



Dr. Th. Leventouri  
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Director, Medical Physics Program  
Department of Physics  
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## Curriculum Vitae Theodora Leventouri

### EDUCATION

- Ph.D. Physics, Experimental Condensed Matter Physics, University of Athens, Greece (1972).
- Post Graduate Training: Visiting Research Scientist (1983-84), X-Rays and Applications Group, Oak Ridge National Laboratory (ORNL), USA.  
Visiting Research Scientist (1998), High Flux Isotope Reactor, Neutron Scattering Section, Solid State Division, ORNL, USA.

### ACADEMIC POSITIONS

- Professor, Physics Department, FAU 2006-
- Founding Director, Medical Physics program, FAU 2010-
- Director, Center for Biomedical and Materials Physics (CBAMP) 2006-
- Associate Professor, Physics Department, FAU 1992-2005
- Graduate Faculty, Charles E. Schmidt College of Science, FAU 2005-
- Adjunct Professor, Physics Department, FAU 1991-92
- Associate Scholar Scientist, Physics Department, FAU 1988-91
- Assoc. Professor, Physics Department, Univ. of Athens, Greece 1986-92
- Lecturer, Physics Department, University of Athens, Greece 1982-86
- Assist. Professor, Physics Department, Univ. of Athens, Greece 1973-82

### HONORS

- 2019: Fellow of the American Physical Society.
- 2019: Invited member of Sigma Xi, The Scientific Research Honor Society.
- 2016: Legacymakers, 100 Women of Distinction at Florida Atlantic University..
- 2008: Sabbatical, National Technical University of Athens, Greece.
- 2006: Faculty Research Incentive Award, Division of Research, FAU.
- 2003: Charles E. Schmidt College of Science UG Teaching Award Nominee.
- 2001: Advisor of the Year Award, for Eminent Leadership, Multicultural Premed Society.
- 1998: Sabbatical at HFIR of the Oak Ridge National Laboratory.
- 1997: Award for Excellence in Undergraduate Advising.
- 1997: Nomination for the Teacher of the Year award by the students.
- 1996: Teaching Incentive Program Award (TIP).
- 1968-73: Hellenic National Research Foundation Graduate Fellowship.

## NEW PROGRAM DEVELOPMENT-NATIONALLY ACCREDITED

- | <b>Medical Physics program</b>   |           |             |
|--|-----------|-------------|
| ○ Professional Science Master in Medical Physics (PSMMP)                                 | 2009-2010 |             |
| accredited by CAMPEP (Commission on Accreditation of Medical Physics Education Programs) | 2014      |             |
| CAMPEP reaccredited  | 2019      |             |
| CAMPEP reaccredited  | 2023      |             |
| ○ Accelerated Program BS Physics/PSMMP   | 2016      |             |
| ○ Medical Physics Certificate for PhD holders, CAMPEP accredited                         | 2018      |             |
| ○ Doctorate in Medical Physics   |           | in progress |

## PROFESSIONAL ORGANIZATIONS

- American Physical Society (APS, GMED, BIO), Fellow
- Sigma Xi, Invited member
- American Association of Physicists in Medicine (AAPM), Member
- Society of Directors of Academic Medical Physics Programs (SDAMPP), Member
- American Crystallographic Association (ACA), Member
- Materials Research Society (MRS), Member
- American Association of University Women (AAUW), Member
- National Association of Women in Education (NAWE), Member
- Association for Women in Science (AWIS). FAU Taskforce
- Hellenic Physics Society (HPS), Member

## TEACHING EXPERIENCE

1992-present, Department of Physics, Florida Atlantic University

1973-1992, Department of Physics, University of Athens, Greece

## FAU Instructional Activities

### Courses Taught

PHY 3221, PHY 4822L, PHS 5224, PHS 5204, PHY 5937, PHY 6938, PHY 6971, PHZ 6435, PHY 6920, PHY 2053, PHY 2054, PHY 3051, PHY 3050, PHY 3040, PHY 7980, PHZ 5304, RAT 6686, RAT 6975, RAT 6687, PHY 6920 RAT 6932

### New Courses Development

PHY 5937 "Intro Nanomaterials"

PHY 6938, PHZ 6435 "Modern X-ray Powder Diffraction"

### Advisor Ph.D. Physics

Nader Moshiri	Ph.D.	2023
Mukunda Pudasaini	Ph.D.	2022
Taindra Neupane	Ph.D.	2022
Sadegh Mohammadi M. K.	Ph.D.	2018
Casey Curley	Ph.D.	2016
Suraj P. Khanal	Ph.D.	2016
Vindu W. Kathiarachchi	Ph.D.	2015
Andreas Kyriacou	Ph.D.	2012
Nearchos I. Papanearchou	Ph.D.	2005
Antonella C. Kis	Ph.D.	2004
Angelica Hotiu	Ph.D. cand.	2003-05

**Co-Advisor Ph.D. Physics**

Panagiota Galanakou	Ph.D.	2023
Brian Doozan	Ph.D.	2016

**Advisor MS Physics**

Andreas Kyriacou		2010
Riccardo Venturelli		2009
Camelia E. Bunaciu		2002
Hadi Y. Moghaddam		2000
Nearchos I. Papanearchou		2000

**Co-Advisor Professional Science Master (PSM) in Medical Physics**

Tristan Irons		2023
Erdem Yigit		2023
Shakeel Pereira		2022
David Gregorish		2022
Maxwell Kassel		2020
Mariam Ibrahim		2020
Michael Leyva		2019
Sara Price-Wisnoskie		2019
Panagiota Galanakou		2019
Evan Hana		2019
Nicolae Dumitru		2019
Udeni Kalpani		2018
Mushfiq Rahman		2018
Taindra Neupane		2018
Mukunda Pudasaini		2018
Marjan Shojaie		2018
Zachary Christ		2018
Grant Gibbard		2017
Janeil Pinder		2017
Sadeg Mohammadi		2016
Samanthia Long		2015
Annette Conill		2015
Nader Moshiri		2015
Mikko Hyvarinen		2015
Casey Curley		2015
Grant Evans		2014
Sheyla Enright		2014
Cindy Smith		2014
Andreea Fodor-Pennington		2014
Bryan Doozan		2014
Bereket Ghebremichael		2014
Vindu W. Kathiarachchi		2013
Angelina Bacala		2013
Suraj P. Khanal		2013
Daniel Vergara		2012
Ramses Herrera		2012
Andreas Kyriacou		2011

**Dissertation Committee Member:** 14 students

**PSMMP Committee Member:** for all students

### **Undergraduate Student Research**

12 students in Research Apprenticeship/Directed Independent Studies.

### **Teaching Experience prior FAU**

1973-88, Department of Physics, University of Athens Greece. General physics, Waves and Optics, generated class notes on "waves and optics" published by the University, set-up and wrote 2 x-ray diffraction experiments for the senior physics lab. Advisor for 4 Ph.D. dissertations, and 12 senior research projects.

### SERVICE

#### **University Service**

- Founder and Director Medical Physics program: 2009-Fall 2022, CAMPEP 10 years evaluation of the Medical Physics program: Submitted to CAMPEP the re-accreditation document June 2022. Organized the on site visit of the 2 Board members in October 2022, meeting with Faculty, Administration and Students.

Recruit students, evaluate applications, (8 students entered the PSMMP program).

Organize class-schedules, oversee courses of 4 Adjunct Medical Physicists/Research Affiliate Associate Professors.

Organize PSMMP students' presentations for International/National Medical Physics meetings.

Work with the Partner Hospitals and Medical Centers for the clinical training of the PSMMP students.

