



**San Francisco Bay Area Chapter of the American  
Association of Physics in Medicine & Stanford  
University**

*Present*

**2016 YOUNG INVESTIGATORS SYMPOSIUM OF MEDICAL  
PHYSICS RESEARCH AND DEVELOPMENT**

*With a Keynote Presentation by:*  
**Luc Beaulieu, PhD, FAAPM**

**Friday May 20, 2016**

**11:30 PM – 6:30 PM**

**Stanford University, Lucile Packard Children's Hospital, 1<sup>st</sup> Floor Auditorium  
725 Welch Rd, Palo Alto, CA 94304**

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**AGENDA**

11:30 AM-12:00 PM	Registration and Luncheon
12:00 PM-1:00 PM	<p><b>Keynote Speaker – Luc Beaulieu, PhD, FAAPM</b>            Professor and Director, Université Laval Cancer Research Centre            Director, CAMPEP Medical Physics Graduate Program            Head of the Medical Physics Research Group, Axe Oncologie, CRCHUQ</p>
1:00 PM – 2:15 PM	<p><b>Postdoctoral Scholar Presentations</b></p> <ol style="list-style-type: none"> <li>1. <b>Shiva Abbaszadeh, PhD</b> (Stanford Radiology, Advisor: Levin)            Title: A new generation small animal positron emission tomography system for molecular imaging discoveries</li> <li>2. <b>Qian Wang, PhD</b> (Stanford Radiation Oncology, Advisor: Prax) Title: Performance Evaluation of 18F Radioluminescence Microscopy Using Computational Simulation</li> <li>3. <b>Benjamin Spencer, PhD</b> (UC Davis Radiology, Advisors: Badawi / Wang)            Title: Evaluation of Kernel-Based Dynamic PET for Quantitative Parametric Imaging Using Phantom and Patient Data</li> <li>4. <b>Hojin Kim, PhD</b> (UCSF Radiation Oncology, Advisor: Chen)            Title: One-step CT reconstruction for metal artifact reduction by a modification of penalized weighted least-squares (PWLS)</li> <li>5. <b>Wei Zhang, PhD</b> (UC Merced BioEng, Advisor: Li)            Title: Multiple Pinhole Collimator Based Microscopic X-ray Luminescence Computed Tomography</li> </ol>
2:15 PM - 2:30 PM	Coffee Break
2:30 PM – 3:30 PM	<p><b>Resident Presentations</b></p> <ol style="list-style-type: none"> <li>1. <b>Daniel Pinkham, PhD</b> (Stanford Radiation Oncology, Advisor: Fahimian)            Title: Development of Electromagnetically Guided High-Dose Rate Brachytherapy for Ablative Treatment of Lung Metastases</li> <li>2. <b>Chithra Kumaran Nair, PhD</b> (UC Davis Radiation Oncology, Advisor: Rong) Title: Tomotherapy to linac plan conversion: implementing a fallback procedure using Raystation</li> <li>3. <b>Dae Yup Han, PhD</b> (UCSF Radiation Oncology, Advisor: Ma)            Title: Dose variability via brain metastases resection cavity shrinkage modeling for I-125 and Cs-131 interstitial LDR seed implantations</li> <li>4. <b>Justin Phillips, PhD</b> (UCSF Radiation Oncology, Advisor: Morin)            Title: Implementation of a Modulated-Arc Total Body Irradiation (TBI) Technique Using the RayStation Treatment Planning System</li> </ol>

3:30 PM-4:30 PM	<b>Graduate Student Presentations – Part I</b> <ol style="list-style-type: none"> <li>1. <b>Cesare Jenkins</b> (Stanford Radiation Oncology and Department / Mechanical Engineering, Advisor: Lei Xing) Title: Real-time optical visualization of ionizing radiation for treatment monitoring and autonomous performance of quality assurance measurements</li> <li>2. <b>Kuang Gong</b> (UC Davis, Biomedical Engineering, Advisor: Qi) Title: Designing a compact high performance brain PET scanner—simulation study</li> <li>3. <b>Abdullah Refaey</b> (UCD Radiology, Advisor: Badawi) Title: 2nd Generation ultra-high resolution PET detector for in vivo imaging of human extremities</li> <li>4. <b>Vishal Samboju</b> (UCSF Radiation Oncology, Advisor: Adam Cunha) Title: Evaluation of Speed Displacement Errors in Prostate Brachytherapy: Steps Toward a Patient Specific Ultrasound Calibration Correction</li> </ol>
4:30 PM - 4:45 PM	Coffee Break
4:45 PM - 5:45 PM	<b>Graduate Student Presentations – Part II</b> <ol style="list-style-type: none"> <li>5. <b>Xinyi Y. Zhou</b> (UCB Bioengineering, Advisor: Conolly) Title: <i>In Vivo</i> Magnetic Particle Imaging of Lung Perfusion in Rats - Towards High Sensitivity and High Contrast Non-Radiation Based Diagnostics for Pulmonary Embolism</li> <li>6. <b>Elaine Yu</b> (UCB/UCSF Bioengineering, Advisor: Conolly) Title: Next Generation Magnetic Particle Imaging (MPI) for Cancer Detection</li> <li>7. <b>Zhi Wei Tay</b> (UCB/UCSF Bioengineering, Advisor: Conolly) Title: Deep Spatially Selective Magnetic Nanoparticle Heating and Imaging with Magnetic Particle Imaging</li> <li>8. <b>John Ready</b> (UCB/LBL Nuclear Engineering, Advisor: Vetter) Title: Prompt gamma imaging for proton beam range verification: initial measurements with a multi-knife-edge slit collimator</li> </ol>
5:45 PM - 6:00 PM	Award Announcements
6:00 PM - 6:30 PM	<b>Brief Tour of Stanford Radiation Oncology</b> Tour Director: Titania Juang, PhD (Resident, Stanford Radiation Oncology)

**SFBA AAPM Organizing Committee:**

*Program Directors: Benjamin Fahimian, PhD & Stanley Benedict, PhD*

*Treasurer: Cynthia Chuang, PhD*

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