PSMMP PUBLICATIONS 2016

• *Dosimetric and radiobiological comparison of CyberKnife M6™ InCise multileaf collimator over IRIS™ variable collimator in prostate stereotactic body radiation therapy*, Vindu Kathriarachchi, Charles Shang, Grant Evans, Theodora Leventouri, and Georgios Kalantzis, J Med Phys **41**, 135-143 (2016).

International/National Meetings
AAPM 2016 July 31-August 4, 2016, Washington D.C.

• *Impact Of The Dosimetric Consequences From Minimal Displacements Throughout The Treatment Time In APBI With SAVI Applicators* - S Chandrasekara¹*, S Pella², M Hyvarinen³, J Pinder⁴, (1) (2) 21st Century Oncology, Boca Raton, FL, (3) (4) Florida Atlantic University, Boca Raton FL.

• ACCELERATED PARTIAL BREAST IRRADIATION USING SAVI, MULTI LUMEN MAMMOSITE AND CONTURA APPLICATORS S. Pella, A. Kyriacou, M. Chilukuri 2016 AAPM annual, invited speaker.

• *The Importance of Immobilization Devices in Brachytherapy Treatments of Vaginal Cuff* - M Shojaei¹*, N Dumitru², S Pella³, A Bacala⁴, (1) (3) Florida Atlantic University, Boca Raton, FL, (2) 21st Century Oncology, Boca Raton, FL, (4) Mindanao State University-Iligan Institute of Technology, Iligan City.

• *The Consistency Dosimetric Analysis of the Accelerated Breast Brachytherapy* - J Pinder¹*, S Chandrasekara², S Pella³, A Bacala⁴, (1) Florida Atlantic University, Boca Raton, Florida, (2) (3) 21st Century Oncology, Boca Raton, FL, (4) Mindanao State University-Iligan Institute of Technology, Iligan City.


• *A Novel Test for Coincidence Between Light Fields and Electron Radiation Fields* - G Gibbard¹*, C Shang², S Khanal³, (1) (3) Florida Atlantic University, Boca Raton, FL, (2) Boca Raton Regional Hospital, Boca Raton, FL.

• *A Technique for Modeling a Diode Array Into the TPS for Lung SBRT*
Patient Specific QA - C Curley\textsuperscript{1*}, Z Ouhib\textsuperscript{2}, T Leventouri\textsuperscript{1}, (1) Florida Atlantic University, Boca Raton, FL, (2) Lynn Regional Cancer Center, Delray Beach, FL

- **A Potential Real Time AQA for Cyberknife Cones and MLC Based Treatments** - C Shang\textsuperscript{1}, G Gibbard\textsuperscript{2}, J Cole\textsuperscript{3}, A Schramm\textsuperscript{4}, T Leventouri\textsuperscript{5}, S Khanal\textsuperscript{6*}, (1) Boca Raton Regional Hospital, Boca Raton, FL, (2) (5) (6) Florida Atlantic University, Boca Raton, FL, (3) (4) Lynn Cancer Institute, Boca Raton, FL.

2016 ASTRO Annual Meeting, September 25-28, Boston MA

- THE IMPORTANCE OF LOCALIZATION AND IMMobilIZATION IN TREATMENT FOR ENDOMETRIAL CANCER WITH hdr BRACHYTHERAPY USING MULTI LUMEN CYLINDERS, N. Dumitru, M. Hyvarin, S. Pella, M. Shoajei.

ABS World Annual Congress, June 27-28, 2016, San Francisco, CA

- IMPACT OF THE DOSIMETRIC CONSEQUENCES FROM MINIMAL DISPLACEMENTS THROUGHOUT THE TREATMENT TIME IN APBI WITH SAVI APPLICATORS S. Chandrasekara, S. Pella, M. Hyvarin.


2016 AAMD Annual Meeting, June 12-16, Atlanta GA

- A DOSIMETRIC/BIOLOGICAL COMPARISON OF IMRT VERSUS RAPID ARC OPTIMIZATION IN WHOLE BREAST WITH AXILLARY NODE IRRADIATION S. Pella, N. Moshiri, invited speaker.

2016 RAMP Annual Meeting, Moscow

- A DOSIMETRIC COMPARISON OF IMRT VERSUS VMAT OPTIMIZATION FOR EARLY STAGE WHOLE BREAST CANCER, S. Pella, N Moshiri, T. Constantion, D. Littlejohn, T. Leventouri.

2016 ESTRO Annual Meeting April 29-May 3, Turin, Italy

- DOSIMETRIC CONSEQUENCES FROM MINIMAL DISPLACEMENTS IN APBI BRACHYTHERAPY USING THE SAVI APPLICATOR S. Chandrasekara, S. Pella, J. Pindel.