- Professional Science Masters in Medical Physics (PSMMP) 2010-CAMPEP accredited 2014, Reaccredited 2019.
- Medical Physics Certificate for PhD holders, CAMPEP accredited 2018
- University Faculty Senate, elected 2017-
- Director: Center for Biomedical and Materials Physics (CBAMP) 2005-
- Institutional Review Board (IRB) 2012-
- Steering Committee Human Imaging Core 2017-
- Institutional Advisory Committee 2019-
- College Connect 2016
- Presenter at the Women's Leadership Forum, March 15 2013 Women in Science, Technology, Engineering and Mathematics (STEM) Title: *A Career in Physics*
- Radiation Safety Committee 2006-2020
- FAU Mentoring Program 1999-
- President's Commission on the Status of Women: Chair of the Subcommittee on Women in Science and Engineering 1996-98
- "Status of Women in Physics" sponsored by the APS (American Physical Society), Speaker 1993-
- Committee on Foreign Faculty and Scholars 1993

#### **College Service**

- NTT Instructors Promotion Committee 2013-8

- NTT Scientists Promotion Committee 2013-8
- Frontiers in Science Steering Committee 2015-9
- CESCOS Dean's Task force: Association of Women in Science (AWIS), FAU 2014-
- CESCOS Dean's Search Committee Member 2012-13
- Graduate Student Assoc. (GSA) Research Day, Judge 2010, 11, 12, 13
- Graduate & Prof. Student Assoc. (GPSA) Research Day, Judge 2014-
- Pre-professional Advisory Committee Chair 2000-03
- Pre-professional Advisory Committee 1992-2000
- CESCOS Strategic Planning Faculty Committee 2003
- Advisor for the Multicultural Premedical Students Society 2000-01
- Advisor for the Premedical Honors Association 2000-01
- Presentations in *Science day* at FAU, Member 1990-93
- FAU Open House, *Orientation day* 1992-
- Planning Committee for the College of Science, Member 1993
- Science/SECME Days (South Eastern Consortium for Minorities in Engineering/Science, Engineering, Communications and Mathematics Enrichment) 1993
- Governance Committee 1994-96
- Member of the organizing Committee and role model speaker for WISE (Women In Science and Engineering) 1989

### **Physics Department Service**

- Founding Director: Medical Physics program 2009-
- Director: Center for Biomedical and Materials Physics (CBAMP) 2005-
- Assessment Medical Physics program 2014-
- Master Teacher 2014-
- New Faculty for Medical Physics Search Committee Chair 2014
- New Faculty for Medical Physics Search Committee Chair 2018
- Undergraduate Advisor, Department of Physics 2006-15
- SPS/Sigma Pi Sigma Advisor 2006-14
- Physics Department New Faculty Search Committee 2002-13
- Physics Colloquium Chair 2003
- Physics Department Chair Search Committee 2001-02
- Physics Department New Faculty Search Committee; Chair of the Subcommittee for Condensed Matter/Biophysics 2004
- New Faculty Search Committee 1995

### **Community Outreach**

To establish partnerships for development of the Medical Physics program: 2008-

- Boca Raton Regional Hospital
- South Florida Radiation Oncology/21<sup>st</sup> Century Oncology/Genesis Care
- Wellington Regional Medical Center
- Broward Health

- The Broward County Science Fair, Judge 2005
- Executive Board of the Hellenic Society "Paideia" 2003-08
- Hellenic Society "Paideia" Secretary elected 2004
- Poinciana Elementary Magnet School, *a Physicist at work* 1995
- Boca Middle, Science Fair Judge 1989

### **Editorial Service**

#### **Reviewer**

- National Science Foundation
- Physical Review B
- Physical Review Letters
- Journal of Biomaterials
- Journal of Pharmaceutical and Biomedical Analysis
- Materials Research Society Proceedings
- Crystal Growth & Design
- Journal of Solid State Chemistry
- Acta Biomaterialia
- Thermochemica Acta
- Journal of Surface Coatings and Technology
- Journal of Biomedical Materials Research. Part A
- J. American Mineralogist
- J. Magnetism and Magnetic Materials

#### RESEARCH

**A)** Research interests focus on structure related physical properties of crystalline matter. Main experimental tool is x-ray diffraction, neutron scattering and electron microscopy are used at ORNL. Research topics include:

- Crystal structure, microstructure and properties of apatite based natural & synthetic nano-biomaterials.
- Structure and magnetism of bioceramics.
- Structure, microstructure and magnetism of alloy catalysts in carbon nanofibers.
- Preferred orientation, phonons, critical current density of bulk high- $T_C$  superconductors.
- Magnetic transitions in long-range ordered alloys.
- Structure and phonons in colossal magnetoresistance materials (CMR).
- Electronic states of light elements with x-ray Raman spectroscopy.
- Internal strains in solids with the techniques of x-ray crystallography.
- Plasmon excitations in solids using inelastic x-ray scattering.

#### **B)** Medical Physics:

- Computational
- Clinical

#### GRANTS

***Over \$ 1.5 million from Federal Agencies, Companies and FAU***

- **GT-002786 NSWC:** Co-PI “Development and Analysis of Composite Wetsuit”  
\$180,000 PI Hassan Mahfuz (continued).
- **DoD HBCU/MSI:** Co-PI in "Acquisition of a Transmission Electron Microscope to Enhance Multidisciplinary Research and STEM Education" \$599,493 PI: Vivian Merk.
- **Pending Florida Department of Health:** Co-PI in “Cancer Center of Excellence” (MCIFAU) PI: Gregg Fields I-HEALTH
- 2018: FAU Technology Fee Enhancing Education in the Medical Physics Laboratory \$5.1K
- 2016 Varian Medical Systems: Non-Clinical Eclipse Educational/Research Co-PIs: Th. Leventouri, G. Kalantzis, Z. Ouhib \$250K
- 2016: Co-PI, FAU Tech Fee: Med Physics Lab IV, PI: Dr. G. Kalantzis \$34K
- 2014: FAU Technology Fee: Medical Physics Lab III \$23K
- 2013: FAU Technology Fee: Medical Physics Lab II \$10K
- 2013: South Florida Radiation Oncology \$2.4K
- ORNL/CNMS2013-055: “Effect of functionalized single walled carbon nanotubes (fSWCNT) on the crystal structure and mechanical properties of nylon-hybridized Hydroxyapatite”<sup>[1]</sup><sub>[SEP]</sub> Feb. 1, 2013-Jan. 31, 2015. User Grant \$90K
- 2012: Sloan Foundation Professional Science Masters development \$1K
- 2012: Nucletron Corporation: Software grant (Oncentra Treatment Planning System) Medical Physics Laboratory \$100K
- 2012: Technology Fee: Medical Physics Lab \$10K
- 2011: Sloan Foundation Professional Science Masters development \$2K
- ORNL/CMS 2011: *Electron Microscopy of Hydroxyapatite Nanocomposites for Biomaterials Applications* ID: CNMS2011-°©-R83. Users Grant \$30K
- 2011: South Florida Radiation Oncology \$10K
- 2010: Sloan Foundation Professional Science Masters development \$2K
- 2010: ORNL/HFIR *Neutron Powder Diffraction Studies of Fe-substituted Nano-Hydroxyapatite*. User Grant: \$30K
- 2010: ORNL, NSSD, Collaborative Research Opportunities: Neutron Sciences Visitors Program: *Neutron Powder Diffraction Studies of Fe-substituted Nano-Hydroxyapatite* \$2K
- 2007: The Cancer Institute, FAU Research Park: “*Nanoscale Magnetic Biomaterials*” \$18K
- 2006: Center for Nanophase Materials Sciences (CNMS), Oak Ridge National Laboratory (ORNL) “*Tuning Magnetic Nanoparticles for Nanoscale Hysteretic Energy Loss, Temperature Control, and Catalytic Carbon Nanofiber Synthesis*”; Renewed User Grant \$30K
- 2006: The Cancer Institute, FAU Research Park; *Research Leading Toward Medical Application of Nanoscale Magnetic Biomaterials* \$16K
- 2006: 3i Implants Innovations Inc. X-ray diffraction analysis of the crystallinity of as deposited CaP \$6.35K
- 2005: Center for Nanophase Materials Sciences (CNMS), ORNL; *Tuning Magnetic Nanoparticles for Nanoscale Hysteretic Energy Loss, Temperature Control, and Catalytic Carbon Nanofiber Synthesis* User Grant, \$30K
- 2005: Southeastern Universities Research Association/Oak Ridge National Lab (SURA/ORNL) Co-Operative Program; “*Nanophase Magnetic Biomaterials & Neutron Scattering from Bulk Magnetic Biomaterials*” \$7.5K

