



American Association of Physicists in Medicine
Southwest Chapter Spring Meeting 2014
Arkansas – Louisiana – Oklahoma - Texas



Grand Hyatt Hotel, San Antonio, TX

Thursday, April 10, 2014

- 8:00 - 8:30 Kick off mtg for the oral exam group 1 (Terrace Suite 530)
8:30 – 11:30 Practice oral exam will be conducted in examiners rooms
11:30-13:00 Examiners review and finalize candidates scores in Terrace Suite 530
- 13:00 – 13:30 Kick off mtg for the oral exam group 2 (Terrace Suite 530)
13:30 - 16:30 Practice oral exam will be conducted in examiners rooms
16:30 – 17:00 Examiners review and finalize candidates scores in Terrace Suite 530
- 5:00 – 6:00 Poster area opens to display scientific posters
6:00 – 7:30 Icebreaker (hors d'oeuvres) – Lone Star DE
- 7:30 - dinner on your own

Friday, April 11, 2014

- 7:00 – 7:40 Continental breakfast – Lone Star DE
- 7:40 – 7:50 Welcome and introductions (Lone Star F) – Niko Papanikolaou, Ph.D.

Session I – (SAM Session) General radiotherapy topics
(Moderator: Sotiri Stathakis, Ph.D.)

- 7:50 – 8:15 Review on image registration and the advantages and pitfalls of deformable registration – Xuejun Gu, Ph.D.
- 8:20 – 8:45 Practical considerations of the AAPM/ESTRO report on dose calculations in brachytherapy – Mitch Price, Ph.D.
- 8:50 – 9:15 Current status of SBRT/SRS/SRT – Alonso Gutierrez, Ph.D.
- 9:20 – 9:45 TG100 and beyond – John Gibbons, Ph.D.
- 9:50 – 10:00 ***Presentation from PTW***
- 10:00 – 10:30 Morning break

Session II – (SAM Session) General Diagnostic Radiology topics
(Moderator: Jason Stafford, Ph.D.)

- 10:30 - 11:00 Advances in CT Dose Reduction Technology - John Rong, Ph.D.
- 11:00 - 11:30 Radiobiological modeling and voxel-based dosimetry for liver-directed 90Y-microsphere therapies - Cheenu Kappadath, Ph.D.
- 11:30 - 12:00 Advances in Ultrasound Imaging - Richard Bouchard, Ph.D.
- 12:00 - 12:30 Overview of MRI guided focused ultrasound - R. Jason Stafford, Ph.D.
- 12:30 - 1:30 *Lunch in the exhibit hall and time to meet with vendors*
- 1:30 – 2:00 **Meet the Clinician**
(Moderator: Kyle Jones Ph.D.)
- Radiotherapy for benign tumors Tony Eng, M.D.
- Neuroscience and Neuroimaging Peter Fox, M.D.
- 2:00 – 2:15 ***Presentation from Standard Imaging***
- 2:15 – 2:45 Afternoon break
- 2:45 – 4:45 **Session III – Young Investigator’s Symposium**
(chair: Taki Mavroidis, Ph.D., co-chair: S. Cheenu Kappadath, Ph.D.)
use room Mission A for judges to review scores
- 14:45-14:55 **“SPECT deadtime count loss correction using monitor source method”**
W. Siman*, S.C. Kappadath
University of Texas M. D. Anderson Cancer Center, Houston, TX
University of Texas Graduate School of Biomedical Sciences at Houston, Houston, TX
- 14:55-15:05 **“Pretreatment CT texture features for prognostication in patient with stage III Non-Small Cell Lung Cancer”**
D.V. Fried*, S.L. Tucker, S. Zhou, Z.X. Liao, G.S. Ibbott, L.E. Court
University of Texas MD Anderson Cancer Center, Houston, TX
- 15:05-15:15 **“Investigating magnetic field dose effects in small animals: a Monte Carlo study”**
Rubinstein*, M. Guindani, J.D. Hazle, L.E. Court
University of Texas M. D. Anderson Cancer Center, Houston, TX
University of Texas Graduate School of Biomedical Sciences at Houston, Houston, TX
- 15:15-15:25 **“Skeletal muscle lipid quantification in lean and diabetic subjects using in vivo proton MR spectroscopy”**
S.K. Valaparla*, G.R.E. Boone, E.M. Ripley, D. Giuseppe, T.Q. Duong, M. Abdul-Ghani, G.D. Clarke
University of Texas Health Science Center at San Antonio, San Antonio, TX
- 15:25-15:35 **“Non-invasive pre-clinical MR Imaging of prostate tumor hypoxia for**

radiation therapy prognosis”