- THE IMPORTANCE OF IMMOBILIZATION AND LOCALIZATION OF GYNECOLOGICAL APPLICATORS IN HIGH DOSE RATE BRACHYTHERAPY TREATMENTS N. Dumitru, S. Pella, M. Hyvarin, C. Curley.
PSMMP PUBLICATIONS 2015


• A computational study on different penalty approaches for constrained optimization in radiation therapy treatment planning with a simulated annealing algorithm, Sadegh Mohamadi, Charles Shang, Zoubir Ouhib, Th. Leventouri, Georgios Kalantzis, 16th IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/ Distributed Computing (SNPD) June 1-3, 2015, Takamatsu, Japan DOI:10.1109/SNPD.2015.7176174.


• A computational tool for patient specific dosimetry and radiobiological modeling of selective internal radiation therapy with $^{90}$Y microspheres, Georgios Kalantzis, Th. Leventouri, Aditiya Apte, Charles Shang, Appl. Radiation and Isotopes, 105, 123-129, 2015 DOI: 10.1016/j.apradiso.2015.08.009.

• Dosimetric Evaluations Due to Minimal Displacements in Gynecological High Dose Rate Brachytherapy, Nicolae Dumitru, Silvia Pella, Mikko Hyvarinen, Samantha Long, Th. Leventouri, Brachytherapy, 14, 102, 2015.


• Should We Use RapidArc (VMAT) for Breast Treatments? A Dosimetric Comparison of IMRT Versus VMAT Optimization in Whole Breast Irradiation of Early Stage Breast Cancer, SU-E-T-693:N Moshiri Sedeh, S Pella, T Leventouri, D Littlejohn and T Costantino Med. Phys. 42, 3496 (2015); http://dx.doi.org/10.1118/1.4925057

• A GPU-Based Pencil Beam Algorithm for Dose Calculations in Proton Radiation Therapy, G Kalantzis, T Leventouri, H Tachibana and C Shang, Med. Phys. 42, SU-E-T-373339 (2015); http://dx.doi.org/10.1118/1.4924398

• Variations of Cardiac Dose at Different Respiratory Status in CyberKnife M6 Treatment Plans for Accelerated Partial Breast Irradiation (APBI), S Long, C Shang, G Evans and T Leventouri, Med. Phys. 42, SU-E-T-797: 3521 (2015); http://dx.doi.org/10.1118/1.4925161.
BOOK CHAPTER
A GPU-based pencil beam algorithm for dose calculations of proton therapy

International/National Meetings

- Will CyberKnife M6™ Multileaf collimator offer advantages over IRIS™ collimator in prostate SBRT?, Kathriarachchi V, Shang CY, Kalantzis G, Leventouri Th. AAPM Spring Clinical Meeting, St. Louis MO, March 7-10, 2015.
- Dosimetric Consequences from Minimal Displacements in APBI with SAVI applicators ABS Annual meeting – Orlando FL

PSMMP PUBLICATIONS 2014

1. DOSIMETRIC CONSEQUENCES FROM MINIMAL DISPLACEMENTS IN APBS WITH SAVI APPLICATORS, M. Hyvarinen S. Pella, N. Dumitru, Th. Leventouri, Annual Radiation Safety International meeting, 2014 Varna Bulgaria.
2. PLANNING TECHNIQUES WITH RESULTS IN ECLIPSE AND BRAINLAB FOR SBRT LUNG TUMORS, B. Doozan, S. Pella, Bay Care Radiation Oncology 2014, invited speaker.
4. CHALLENGES IN MEASURING OUTPUT FACTORS FOR SMALL FIELDS UNDER 1 CM C. Smith, S. Pella, A. Bacala, Th. Leventouri, AAPM, 2014 annual.
5. IMPROVING MOTION CONTROL IN HDR BRACHYTHERAPY FOR MULTY LUMEN CYLINDERS, M. Hyvarinen S. Pella, N. Dumitru, Th. Leventouri, AAPM, 2014 annual.

6. PLANNING TECHNIQUES WITH RESULTS IN ECLIPSE AND BRAINLAN FOR SBRT LUNG TUMORS, S. Pella, B. Doozan, Bay Care Radiation Oncology, 2014 annual.


8. CHALLENGES IN COMMISSIONING SMALL FIELDS FOR SRS TREATMENT PLANNING SYSTEMS C. Smith, A. Bacala, S. Pella, AAPM Spring, 2014


10. Measuring Output Factors for Photon Fields Smaller than $10 \text{ cm} \times 10 \text{ cm}$, B Doozan, S Pella, A Bacala, Th Leventouri, C Smith, J. Applied Clinical Medical Physics, 15, No. 3, 2014.