- 2005: The Cancer Institute, FAU Research Park; *Research Leading Toward Medical Application of Ferrimagnetic Bioglass Ceramics* \$15K
- 2004: The Cancer Institute, FAU Research Park; *Research Leading Toward Medical Application of Ferrimagnetic Bioglass Ceramics* \$12.6K
- 2004: SURA/ORNL Co-Operative Program; *Magnetism, Structure and Microstructure of Ferrimagnetic Bioglass Ceramics* \$6.5K
- 2003: SURA/ORNL Co-Operative Program; *Structure, Magnetic and Microstructural Properties of Bioactive Ferrimagnetic Glass-Ceramics* \$6K
- 2002: SURA/ORNL Co-Operative Program; *Processing, Magnetization and Structural Studies of Bioactive Ferromagnetic Glass-Ceramics* \$5.9K
- 2002: ORNL, Solid State Division, Superconductivity Group; *Magnetization Studies of Bioactive Ferrimagnetic Glass-Ceramics* User Grant \$28.5K
- 2001: SURA/ORNL Co-Operative Program; *Processing, Magnetization and Structural Studies of Bioactive Ferromagnetic Glass-Ceramics* \$7K
- 2001: ORNL, Solid State Division, Superconductivity Group; *Magnetization Studies of Bioactive Ferrimagnetic Glass-Ceramics* User Grant \$24K
- 2001: FAU Charles Schmidt College of Science, small equipment grant, meritorious for the Presidential Research Development Awards. \$2K
- 2000: SURA/ORNL Co-Operative Program; *"Preparation and Neutron Diffraction Studies of Silicon-Substituted Hydroxyapatite"* \$7.5K
- 2000: ORNL, beam time on the HB4 diffractometer at the High Flux Isotope Reactor (HFIR) *Neutron Diffraction Studies of Silicon-Substituted Hydroxyapatite* User Grant \$15K
- 1999: SURA/ORNL Co-Operative Program; *Neutron Diffraction Studies of Synthetic Carbonated Hydroxyapatites* \$5.5 K
- 1999: ORNL, beam time on the HB4 diffractometer at HFIR; *Neutron Diffraction Studies of Synthetic Carbonated Haps* User Grant: \$25.2K
- 1998: SURA/ORNL Co-Operative Program; *Neutron Diffraction Studies of a Carbonate Fluorapatite* \$5.5K
- 1998: ORNL, beam time on the HB4 diffractometer at HFIR; *Neutron Diffraction Studies of a Carbonate Fluorapatite* User Grant \$15K
- 1998: FAU Research Initiative Award; *Structural Studies of Carbonate Apatites* \$5K
- 1997: SIEMENS, Equipment Grant \$19.6K
- 1996: Oak Ridge Associated Universities (ORAU), *Neutron Diffraction experiments on High Temperature Superconductivity*\$ \$1.5K
- 1996: ORNL, beam time on the HB4 diffractometer at HFIR; *"Neutron Diffraction experiments on High Temper. Superconductivity"* User Grant: \$15K
- 1995: ORAU Neutron Diffraction experiments at the HFIR of the ORNL \$1.4K
- 1995: ORNL, High Temperature Materials Laboratory (HTML) *X-ray Diffraction on High Temperature Superconductors* User Grant \$6K
- 1994: DOE Fellowship Program, # S-3529 (ORNL) \$1.2K
- 1993: FAU Internal Research Program; *Experimental Measurement of Phase Boundaries in Alloys* \$5K
- 1989-90: Department of Research and Technology, Greece; *High  $T_c$  Superconductivity* with colleagues from Greece \$288K
- 1989-90: Defense Advanced Research Projects Agency (DARPA) continuation, Contract #MDA972-88-J-1006 *Materials Synthesis, Processing Characterization & Physical Properties of High  $T_c$  SC* with FAU colleagues \$185K



- 1988-89: DARPA # MDA972-88-J-1006; *High T<sub>c</sub> Superconductors: Synthesis, Processing and Applications Development* with FAU colleagues \$375K

### **Collaborations**

- Oak Ridge National Laboratory
- Florida Atlantic University
- National Technical University of Athens, Greece
- University of Athens, Greece
- Technical University of Crete, Greece
- Florida State University
- University of Florida
- National Research Foundation of Greece
- Motorola Inc. Ft. Lauderdale, Florida
- University of Miami

### **Conferences Organized**

- Session "Inorganic Materials in Biological Systems". Invited by the American Crystallographic Association, Annual Meeting, May 28-June 2, Orlando, FL, 2005
- "Progress on High T<sub>c</sub> Superconductivity", Athens, Greece 1988
- "IV Panhellenic Conference on Solid State Physics" Sept 20-23, 1988

### **PUBLICATIONS**

(1748 Citations Research Gate 9/2023, h Index 15)

#### **Peer Reviewed Papers**

1. *Radiological indices and equivalent uniform dose prediction through an artificial neural network in lung cancer radiation therapy*, Pudasaini, M., Pella, S., Leventouri T., Falchook, A., Muhammad, W., Radiation Oncology, submitted.
2. *Viability of the virtual cone technique using a fixed small multi-leaf collimator field for treatment of trigeminal neuralgia*, Neupane T., Shang C., Kassel M., Muhammad W., Leventouri T., *Journal of Applied Clinical Medical Physics* 24 (8), 2023 DOI: [10.1002/acm2.14148](https://doi.org/10.1002/acm2.14148).
3. *Dosimetric Effects of Inserted Non-Radioactive Elements in Tumor Area in Proton Therapy*, Galanakou, P., Leventouri, T. and Muhammad, W. *Frontiers in Physics*, submitted.
4. *A Novel Monte Carlo (MC) Dose Model for Small MLC Fields of the CyberKnife® M6 Radiosurgery System using the EGSnrc Taindra* Neupane, Charles Shang, Wazir Muhammad, Theodora Leventouri, , *J Applied Clinical Medical Physics* **24**, e13880 (2023).
5. *Non-radioactive elements for prompt gamma enhancement in proton therapy*, P. Galanakou, T. Leventouri, and W. Muhammad, *Radiat. Phys. Chem.* **196**, (2022).
6. *Dosimetric comparison of treatment plans computed with Finite Size Pencil Beam and Monte Carlo algorithms using the InCiseT Multileaf collimator equipped CyberKnife® system*, Kalpani Udeni Galpayage, Charles Shang, Theodora Leventouri, *Journal of Medical Physics*, **45** March 3, (2020).

