biomedical Sciences; Ph.D. Medical Physics (2009), University of Texas Graduate School of Biomedical Sciences
**Member of:** American Association of Physicist in Medicine, Radiosurgery Society, National Society of Black Physicists

**Fields of Interest:** Three-Dimensional Dosimetry, Stereotactic Radiosurgery, Stereotactic Body Radiation Therapy

**Stephanie Junell** ([junells@ohsu.edu](mailto:junells@ohsu.edu))
Assistant Professor and Radiation Therapy Physicist
B.S. Radiation Health Physics (2006), Oregon State University, M.S. Medical Physics (2008), University of Wisconsin, Ph.D. Medical Physics (2013), University of Wisconsin.

**Member of:** American Association of Physicists in Medicine (AAPM), American Society for Radiation Oncology (ASTRO).

Fields of Interest: Radiation dosimetry and instrumentation, quality assurance program development, Monte Carlo methods, patient specific dosimetry, biological treatment optimization

**Monica Kishore** ([kishore@ohsu.edu](mailto:kishore@ohsu.edu))
Assistant Professor and Staff Radiation Therapy Physicist; Director, Therapy Physics Residency Program

Completed Radiation Therapy Physics Residency at Oregon Health & Science University in 2013.

**Member of:** American Association of Physicists in Medicine (AAPM), American Society of Therapeutic Radiology and Oncology (ASTRO), Diplomate, American Board of Radiology (DABR®), Society of Directors of Academic Medical Physics Programs (SDAMPP)

**Milky Kohno** ([kohno@ohsu.edu](mailto:kohno@ohsu.edu))
Assistant Professor
B.A. Psychology (2006), University of California, Berkeley; Ph.D. Neuroscience (2013), University of California, Berkeley.

**Fields of interest:** Broadening and extending the knowledge of the neural circuitry that mediates neuropsychiatric diseases.

**Jeanne Link** ([lijea@ohsu.edu](mailto:lijea@ohsu.edu))
Director, Center for Radiochemistry Research; Professor of Diagnostic Radiology
B.S. Biological Studies (1974), University of California at Davis; M.S. Fisheries / Radiation Ecology (1982), University of Washington, Seattle; Ph.D. Chemistry (1998), University of Washington, Seattle.

**Fields of interest:** the development and translation of PET radiochemistry to imaging agents for preclinical and clinical research through collaborative research.

**Anna Mench** ([mench@ohsu.edu](mailto:mench@ohsu.edu))
Assistant Professor and Diagnostic Imaging Physicist

**Member of:** American Association of Physicists in Medicine (AAPM); Diplomate, American Board of Radiology (DABR®).
**Fields of interest:** Dose measurement and reduction in interventional radiology. Clinical optimization strategies using dose tracking systems for CT and Fluoroscopy. High dose therapies in Radiology.

**Brandon Merz** *(merzbr@ohsu.edu)*  
*Assistant Professor and Radiation Therapy Physicist*  
B.S. Physics (2006), University of Hawai‘i, Manoa; M.S. Therapy Medical Physics (2008), University of Toledo, Health Science Campus.  
*Fields of interest:* Applied mathematics, digital communications.

**Susha Pillai** *(pillai@ohsu.edu)*  
*Assistant Professor and Radiation Therapy Physicist*  
M.S. Physics (1996), M.G. University, Kerala, India, M.S. Nuclear Engineering (1999), University of Missouri-Columbia.  
*Member of:* American Association of Physicists in Medicine (AAPM), American Society of Therapeutic Radiology and Oncology (ASTRO). Diplomate of the American Board of Radiology (DABR®).  
*Fields of interest:* Developing innovative treatment delivery techniques, Heterogeneity correction algorithms for treatment planning systems, In Vivo dosimetry, Intraoperative Radiation Therapy, Total Marrow Irradiation.

**Andrei Pugachev** *(pugachev@ohsu.edu)*  
*Assistant Professor, Diagnostic Radiology*  
*Member of:* American Association of Physicists in Medicine (AAPM), Society of Nuclear Medicine & Molecular Imaging, Diplomate of the American Board of Radiology (DABR®).  
*Fields of interest:* Physics of radiation therapy (both external beam and radionuclide-based), PET imaging, investigation and validation of novel radiolabeled compounds.