D.A. White*, R.P. Mason

University of Texas at Arlington, Arlington, TX

University of Texas Southwestern Medical Center, Dallas, TX

15:35-15:45 **“On the evaluation of patient specific IMRT QA using EPID, Dynalog Files and patient anatomy”**

D. Defoor*, P. Mavroidis, L. Vazquez Quino, A.N. Gutierrez, N. Papanikolaou, S Stathakis

University of Texas Health Science Center at San Antonio, San Antonio, TX

Cancer Therapy and Research Center, San Antonio, TX

15:45-15:55 **“Ultrafast cone-beam CT scatter correction with GPU-based Monte Carlo simulation”**

Y. Xu*, T. Bai, H. Yan, L. Ouyang , J. Wang, A. Pompos, L. Zhou, S.B. Jiang, X. Jia

University of Texas Southwestern Medical Center, Dallas, TX

15:55-16:05 **“Mathematical analysis of approximate biological effective dose (BED) calculation for multi-phase radiotherapy treatment plans”**

K.I. Kawwelo*, A.N. Gutierrez, A. Bergamo, S. Stathakis, N. Papanikolaou, P. Mavroidis

University of Texas Health Science Center at San Antonio, San Antonio, TX

Cancer Therapy and Research Center, San Antonio, TX

16:05-16:15 **“Characterization of tumor dose heterogeneity for 90Y microsphere therapies using voxel-based dosimetry”**

J. Mikell*, F. Mourtada, A. Mahvash, S.C. Kappadath

University of Texas MD Anderson Cancer Center, Houston, TX

Christiana Care, Newark, DE

16:15-16:25 **“An evaluation of the stability of image quality parameters of Varian On-Board Imaging (OBI) and EPID imaging systems”**

D.N. Stanley*, N. Papanikolaou, A.N. Gutierrez

University of Texas Health Science Center at San Antonio, San Antonio, TX

Cancer Therapy and Research Center, San Antonio, TX

16:25-16:35 **“GPU-Monte Carlo based fast IMRT plan optimization”**

Y. Li*, Z. Tian, F. Shi, S. Jiang, X. Jia

University of Texas Southwestern Medical Center, Dallas, TX

16:35-16:45 **“Deformable image and dose registration evaluation using two commercial programs”**

R. Tuohy*, C. Bosse, P. Mavroidis, Z. Shi, R. Crownover, N. Papanikolaou, S. Stathakis

University of Texas Health Science Center at San Antonio, San Antonio, TX

Cancer Therapy and Research Center, San Antonio, TX

4:45 – 5:00

Presentation from RIT

5:30 – 6:30 **Awards ceremony at pool Terrace**

6:30 – *Dinner on your own*

Saturday, April 12, 2014

7:00 – 7:45 *Continental breakfast* - Lone Star DE

Session IV – (SAM Session) Professional issues in medical physics
(Lone Star F) Moderator: Niko Papanikolaou, Ph.D.

7:45 – 8:15 Therapy Accreditation - Jennifer Johnson, MS

8:20 – 8:45 RPC and the new IROC – Jessica Lowenstein, M.S.

8:50 – 9:15 Quality methods in medicine – Joseph Steele, M.D, MMM

9:20 – 9:45 ABR Update: Initial Certification and Maintenance of Certification of
Medical Physicists - Geoffrey Ibbott, Ph.D.

9:45 – 10:00 *Presentation from ScandiDos*

10:00 – 10:30 Morning break

10:30 – 10:40 *Presentation from Oncology Services International*

Session V (SAM Session) – Advances in medical physics
(Moderator: Alonso Gutierrez, Ph.D.)

10:40 – 11:10 Medical Imaging Informatics &AAPM webmaster update- G. Kagadis, Ph.D.

11:10 – 11:40 GPU Computing in Medical Physics - Steve Jiang, Ph.D.

11:40 – 12:10 Advances in proton and heavy ion treatment - Salahuddin Ahmad Ph.D.

12:10 – 12:40 Radiation Safety: challenges and opportunities since 911 - Michael
Charlton, Ph.D.

END OF SCIENTIFIC PROGRAM

12:40 – 2:00 PTW sponsored symposium and luncheon (Lone Star F)
• Dosimetry with a 3D water phantom- Wolfram Laub, Ph.D.
• Small field dosimetry and microdiamond detector – Jan Wuerfel Ph.D.

2:00 – 3:30 SWAAPM Business Meeting (San Jacinto)

2:00 – 3:30 ** New this year ** Residents/Students Social event (Bonham B)

Meet the professor: Brent Parker, PhD and Kyle Jones PhD
Discussion and tips on interviewing, job placement and career advancement.