7. *A study of wavelet-based denoising and a new shrinkage function for low-dose CT scans* Mohammadi, Sadegh; Leventouri, Theodora, Biomedical Physics & Engineering Express, BPEX-101275.R2, (2019).
8. *Raman and IR study of the effect of Fe substitution in hydroxyapatites and deuterated hydroxyapatite*, A. Antonakos, E. Liarokapis, A. Kyriakou, Th. Leventouri, American Mineralogist **102**, 85-91 (2017).
9. *A GPU accelerated simulation annealing algorithm for IMRT optimization*, P. Galanakou, T. Leventouri, A. Georgakilas, G. Kalantzis, IEEE SNPD (2017)
10. *Improvement of the fracture toughness of hydroxyapatite (HAp) by incorporation of carboxyl functionalized single walled carbon nanotubes (CfSWCNTs) and nylon*, S.P. Khanal, H. Mahfuz, A.J. Rondinone, Th. Leventouri, Mat Sc Eng C **60**, 204-10, (2016).
11. *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).
12. *Investigations of a GPU-based levy-firefly algorithm for constrained optimization of radiation therapy treatment planning*, G Kalantzis, C Shang, Y Lei, T Leventouri, Swarm and Evolutionary Computation **26**, 191-201 (2016).
13. *Evaluation of surface dose outside the treatment area for five breast cancer irradiation modalities using thermo-luminescent dosimeters*, Suraj Prasad Khanal, Zoubir Ouhib, Rashmi K Benda, Th. Leventouri, Intern. J. Cancer Therapy and Oncology, **3**, (2015).
14. *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, G. Kalantzis, IEEE (2015).
15. *A GPU-based Pencil Beam Algorithm for Dose Calculations in Proton Radiation Therapy*, Georgios Kalantzis, Th. Leventouri, Hidenobu Tachibana, Charles Shang, Int. J. of Networked and Distributed Computing, **3** 243-249 (2015).
16. *A computational tool for patient specific dosimetry and radiobiological modeling of selective internal radiation therapy with <sup>90</sup>Y microspheres*, Georgios Kalantzis, Th. Leventouri, Aditiya Apte, Charles Shang, Applied Radiation and Isotopes, **105**, 123-129 (2015).
17. *A Study of Mechanical Behavior and Morphology of Carbon Nanotube Reinforced UHMWPE/Nylon 6 Hybrid Polymer Nanocomposite Fiber*, Mujibur R. Khan, Hassan Mahfuz, Ashfaq Adnan, Th. Leventouri, and Saheem Absar, Fibers and Polymers **15**, 1484-1492 (2014).
18. *Combined x-ray and neutron diffraction Rietveld refinement in iron substituted nano-hydroxyapatite* A. Kyriacou, Th. Leventouri, B. C. Chakoumakos, V. O. Garlea, C. B. dela Cruz, A. J. Rondinone, K. D. Sorge, J Mater Sci **48**, 3535–3545 (2013).
19. *Elastic Properties of UHMWPE-SWCNT Nanocomposites' Fiber: An Experimental, Theoretic, and Molecular Dynamics Evaluation*, Mujibur R. Khan, Hassan Mahfuz,

- Ashfaq Adnan, Ishraq Shabib, Th. Leventouri, *J Mat Engin & Performance* **22** (2013).
20. *Effect of strain hardening on the elastic properties and normalized velocity of hybrid UHMWPE–nylon 6–SWCNT nanocomposites fiber*, M. R. Khan, H. Mahfuz, Th. Leventouri. *J. Mat. Res.* **27**, 2657-2667 (2012).
  21. *Investigation of MWCNT reinforcement on the strain hardening behavior of Ultra High Molecular Weight Polyethylene (UHMWPE)*, H. Mahfuz, M. R. Khan, Th. Leventouri, E. Liarokapis, *J Nanotechnology* **2011** (2011).
  22. *Enhancing toughness of LDPE filaments through infusion of MWCNTs and UHMWPE* M. R. Khan, H. Mahfuz, Th. Leventouri, V. K. Rangari and A. Kyriacou, *Polymer Engineering and Science* **2009** (2010).
  23. *Crystal structure studies of human dental apatite as a function of age* Th. Leventouri, A. Antonakos, A. Kyriacou, R. Venturelli, E. Liarokapis, V. Perdikatsis, *Intern J Biomat* **2009** (2009).
  24. *Magnetic properties of Fe-Co catalyst particles in vertically aligned carbon nanofibers* K. D. Sorge, K. L. Klein, A. V. Melechko, C. L. Finkel, O. Malkina, Th. Leventouri, J. D. Fowlkes, P. D. Rack, and M. L. Simpson. *J. Appl. Phys.* **104**, 033909 1-7 (2008).
  25. *Micro-Raman and FTIR Studies of Synthetic and Natural Apatites*, A. Antonakos, E. Liarokapis, Th. Leventouri. *J. Biomat.* **28**, 3043-3054 (2007).
  26. *Synthetic and Biological Hydroxyapatites: Crystal Structure Questions*, Th. Leventouri, *J. Biomat.* **27**, 3339-3342, (2006). (Leading Opinion Paper, invited).
  27. *Magnetic Alloys in Nanoscale Biomaterials*", Th. Leventouri, A. V. Melechko, K. D. Sorge, K. L. Klein, J. D. Fowlkes, P. D. Rack, I. M. Anderson, J. R. Thompson, T. E. McKnight, M. L. Simpson, *Trans Met A*, **37A**, 3423-3427 (2006).
  28. *Mean field approximations for the electronic states in disordered alloys* J. S. Faulkner, S. Pella, A. Rusanu, Y. Puzyrev, Th. Leventouri, G. M. Stocks, and B. Ujfalussy, *Phil. Mag.* **86** 2661-2671, (2006).
  29. *Structure, Microstructure and Magnetism in Ferrimagnetic Bioglass Ceramics*, Th. Leventouri, A. C. Kis, J. R. Thompson, and I. M. Anderson, *J. Biomat.* **26**, 4924-4931, (2005).
  30. *Effect of Simulated Body Fluid on the Microstructure of Ferrimagnetic Bioglass Ceramics*. N. Papanearchou, Th. Leventouri A. C. Kis, A. Hotiu, and J. M. Anderson, *Mat. Res. Soc.* **839**, P3.7.1, (2005).
  31. *Magnetic and structural properties of ferrimagnetic bioceramics*, A. C. Kis, Th. Leventouri, J. R. Thompson, *Mater. Sci. Forum* **473**, 117-122, (2005).
  32. *Using Computer Simulations to Enhance Teaching the Structure of Materials*, N. I. Papanearchou and Th. Leventouri, *Computer Based Learning in Science*, Vol. **2**, p. 106-115, (2004).
  33. *Neutron powder diffraction studies of silicon substituted hydroxyapatite*, Th. Leventouri, C. E. Bunaciu, V. Perdikatsis, *J. Biomat.* **24**, 4205-11 (2003)
  34. *Processing, Structure and Magnetic Properties of Bioactive, Ferrimagnetic Glass-Ceramics*, Th. Leventouri, A. C. Kis, C. E. Bunaciu, K. Sorge, J. R. Thompson, *Mat. Res. Soc. Symp. Proc.* **711**, 271 (2002).
  35. *A Comparison of Crystal Structure Parameters of Natural and Synthetic Apatites from Neutron Powder Diffraction*, Th. Leventouri, B. C. Chakoumakos, N. Papanearchou, V. Perdikatsis, *J. Mat. Res.* **16**, 2600-06 (2001).
  36. *Crystal Structure Studies of Natural and Synthetic Apatites from Neutron Powder Diffraction*, Th. Leventouri, B. C. Chakoumakos, N. Papanearchou, V. Perdikatsis, *Mater. Sci. Forum* **378**, 517-22 (2001).