**Junan Zhang** *(zhang@ohsu.edu)*  
*Assistant Professor and Radiation Therapy Physicist*  
*Member of:* American Association of Physicists in Medicine (AAPM). Diplomate, American Board of Radiology (DABR®).  
*Fields of interest:* improving image quality and reduction of dose in 3D and 4D CBCT, improving spatial resolution of IMRT and RapidArc quality assurance.
Facilities

OHSU Radiation Medicine

Radiation Oncology at OHSU consists of the main campus (Sam Jackson Park Road hospital – all new in 2007), and two satellite facilities. Under the OHSU umbrella, students have access to:

- **Linacs:**
  - 2 Elekta Versa HD
  - Elekta Infinity
  - Elekta Infinity (satellite campus)
- **Mobetron IORT Linac**
- **Intrabeam IORT**
- **TomoTherapy**
- **Imaging / Localization / TP / RV Systems:**
  - CBCT
  - Novalis (SRS) w/ Big Bore CT
    - Novalis Robotic Tabletop (Varian)
      - Exactrac (BrainLab)
  - Calypso Prostate Localization
  - Respiratory Gating
  - VisionRT Laser Scanning Patient Positioning System
  - Eclipse TPS – with Rapidarc license
  - Pinnacle TPS – with Smartarc license
  - Monaco (CMS) – with VMat license
  - iPlan TPS (BrainLab)
  - IMPAC RV (Mosaiq RBV)
- **Treatment types include:**
  - IMRT / Conventional / 3DCRT / EBT
  - SRS / SBRT
  - TBI
  - TSE
  - Novalis / Exactrac
  - Eye Plaques
  - LDR Seed Implants (permanent and temporary)
  - HDR
  - TomoTherapy
  - IORT (Mobetron, Intrabeam)

OHSU Diagnostic Radiology

The Department of Diagnostic Radiology at OHSU consists of the main campus (Marquam Hill campus hospital and the Center for Health and Healing buildings 1 and 2), and seven satellite facilities. Within these facilities, students have access to the following equipment:
• 14 general radiographic rooms (all DR)
  o with 12 utilizing wireless DR
• 6 radiographic & fluoroscopic rooms
• 6 interventional suites
  o including 2 bi-plane rooms and 5 utilizing flat-panel detectors (FPDs)
• 5 cardiac catheterization angiography suites
• 24 portable x-ray units
  o including 5 with wireless DR detectors
• 24 portable fluoroscopic units
  o including 4 with FPDs
• 8 diagnostic CT scanners (16-320 slice);
  o 5 with iterative reconstruction technology
  o 2 with iterative model based (IMR) technology
  o This fleet includes a Toshiba Aquilion ONE Prime 320 slice CT and a Philips Brilliance iCT 256 slice.
• 2 mobile head CT scanners
• 6 MRI scanners
  o three 3.0 Tesla magnets, three 1.5 Tesla magnets
• 22 diagnostic ultrasound units
• 3 full-field digital mammography units
  o three digital breast tomosynthesis (DBT) units and one stereotactic breast biopsy (SBB) unit
• 2 PET/CT units
• 1 PET/MR unit
• 1 SPECT/CT unit
• 2 gamma cameras with flat-panel cone-beam CT
• 2 C-arm interventional radiology units used for animal research at the Dotter Research Institute

**Student Resources at OHSU**

There are many resources available to you as a student at OHSU. The Student Central homepage is located at [https://o2.ohsu.edu/student-central/](https://o2.ohsu.edu/student-central/). On this website you will find links to Sakai, the Student Information System, Box, Registrar, Financial Aid, the Library, and the ITG help desk. Additional student resources are described in the Graduate Student Handbook under Student Support: [https://www.ohsu.edu/school-of-medicine/graduate-studies/student-handbook](https://www.ohsu.edu/school-of-medicine/graduate-studies/student-handbook).

