

**Mid-Atlantic Chapter of the American Association of Physicists in Medicine
Annual Fall Meeting**

29 September 2012 – University of Mary Washington – Stafford Campus, Stafford, VA
125 University Blvd, Fredericksburg, VA

Final Program

8.00 a.m. **Registration**

9.00 a.m. **Welcome:** Cari Borrás, MAC-AAPM President

New Horizons Lecture

Moderator: David Djajaputra, MAC-AAPM President Elect

9.15 a.m. **“Microfluidic Devices for Blood Fractionation and Detection of Circulating Tumor Cells”** --- German Drazer, Department of Chemical and Biomolecular Engineering, John Hopkins University, Baltimore, MD

10.00 a.m. Discussion

10.15 a.m. **Coffee Break: Visit Technical Exhibit**

Symposium: Advanced Topics of Imaging in Radiation Therapy.

Moderator: Cari Borrás, MAC-AAPM President

10.45 a.m. **“Image-guided Stereotactic Ablative Radiotherapy (SABR) for Breast Cancer - A New Paradigm”** --- Cedric Yu, Department of Radiation Oncology, University of Maryland School of Medicine, Baltimore, MD

11.15 a.m. **“Advances in Image-guided Brachytherapy”** --- Jeffrey F. Williamson, Department of Radiation Oncology, Virginia Commonwealth University, Richmond, VA

11.45 a.m. **“Image-guided High Intensity Focused Ultrasound: The Future of Radiation Oncology?”** --- David J Schlesinger, Departments of Radiation Oncology and Neurosurgery, University of Virginia Health Systems, Charlottesville, VA

12.15 p.m. **Lunch: Visit Technical Exhibit**

1.30 p.m. **“Induced Thermal Injury with Radiosurgery Head Frames during 3T MR Imaging”** --- Daniel J. Bourland, Departments of Radiation Oncology, Physics, and Biomedical Engineering, Wake Forest School of Medicine, Winston-Salem, NC

Young Investigators Symposium

Moderator: David Schlesinger, MAC-AAPM Secretary-Treasurer

2.00 p.m. **“Feature Tracking and Motion Modeling for Respiratory Signal Extraction in Cone Beam CT Scan Projections”** --- Salam Dhou, Electrical and Computer Engineering Department, Virginia Commonwealth University, Richmond, VA

2.12 p.m. **“Non-uniform B-spline Deformable Image Registration”** --- Travis Jacobson and Martin Murphy, Department of Radiation Oncology, Virginia Commonwealth University, Richmond VA

- 2.24 p.m. **“Gamma Knife Perfexion™ Dosimetry: A Monte Carlo Model of one Sector”** --- Ryan Best, University of Virginia Health Systems, Charlottesville, VA
- 2.36 p.m. **“Automatic Treatment Planning for SBRT Pancreas Patients”** --- Joseph A. Moore, Joseph Herman, Kimberly T. Evans, Wuyang Yang and Todd R. McNutt, Department of Radiation Oncology, Johns Hopkins Medical Institute, Baltimore, MD
- 2.48 p.m. **“Static Breath-Hold MRI and Deformable Image Registration Based Measurement of Pulmonary Function: Contrast Enhanced vs. Non-Contrast Lung MRIs”** --- Dong Han, Elisabeth Weiss, Geoffrey Hugo, John Chet Ford, Jeffrey Williamson, and Kai Ding, Department of Radiation Oncology, Virginia Commonwealth University, Richmond, VA
- 3.00 p.m. **“Analysis of Template Shape Generation in Markerless Tumor Trajectory Estimation in Lung Cancer Patients”** --- Shufei Chen and Geoffrey Hugo, Department of Radiation Oncology, Virginia Commonwealth University, Richmond, VA
- 3.12 p.m. **“Field Map Method for Field Homogeneity Monitoring Using An Automated Quality Assurance Tool”** --- David R. Little, M. Wasil Wahi-Anwar, Amanda Gearhart and Susan K. Lemieux, Penn State University, Social, Life and Engineering Sciences Imaging Center and Department of Physics, University Park, PA
- 3.24 p.m. **“An Automated Quality Assurance Tool for EPI-MRI: Results for SNR, Ghosting, and Stability”** --- James S. Rotella , Amanda Gearhart and Susan K. Lemieux, Penn State University, Social, Life and Engineering Sciences Imaging Center and Department of Physics, University Park, PA
- 3.36 p.m. **“An Inexpensive Scanner-Independent Motion Monitor for MRI”** --- M. Wasil Wahi-Anwar, David R.Little, James S. Rotella, Amanda Gearhart and Susan K. Lemieux, Penn State University, Social, Life and Engineering Sciences Imaging Center and Department of Physics, University Park, PA
- 3.48 p.m. **Coffee Break: Visit Technical Exhibit**
- 4.15 p.m. **Young Investigator Award Ceremony**

Proffered Session (Contributed papers)

Moderator: Nesrin Dogan, MAC-AAPM Board Representative

- 4.30 p.m. **“Construction and Calibration of an Integrated X-ray/optical Tomography System”** --- Yidong Yang, Department of Radiation Oncology, Johns Hopkins University, Baltimore, MD
- 4.45 p.m. **“Monte Carlo Dose Calculation for TomoTherapy using Cloud Computing”** --- Quan Chen, Department of Radiation Oncology, University of Virginia Health System, Charlottesville, VA
- 5.00 p.m. **“Proton Beam Radiotherapy at Hampton University Proton Therapy Institute (HUPTI)”** --- T. Twyford, C. Butuceanu, N. Baillie, B. Athar, S. Duwuri, J. Renegar, N. Demez, S. Chung, C. Long, P. Wong, Hampton University, Hampton, VA
- 5.10 p.m. **Annual Business Meeting**
- 6.00 p.m. **Closure**