37. *Atomic Displacements Parameters of Carbonate Apatites from Powder Neutron Diffraction Data*, Th. Leventouri, H.Y. Moghaddam, N. Papanearchou, C.E. Bunaciu, R.L. Levinson, O. Martinez, *Mat. Res. Soc. Symp. Proc.* **599**, 79 (2000).
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### International Conferences

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7. *A Dosimetric Comparison of IMR Vs VMAT Optimization in Early Stage Whole Breast Cancer*, S Pella, N Moshiri, T Leventouri, AAPM Annual, 2018.
8. *Dosimetric Evaluations of the Bladder and Rectum in Brachytherapy Treatments Using Multi-Lumen Cylinders*, N Dumitru<sup>1</sup>, M Shojaei, S Pella, T Leventouri, AAPM Annual, 2018.
9. *Dose Rate Dosimetric Effects During the 6 MV Flattening Filter Free RapidArc-Based Stereotactic Body Radiation Therapy On Lung* N Dumitru, M Pudasaini, S Pella, T Leventouri, AAPM Annual, 2018.
10. *Potential Efficacy of Monte Carlo Dose Calculations of 6MV FFF Photon Beam of M6™ CyberKnife® using the EGSnrc Program*, T. Neupane, M. Rahman, C. Shang, T. Leventouri, AAPM Spring Meeting 2018, Las Vegas, NV.
11. *Effects of Therapeutic Radiation On Sperm in Prostate External Radiotherapy* A Ataei\*, T Leventouri, S Pella, AAPM Annual Denver, CO, 2017.
12. *Implementation of a Parallel Simulating Annealing Algorithm for Intensity Modulated Radiation Therapy Optimization*, P Galanakou\*, T Leventouri, G Kalantzis, AAPM July 30-Aug 3, Denver, CO, 2017.
13. *Consistency of Treatment Volume Vs. Bladder and Rectum Anatomical Variations with Fractionated High-Dose Rate GYN Brachytherapy Using Multi Lumen Cylinders*, M Shojaei\*, N Dumitru, S Pella, T Leventouri, AAPM July 30-Aug 3, Denver, CO, 2017.
14. *Dosimetric Implications of the Organs at Risk in Vaginal Cuff Brachytherapy with Multi-Lumen Cylinder*, N Dumitru, M Shojaei, S Pella, T Leventouri, AAPM July 30-Aug 3, Denver, CO, 2017.
15. *A Technique for Modeling a Diode Array Into the TPS for Lung SBRT Patient Specific QA* - C Curley, Z Ouhib, T Leventouri, AAPM 2016 July 31-August 4, 2016, Washington D.C.
16. *A Potential Real Time AQA for Cyberknife Cones and MLC Based Treatments* - C Shang, G Gibbard, J Cole, A Schramm, T Leventouri, S Khanal, AAPM 2016 July 31-August 4, 2016, Washington D.C.
17. *Effect of Processing Temperature on Crystal Structure, Particle Morphology and Magnetic Properties of Nanophase Fe-Hydroxyapatite*, Kathriarachchi V, Leventouri Th and Sorge K, APS March Meeting, San Antonio TX, March 2-6, 2015.
18. *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.
19. *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.
20. *Preparation, characterization and Mechanical Testing of fSWCNT/HAp-Nylon hybridized composite biomaterial*, S. Khanal, Th. Leventouri, H. Mahfuz, A. Rondinone APS March Meeting, Denver, CO March 5<sup>th</sup>, 2014.
21. *Evaluation of surface dose outside treatment area for breast cancer irradiation modalities using Thermo-luminescent Dosimeters (TLDs)*, S. Khanal, Z. Ouhib, R. Benda, Th. Leventouri, American Brachytherapy Society (ABS) Annual Meeting, San Diego, CA 3<sup>rd</sup> April, 2014.
22. *Commissioning for SRS Planning Systems*, Silvia Pella, Cindy Smith, A. Bacala,
23. *Investigation of Dose Variation in High Dose Radiation Brachytherapy*, M. Hyvarinen, D. Pella, Th. Leventouri, C. Casey, N. Dimitru, R. Herrera, S. Long, AAPM July 20-24, 2014 Austin TX.

24. *Motion Control Challenges in High Dose Rate Brachytherapy*, M. Hyvarinen, D. Pella, Th. Leventouri, N. Dimitru, AAPM July 20-24, 2014 Austin TX.
25. *Combined X-Ray and Neutron Powder Diffraction Studies of Nanoscale  $\text{Ca}_{5-x}\text{Fe}_x(\text{PO}_4)_3\text{OH}$  Systems*, A. Kyriacou, Th. Leventouri, B.C. Chakoumakos, V.O. Garlea, C. D. Cruz, A.J. Rondinore, K.D. Sorge, APS March Meeting 2012 Boston, Feb 27-March 2 2012.
26. *Crystal structure and magnetic properties of Fe Substituted Nanosized Hydroxyapatite*, A. Kyriacou, R. Venturelli, K. D. Sorge, Th. Leventouri, APS March Meeting 09 Pittsburgh, March 16-20 2009.
27. *Magnetic Properties of Fe-Co Catalysts for Carbon Nanofiber Growth*, O. Malkina, C. Finkel, K. D. Sorge, Th. Leventouri, K. L. Klein, A. V. Meleshko, J. D. Fowlkes, P. D. Rack, M. L. Simpson, APS March Meeting, Denver CO, March 3-9, 2007.
28. *Micro-Raman and FTIR Studies of Synthetic and Natural Apatites*, A. Antonakos, E. Liarokapis, Th. Leventouri, APS March Meeting, Denver CO, March 3-9, 2007.
29. *Crystallographic Properties of Physiological Hydroxyapatite as a Function of Age*, Th. Leventouri, R. Venturelli, A. Kyriacou, APS March Meeting, Denver CO, March 3-9, 2007.
30. *FTIR and Low Temperatures Micro-Raman study on Carbonate Apatites as a function of carbonate content* A. Antonakos, E. Liarokapis, Th. Leventouri. 5th International Conference on Inorganic Materials, Ljubljana, Slovenia, 23-26 September, 2006.
31. *Micro-Raman and FTIR Studies on Carbonate Apatites* A. Antonakos, E. Liarokapis, Th. Leventouri. ESB, 20<sup>th</sup> European Conference on Biomaterials, September 27<sup>th</sup>–October 1<sup>st</sup>, Nantes France, 2006.
32. *Fe-Co magnetic alloy catalysts for the synthesis of vertically aligned carbon nanofibers* K.L. Klein, A.V. Melechko, J.D. Fowlkes, I.M. Anderson, K. D. Sorge, T. Leventouri, J.R. Thompson, R. Rucker, P.D. Rack, T. E. McKnight, and M.L. Simpson, MRS Spring Meeting, San Francisco, CA, April 17-21, 2006.
33. *Magnetic Properties of Fe-alloy Catalyst Nanoparticles for Carbon Nanofiber Synthesis* K. D. Sorge, Th. Leventouri, C. Finkel, O. Malkina, P. D. Rack, A. V. Melechko, J. D. Fowlkes, K. L. Klein, M. L. Simpson, MAR06 APS Meeting, Baltimore MD March 13-17, 2006.
34. *Carbonate Substitution in the Apatite Structure*. N. Papanearchou, Th. Leventouri, B. C. Chakoumakos, V. Perdikatsis, American Crystallographic Association, Orlando, FL, May 28-June 2, 2005.
35. *“Effect of Simulated Body Fluid on the Microstructure of Ferrimagnetic Bioglass Ceramics.”* N. Papanearchou, A. C. Kis, Th. Leventouri, A. Hotiu, and J. M. Anderson, Materials Research Society, Boston MA, November 29-December 5, 2004.
36. *Microstructural Studies of Bioglass Ceramics* A. C. Kis, N. Papanearchou, Th. Leventouri, I. M. Anderson, and B. S. Horowitz, Biotech Florida, Miami FL, March 2004.
37. *Magnetic and structural properties of ferrimagnetic bioceramics*, A. C. Kis, Th. Leventouri, J. R. Thompson, 4<sup>th</sup> Hungarian Confer. & Exhibition on Materials Science Testing and Informatics, Budapest Hungary, October 12-14, 2003.
38. *Processing, Structure and Magnetism of Bioglass Ceramics* Th. Leventouri, A. C. Kis, and J. R. Thompson, APS March Meeting, Austin TX, March 2-7, 2003.
39. *Processing and Magnetic Properties of Bioceramics*, A. C. Kis, Th. Leventouri, C. E. Bunaciu, K. Sorge, J. R. Thomson, European Physical Society, EPS-12, Budapest Hungary, August 26-30, 2002.