**MATLAB Software**

OHSU provides a free student download of MATLAB. Find more information here: [https://o2.ohsu.edu/school-of-medicine/researchers/matlab.cfm](https://o2.ohsu.edu/school-of-medicine/researchers/matlab.cfm). Please note that the pilot program for downloading MATLAB is currently only going through October 31, 2021, so be sure to download before then.
**Health Insurance**

OHSU’s Student Health Insurance plan is with Pacific Source. All students are required to enroll in the health insurance plan unless they can prove comparable coverage elsewhere. Students who do waive out of the insurance must do so annually. Waiver forms can be found on the Student Health & Wellness (SHW) website. Any additional questions about waiving out of the insurance should be directed to Human Resources: 503-494-7617 option 4. For more information on health insurance requirements and your healthcare needs, please visit the SHW website: [https://www.ohsu.edu/education/student-health-and-wellness-center](https://www.ohsu.edu/education/student-health-and-wellness-center)

**March Wellness & Fitness Center**

The March Wellness and Fitness Center is a fitness facility located on the second floor of the Center for Health & Healing (CHH1). As part of being a student at OHSU, you get free access to this fitness facility. If you would like to enroll, just stop by the front desk of March Wellness.

**Graduate Student Lounge - RLSB**

The Graduate Student Lounge is located on the 4th floor of RLSB. The lounge contains access to refrigerators, microwaves and dining spaces.

**Academic Calendar**

The current academic year can be found on the Office of the Registrar’s website located here: [https://www.ohsu.edu/education/academic-calendar](https://www.ohsu.edu/education/academic-calendar)

**Using Information Technology**

Please review the Student Technology, Security and Privacy page on O2 in Student Central: [http://o2.ohsu.edu/studenttech](http://o2.ohsu.edu/studenttech). This site contains detailed information on wireless internet access, mobile device management, OHSU email, cloud storage, removable storage devices, and other Help & How-To resources.

**OHSU Employees as Students**

**Policy No. 03-30-145** (updated 8/18/2021) states that OHSU employees pursuing a degree or certificate within OHSU, and OHSU students seeking employment from OHSU shall notify their academic program director to ensure the activity does not impact their employment schedule and/or educational activities and to minimize potential conflicts of interest. An internal approval process must be followed when an OHSU employee becomes a student, or an OHSU student accepts a position as an OHSU employee in a primary or secondary assignment.

If you are interested in becoming an OHSU employee, please review the aforementioned policy and procedure available under the Human Resources section on the OHSU policy page: [https://www.ohsu.edu/about/policies](https://www.ohsu.edu/about/policies). A Smartsheet form will become available for the employee/student to use to initiate a review process for conflict of interest. In the meantime, please contact your Program Director to initiate the form. Please submit the completed form to both the Academic Program Director and employment supervisor. The form will be reviewed by
both parties for potential conflict of interest, and approved forms will then be submitted to the Office of the Provost for final review.
Two terms before your planned defense...

Complete and submit the “Mentor Assignment Form”

By the end of Fall term, complete the Request for Master Thesis Advisory Committee Form

Early in Winter Term...

Hold first TAC meeting with your committee which should include an overview of background research, description of project and project timeline. Fill out this form 5 days before meeting & submit to your mentor: TAC Meeting Summary form

https://www.ohsu.edu/school-of-medicine/graduate-studies/forms-and-policies

Send completed form to MP admin coordinator following the TAC Meeting

Two months before Graduation...

Complete the “Request for Graduation” form

At least 4 weeks before your planned defense date...

Complete and submit the “Request for Oral Examination” form

Two weeks before your planned defense date...

Send the completed thesis to your committee members for review. Must be correctly formatted according to Graduate Studies office document “Guidelines for preparation of dissertation and thesis”.

Two weeks before your planned defense date...

- Begin / continue to work on your thesis defense presentation (powerpoint, visual aids, script, preparation for questions from the audience, preparation for more general questions about medical physics from your coursework)
- Your thesis defense presentation must be approved by your mentor prior to the defense date
- This presentation should last about 45 minutes with 15 minutes for questions from the public
- The public will then be removed from the room and the private defense portion of the exam will continue for 1-2 hours

Paperwork (for the final Oral Examination / Defense) will then be sent to the committee to complete during / after the Oral Examination (Thesis Defense).