40. *Processing, Structure and Magnetic Properties of Bioactive, Ferrimagnetic Glass-Ceramics*, A. C. Kis, Th. Leventouri, C. E. Bunaciu, K. Sorge, J. R. Thomson, *BioTech 2002, FAU, Boca Raton FL, March 7, 2002.*
41. *Neutron Crystallography of Carbonate-Substituted Hydroxyapatite*, B. C. Chakoumakos, Th. Leventouri, H. Y. Moghaddam, V. Perdikatsis, *APS Centennial Meeting, Atlanta GA, March 20-26, 1999.*
42. *Atomic Displacement Parameters of a Carbonate Apatite from Powder Neutron Diffraction Data*, Th. Leventouri, B. C. Chakoumakos, H. Y. Moghaddam, V. Perdikatsis, *APS Centennial Meeting, Atlanta GA, March 20-26, 1999.*
43. *The Effect of Composition on the Structural, Magnetic and Electrical Properties of the System  $La_{1-x}Ca_xMnO_3$* , Th. Leventouri, J.J. Neumeier, D.H. Goodwin, *The Minerals, Metals and Materials Society (TMS), Indianapolis IN, Sept 14-18, 1997.*
44. *Refinement of the Structure of Ca substituted YBCO from X-ray Powder Diffraction Data*, Th. Leventouri, *Materials Aspects of High Tc Superconductivity, Delphi Greece, August 19-31, 1996.*
45. *Structural and Raman Studies of the Y-Ba-Ca-Cu-O Superconductor*, Th. Leventouri M. Calamiotou O. Papageorgiou E. Liarokapis N. Poulakis, V. Perdikatsis, *APS March Meeting, Pittsburgh PA, March 21-25, 1994.*
46. *X-ray Diffraction, Raman and Photoluminescence Spectroscopic Characterization of CVD Diamond Films*, H. Wang, Th. Leventouri, F. D. Medina, M. A. Moreno, M. I. Landstrass, *Optical Society of America, Annual Meeting, Toronto Ontario Canada, October 3-8, 1993.*
47. *Melt Textured Growth of Bulk Partially Oriented Y-Ba-Cu-O*, Th. Leventouri, E. Liarokapis, F. D. Medina, *MRS Fall Meeting, Boston MA, 1992.*
48. *EPR Spectra of Bulk Textured Samples of the  $YBa_2Cu_3O_x$  Superconductors*, M. Calamiotou, N. Guskos, Th. Leventouri, S. M. Paraskevas, Y. S. Hascicek, *APS March Meeting Indianapolis IN, March 16-20, 1992.*
49. *Raman Spectroscopy as a probe of the Bulk Microcrystalline Orientation in High  $T_c$  Superconductors*, E. Liarokapis, Th. Leventouri, *M<sup>2</sup>S-HTSC III, Kanazawa Japan, July 22-26, 1991.*
50. *X-ray and Raman Studies of the Pb-Bi-Sr-Ca-Cu-O Superconductor*, Th. Leventouri, E. Liarokapis, F.D. Medina, *Materials and Methods in High Tc Superconductors (M<sup>2</sup>S-HTSC) III, Kanazawa Japan, July 22-26, 1991.*
51. *Structural Studies of Bi Superconducting Phases*, O. Papageorgiou, M. Calamiotou, Th. Leventouri, H. Lu, V. Perdikatsis, *First European Powder Diffraction Conference, Munich Germany, March 14-16, 1991.*
52. *A Raman Study of Bi-Pb-Sr-Ca-Cu-O Superconductors*, Th. Leventouri, E. Liarokapis, H. Lu, O. Papageorgiou, F.D. Medina, *APS March Meeting, Cincinnati OH, March 18-22, 1991.*
53. *Preparation and Properties of Bulk Textured  $YBa_2Cu_3O_x$* , Th. Leventouri, *Defense Advanced Research Projects Agency (DARPA), High Temperature Superconductivity (HTSC) Workshop, Boston MA, October 3-5, 1990.*
54. *Studies of the Orientation of the Grains in the YBaCuO Superconductor*, M. Calamiotou, Th. Leventouri, V. Perdikatsis, *XVth Congress and General Assembly of the International Union of Crystallography, Bordeaux France, 19-28 July, 1990.*
55. *Structure and Superconducting Properties of Fe-doped YBaCuO* E. Liarokapis, Th. Leventouri, L. Martinez, L. T. Wille, V. Hadgiev, M. Iliev, *World Ceramics Congress Conference Satellite Symposium on High Temperature Superconductors, Trieste Italy, July 2-5, 1990.*

56. *Structure and Properties of Bulk Oriented  $YBa_2Cu_3O_x$*  Th. Leventouri, E. Liarokapis, J. S. Faulkner, M. Calamiotou, V. Perdikatsis, Y. S. Hascicek, L. R. Testardi, *European MRS Spring Meeting, Strasburg France, May 29-June 1, 1990.*
57. *Anomalous Peak Effect in Critical Current of Bulk  $YBaCuO$  and  $YBaCuO+Ag$  Samples* Y. S. Hascicek, L. R. Testardi, H. Niculescu, P. J. Gielisse, Th. Leventouri, *MRS Spring Meeting, San Francisco CA, April 16-21, 1990.*
58. *Critical Currents in Partially Aligned Bulk Samples of  $YBaCuO$  Superconductors*, Y. S. Hascicek, L. R. Testardi, Th. Leventouri, *Materials Research Society (MRS) Spring Meeting, San Francisco CA, April 16-21, 1990.*
59. *Studies of Various Bi Superconducting Phases*, H. Lu, O. Papageorgiou, Th. Leventouri, F. D. Medina, B. D. Landreth, *APS March Meeting, Anaheim CA, March 12-16, 1990.*
60. *A Spectroscopic Study of the Orthorhombic to Tetragonal Phase Transition in the  $YBa_2Cu_{3(1-x)}Fe_{3x}O_y$  Superconductors*, E. Liarokapis, Th. Leventouri, L. Martinez, L. T. Wille, V. Hadjiev, M. Iliev, *APS March Meeting, Anaheim CA, March 12-16, 1990.*
61. *New Studies of the Bulk Orientation in the YBCO Superconductor*, Th. Leventouri, E. Liarokapis, J. S. Faulkner, F. D. Medina, L. Martinez, M. Calamiotou, V. Perdikatsis, B. D. Landreth, Y. S. Hascicek, L. R. Testardi, *APS March Meeting, Anaheim CA, March 12-16, 1990.*
62. *The growth habits of the polycrystalline Y-Ba-Cu-O Superconductors* Th. Leventouri, M. Calamiotou, V. Perdikatsis, J. S. Faulkner, *American Physical Society (APS) March Meeting, Saint Louis MO, 20-24, 1989.*

### **Panhellenic Annual Conference on Solid State Physics**

1. *Structure and Magnetism of Fe-Co Catalysts Used for Carbon Nanofiber Synthesis*, K. D. Sorge, Th. Leventouri, K. L. Klein, A. V. Melechko, C. L. Finkel, O. Malkina, J. D. Fowlkes, P. D. Rack, and M. L. Simpson. *Proc. of XXIV Panhellenic Conference of Solid State Physics and Materials Science. Heraklion, Crete, September 21-24, 2008.*
2. *Evolution of Crystal Structure Properties of Human Dental Apatite as a Function of Age*, Th. Leventouri, A. Antonakos, A. Kyriacou, R. Venturelli, E. Liarokapis, V. Perdikatsis. *4<sup>th</sup> Hellenic Crystallographic Association Conference, Athens, 26 – 27 September 2008.*
3. *X-ray Rietveld Analysis of Phases in the Bi Superconductor*, O. Papageorgiou, Th. Leventouri, 1993.
4. *A Spectroscopic Study of the  $YBa_{2-x}Ca_xCu_3O_y$  Superconductors*, E. Liarokapis, N. Poulakis, Th. Leventouri, *Proc. of the IX Panhellenic Conference on Solid State Physics, p. 387-390, (1993).*
5. *X-ray Powder Diffraction and Microstructural Studies of the  $YBa_{2-x}Ca_xCu_3O_y$  Superconductors*, M. Calamiotou, Th. Leventouri, O. Papageorgiou, V. Perdikatsis, 1993.

### **Invited Colloquia**

1. *Building a Professional Science Master in Medical Physics (PSMMP)*, Megara, Greece, June 26, 2019.
2. *Physics of Biomaterials Biological Apatites, from bulk to nano-structures*, UG, FAU, 10/7/2016.
3. *A Career in Physics, Women's Leadership Forum*, FAU March 15 2013.

4. *Physiological Apatites: From bulk to nano-structures*, FAU, Department of Physics, October 5 2012.
5. *Hydroxyapatite based biomaterials: Crystal structure questions*. Department of Physics, FAU, April 15, 2010.
6. *Nanoscale Magnetic Biomaterials*, Department of Physics, Florida International University, Miami, FL, October 21, 2005.
7. *Nanoscale Magnetic Biomaterials*, Department of Physics, Florida Atlantic University, Boca Raton, FL, September 2, 2005.
8. *Physical Properties of Apatite-based Biomaterials* Physics Department of the National Technical University of Athens, Greece July 1, 2004.
9. *Physical Properties of Apatite-based Biomaterials* FAU, Department of Physics, January 20, 2003.
10. *Physics of Biocompatible and Bioactive Apatites*, Florida International University, Physics Department, Miami FL, October 25, 2002.
11. *Rietveld Refinement Experiences (Rediscovering Powder Diffraction)* FAU, Department of Physics, November 1999.
12. *Atomic Displacement Parameters of Carbonate Apatite from Powder Diffraction Data* FAU, Department of Physics, March 5 1999.
13. *High Temperature Superconductors*, New College, USF, Physics Department, Sarasota FL, Jan. 21, 1994.
14. *Melt-Textured Y-Ba-Cu-O Grown from Bulk Partially Oriented Precursors*, University of South Florida, Physics Department, Tampa FL, November 5, 1993.
15. *Some Recent Results from our Studies on High  $T_c$  Superconductors*, University of Athens, Physics Department, Solid State Section, July 3, Athens Greece, 1991.
16. *Introduction to High  $T_c$  Superconductivity*, Florida Atlantic University, Science day, February 21, 1989.
17. *Grain Orientation in the Y-Ba-Cu-O Superconductors*, University of Miami, Physics Department, May 4, 1989.
18. *Bulk Grain Orientation in Y-Ba-Cu-O Superconductor*, Florida State University, Department of Physics, July 12, 1989.
19. *Microstructure and Preferred Orientation of the YBCO and BiSCO Superconductors*, University of Miami, Physics Department, December 15, 1989.
20. *Results from the Research on the High  $T_c$  Superconductors*, Univ. of Athens, Phys. Dept., Solid State Section, June 22, 1990, Athens, Greece.
21. *Bulk Preferred Orientation Studies in the YBCO*, Foundation for Research and Technology, June 29, 1990, Crete, Greece.
22. *High  $T_c$  Superconductivity at the University of Athens, Greece*, University of Athens, February 24, 1988.
23. *Preparation/Properties of the Y-Ba-Cu-O Superconductor*, National Nuclear Research Center of Greece "Democritos, May 1988.

#### **Conference Papers:**

##### **National**

- "X-ray studies of the 1-2-3 superconductors, prepared by the Oxalate Precipitation/Evaporation method", Th. Leventouri, *Meeting of Principal Investigators on DARPA Sponsored Superconductivity Research at Universities in Florida and Houston, January, 23, 1989, Orlando, FL.*
- "Bulk Preferred Orientation in the YBCO Superconductor", Th. Leventouri, J. S. Faulkner, E. Liarokapis, F. D. Medina, L. Martinez, M. Moreno, B. D. Landreth, *Meeting of Principal Investigators on DARPA Sponsored Superconductivity Research at Universities in Florida, August 18, 1989, Orlando FL.*

- "Processing, Texture and Physical Properties of the High T<sub>c</sub> Superconductors", Th. Leventouri, *DARPA Superconductivity Review, An Academia/Industry Exchange, Florida State University, January 18-19, 1990, Tallahassee FL.*
- *Preparation and Properties of Bulk Textured YBa<sub>2</sub>Cu<sub>3</sub>O<sub>x</sub>*, Th. Leventouri, J. S. Faulkner, E. Liarokapis, F. D. Medina, L. Martinez, B. D. Landreth, Y. S. Hascicek, L. R. Testardi, *DARPA 2nd annual HTSC Workshop, October 3-5, 1990, Boston, MA.*
- *Bulk Texture Detection by Raman Spectroscopy"* Th. Leventouri, E. Liarokapis, J. S. Faulkner, F. D. Medina, *DARPA/DOE Workshop in "HTS Bulk Technology Development: Formulating a Strategy leading to Defense and Commercial Applications", Jan. 31-Feb. 1, 1991, Santa Fe, N M.*

**FL-AAPM Spring Meeting February 27-March 1, 2020, Orlando FL**

**FL-AAPM Spring Meeting February 22-24, 2018, Orlando FL**

- *Selection of Functional Human Sperm with Microfluidic Sorting Device*, A. Ataei, AWC Lau, Th Leventouri, W Asghar, S Pella.
- *Radio-Biological Consequences Due To Applicator Displacement In Savi Treatments With APBI For Under Evaluated Applicators At The Cavity Evaluation Process.* P. Galanakou, S. Pella, Th. Leventouri.
- *Dosimetric and Radiobiological Effect Differences between Plans from High Definition MLC and Standard MLC for SBRT Lung Cancer*, M. Pudasaini, N. Dumitru, S. Pella, Th. Leventouri.
- *Medical Physics Computational Research*, M. Rahman, G. Galanakou, G. Gibbard, Th. Leventouri, G. Kalantzis

**FL-AAPM Spring Meeting April 28-30, 2017, Orlando FL**

- *Matlab toolkit for physics QA.* M. Mushfiqur Rahman, T. Leventouri, Georgios Kalantzis.
- *Evaluation of Sperm Quality Affected by Therapeutic Radiation* A. Ataei, S. Pella, Th. Leventouri.
- *Impact of the Dosimetric Consequences From Minimal Displacements throughout the Treatment Time in APBI With Savi Applicators*, Shereen Chandrasekara, Silvia Pella, Janeil Pinder.
- *The Consistency Dosimetric Analysis of the Accelerated Breast Brachytherapy*, J. Pinder, S. Chandrasekara, M. Hyvärinen, S. Pella, Th. Leventouri.
- *The Consistency of Treatment Volume with Fractionated High-Dose Rate GYN Brachytherapy Using Multi Lumen Cylinders*, M. Shojaei, N. Dumitru, M. Hyvarinen, J. Pinder, S. Pella, Th. Leventouri.

**FAU GPSA and CESCOS Research Day Students' Presentations**

1. 2022
2. 2021: Virtual
3. 2020
4. 2019
5. 2018: Same as in 2018 FL-AAPM Spring Meeting.
6. 2017: Same as in 2017 FL-AAPM Spring Meeting.
7. 2016: *Modeling the measurement environment: A dosimetric study for lung stereotactic body radiation therapy patient specific quality assurance*, Casey Curley, Zoubir Ouhib, Th. Leventouri.



8. 2015: *Will CyberKnife M6™ Multileaf collimator offer advantages over IRIS™ collimator in prostate SBRT?*, Kathriarachchi V, Shang CY, Kalantzis G, and Leventouri Th.
9. 2015: *Effect of Processing Temperature on Crystal Structure, Particle Morphology and Magnetic Properties of Nanophase Fe-Hydroxyapatite*, Kathriarachchi V, Leventouri Th and Sorge K.
10. 2015: *Dosimetric Evaluations Due to Minimal Displacements in Gynecological High Dose Rate Brachytherapy*, N. Dumitru, S. Pella, Mikko Hyvarinen, S. Long, Th. Leventouri.
11. 2014: *Preparation, characterization and Mechanical Testing of fSWCNT/HAp-Nylon hybridized composite biomaterial*, S. Khanal, Th. Leventouri, H. Mahfuz, A. Rondinone.
12. 2014: *Evaluation of surface dose outside treatment area for breast cancer irradiation modalities using Thermo-luminescent Dosimeters (TLDs)*, S. Khanal, Z. Ouhib, R. Benda, Th. Leventouri.
13. 2014: *Surface Dose Evaluation Outside Treatment Area for Breast Cancer Irradiation Modalities Using TLDs*, S. Khanal, Zoubir Ouhib, Th. Leventouri, BrachyNext – Working Together to Shape the Future of Brachytherapy.
14. 2014: *Commissioning for SRS Planning Systems*, Silvia Pella, Cindy Smith, A. Bacala, Th. Leventouri.
15. 2014: *Investigation of Dose Variation in High Dose Radiation Brachytherapy*, M. Hyvarinen, D. Pella, Th. Leventouri, C. Casey, N. Dimitru, R. Herrera, S. Long.
16. 2014: *Motion Control Challenges in High Dose Rate Brachytherapy*, M. Hyvarinen, D. Pella, Th. Leventouri, N. Dimitru.
17. 2014: *Comparison of Treatment Plans Calculated Using Ray Tracing and Monte Carlo Algorithms for Lung Cancer Patients Having Undergone Radiotherapy with Cyberknife*, A. Pennington, R Selvaraj, T Leventouri, S Kirkpartick, S Oliveira, AAPM.
18. 2014: *Stereotactic Body Radiotherapy (SBRT) using Cyberknife for Lung Cancer- Comparison of Treatment Plans Using Ray Tracing and Monte Carlo Algorithms*, A. Pennington, R. Selvaraj, T. Leventouri, American Association for Radiation Oncology (ASTRO).
19. 2013: *Intensity Modulated Radiation Therapy Optimization Methods*, B. Doozan, S. Pella, Th. Leventouri, April 12.
20. 2013: *Improved methods of collecting and modeling beam data for commissioning*, C. Smith, A. Bacala, S. Pella, March 22, April 12.
21. 2013: *Evaluation of surface dose outside treatment area for breast cancer irradiation modalities using Thermoluminescence Dosimeters (TLDs)*, Suraj P. Khanal, Zoubir Ouhib Th. Leventouri, March 22, April 12.
22. 2012: *“Effect of Processing Temperature on Crystal Structure Properties of Nanophase Fe-Hydroxyapatite”*, V. Kathriarachchi, S. Khannal, A. Kyriacou and Th. Leventouri March 30, March 23.
23. 2012: *A new method to evaluate local control of SBRT for lung cancer treatment using <sup>18</sup>F-FDG PET*, V. Kathriarachchi, C. Shang, Th. Leventouri, A. Schramm and M. Kasper March 23.

24. 2012: *A Characterization of the LAP Aquarius Phantom for External LAP Laser Alignment and MR Geometric Distortion Verification for SRS Patient Simulation*, D. Vergara, C. Shang, Z. Ouhib, A. Schram, Th. Leventouri, Research Day, March 30.
25. 2012: R. Herrera, S. Pella, D. G. Saez, Th. Leventouri, *Homogeneity Corrections Using Monte Carlo Simulations in HDR Planning Algorithm*, GSA Research Day, FAU, March 30.
26. 2011: “*Crystal structure studies of cone snail shells by powder x-ray diffraction*” S. P. Khanal, V. Kathriarachchi, A. Kyriacou, Th. Leventouri, GSA Research Day, FAU, April 8, 2011.
27. 2011: “*Accurate Verification of Balloon Rotation Correction for the Contura® Multilumen Device for Accelerated Partial Breast Irradiation.*” A. Kyriacou, Z. Ouhib, R. Benda, M. Kasper, C. Vargas, M. Lyden, GSA research Day, FAU, April 8, 2011.
28. 2011: “*Crystal structure, microstructure and magnetism of nano phase Fe-substituted Hydroxyapatite*”, A. Kyriacou, Th. Leventouri, B. C. Chakoumakos, K. D. Sorge, E. A. Kennik 2011.
29. 2011: “*Accurate Verification of Balloon Rotation Correction for the Contura® Multilumen Device for Accelerated Partial Breast Irradiation.*” A. Kyriacou, Z. Ouhib, R. Benda, M. Kasper, C. Vargas, M. Lyden, GSA research Day.
30. 2010: “*Crystal Structure and Magnetic Properties of Fe substituted Nanophase Hydroxyapatite*” A. Kyriacou, Th. Leventouri, K.D. Sorge.
31. 2010: “*Total treatment time verification for the Contura Multilumen Balloon*”, Z. Ouhib, A. Kyriacou, B. S. Suutari.
32. 2010: “*Crystal Structure and Magnetic Properties of Fe substituted Nanophase Hydroxyapatite*” A. Kyriacou, Th. Leventouri, K.D. Sorge
33. 2008: “*Synthesis and structure of nanoscale hydroxyapatite*” A. Kyriacou, R. Venturelli, Th. Leventouri.
34. 2007: “*Crystal structure properties of human teeth hydroxyapatite as function of Age*” R. Venturelli, A. Kyriacou, Th. Leventouri.

#### **FAU, Department of Physics Seminars**

- *Medical Physics Program at FAU. First Year Seminar for UG 9/13/2019*
- *Medical Physics Accredited Programs: Overview from CAMPEP at the AAPM Meeting, San Antonio, TX, July 14-18, 2019, PSMMP, 8/29/2019.*
- *Medical Physics Accredited Programs: Overview from CAMPEP at the AAPM Meeting, Nashville TN, July 29-August 2, 2018, PSMMP 8/30/2018.*
- *Medical Physics Program at FAU. First Year Seminar for UG, 9/13/2018.*
- *Medical Physics Accredited Programs: Overview from CAMPEP at the AAPM Meeting, Denver CO, July 30-August 3, 2017, PSMMP 8/31/2017.*
- *Medical Physics Program at FAU. First Year Seminar for UG, 3/2/2017.*
- *Physics of Biomaterials Biological Apatites: From bulk to nanostructures Seminar for Undergraduates, fall 2016.*
- *Medical Physics Accredited Programs: Overview from CAMPEP, AAPM Meeting, July 2015, PSMMP 8/20/2015.*
- *Medical Physics Accredited Programs: Overview from CAMPEP, AAPM Meeting, July 2014, PSMMP 8/21/2014.*

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