CURRICULUM VITAE

MARIA KALLERGI

D.E.A., M.S., Ph.D.

LAST UPDATE October 20, 2014

CONTENTS

1. PERSONAL INFORMATION

NAME	:	MARIA KALLERGI
DATE OF BIRTH	:	July 30, 1957
OFFICE ADDRESS	:	Department of Biomedical Engineering, TEIA
TELEPHONE NUMBERS	:	210-5385531 (OFF) / 697-3814204 (MOB)
E-MAIL	:	kallergi@teiath.gr

2. EDUCATION (theses titles in parentheses)

INSTITUTION/ADDRESS	DEGREE	YEAR	AREA
French Institute, Athens, Greece	A.A.	1981	French Lit.
National Kapodistrian University of Athens Athens, Greece (Solid state physics - Percolation theory)	B.Sc.	1982	Physics
Institut National Polytechnique de Grenoble Grenoble, France (Stockage électrochimique de l' énergie: Intercalation de Li dans des oxides des métaux de transition.)	D.E.A	1983	Alternative energy forms
University of South Florida, USA (Modulated reflectance studies of epitaxial $Al_xGa_{1-x}As$, GaAs, and AlAs.)	M.S.	1987	Physics
University of South Florida, USA (Optical studies of III-V Semiconductor Heterostructures.)	Ph.D.	1990	Physics/Electr.Eng.
University of South Florida, USA (USF Medical School's Office of Research Strategic Plan 2001)	Grad. Certif.	2001	Management/Leadership

3. SCHOLARSHIPS – AWARDS – PROFESSIONAL MEMBERHIPS & ACTIVITIES

3.1. Scholarhips - Awards

Undergraduate Scholarship – University of Athens, GR	1980
Dean's List of Scholars	1987
GTE Graduate Scholar	1988-1990
DARPA Scholar	1990-1991
Student Travel Award, American Vacuum Society	1989
Fellow Research Award, College of Medicine, Univ. of South Florida	1992
AAPM Summer School Scholarship	1993
Evelyn & Alfred Silbiger Cancer Research Fellow	1994
Moffitt Center Director's Outstanding Research Award	1994
Woman of Achievement Award for Technology Category	2002

    Carrollwood Business and Professional Women Foundation of Tampa Bay
    in honor of National Business Women's Month (October 2002)

3.2. Professional Memberships

Student member of the American Vacuum Society	1987-1990
Student member of the American Physical Society	1989-1991

Student member of the Materials Research Society 1990-1991
Member of AAPM's Publications committee 1999-2001
Member of Optical Society of America (OSA) 2001-2003
Member of H. Lee Moffitt Cancer Center & Research Institute 1993-2006
Member of the American Roentgen Ray Society 2006-2008
Member of the Society of Photo-Optical Instrumentation Engineers (SPIE) ..... since 1992
Member of the American Association of Physicists in Medicine (AAPM) .... since 1992
Member of the European Society of Radiology .... since 2008
Member of the IEEE EMB 2012

3.3. Professional Activities

U.S. Civilian Research & Development Foundation (CRDF) reviewer
American Institute of Biological Sciences (AIBS) reviewer
U.S. Army Medical Research & Materiel Command - Breast, Ovarian, and Prostate Programs reviewer
NCI Biomedical Imaging Technology Study Section reviewer
NCI SBIB Study Section reviewer
American Cancer Society Institutional grant committee member
Institutional Committees for equipment purchases

Associate Editor and/or Reviewer of:
        IEEE Transactions on Information Technology in Biomedicine
        IEEE Transactions in Medical Imaging
        Medical Physics Journal
        Academic Radiology
        Computers and Biomedical Research
        Skeletal Radiology

3.4 Patents

1. *Nuclear Imaging Enhancer.* USA No. 5576548. Granted on November 19, 1996.
2. *Image Analyzing Device Using Adaptive Criteria*. USA No. 5825936. Granted on October 20, 1998.
3. *Workstation interface for use in digital mammography and associated methods.* USA No. 6630937 B2. Granted on October 7, 2003.
4. *Computer Aided Diagnosis Methodology for Mammographic Calcifications.* USA No. 7430308 B1. Granted on September 30, 2008.
5. *Magnetic Resonance Electrical Impedance Mammography.* Filed May 2008. Office of Technology Management and Commercialization. H. Lee Moffitt Cancer Center & Research Institute.

4. FOREIGN LANGUAGES AND OTHER EXPERTISE

Greek .... Maternal
English .... Proficiency (Michigan & Cambridge)
French .... Sorbonne III

Programming languages: Basic, C++, IDL, MATLAB

Participation in seminars, continuing education lectures and workshops with certification:
        «Enhancing Teaching and Learning with PowerPoint Workshop", February 27, 1998
        «AAPM Summer School on Digital Imaging», August 1-6, 1993
        «The protection of human research subjects», April 26, 2002
        «Digital Mammography», March 16-17 2001
        «Radiation Safety», January 7, 2002

5. PROFESSIONAL EXPERIENCE

Graduate Research Assistant, Institut National Polytechnique, Grenoble, France 1982-1983
> Research on alternative forms of energy (nuclear, solar, etc),
> development of new materials for energy storage (batteries)
> and x-ray spectroscopy.

Graduate Research Assistant, Department of Physics, USF, Tampa 1988-1990
> Research on optical characterization of III-V and II-VI semiconductors
> and semiconductor devices using modulation reflectance (electro- and
> photoreflectance), photoluminescence, and Raman scattering.

Postdoctoral Research Associate/Diagnostic Radiology 1991-1992
> H. Lee Moffitt Cancer Center & Research Institute, Tampa.
> Research on diagnostic medical physics including application, characterization
> and improvement of emission computed tomography. Performed phantom and patient
> measurements using beta or gamma emitting radionuclides, image analysis
> and processing, statistical analysis and presentation of experimental data.

Postdoctoral Research Associate/Diagnostic Radiology 1992-1993
> Department of Radiology, College of Medicine, USF, Tampa.

Research Triangle Institute/NASA Σύμβουλος Jun-Nov 1992
> NASA/NCI project on technology transfer to digital mammography. Generated
> report with evaluation of dual-use technologies identified in Federal Laboratories
> which could be applied to mammography for direct digital x-ray detection,
> computer assisted diagnosis, and teleradiology.

Visiting Assistant Professor 1993 -1994
> Department of Radiology, College of Medicine, USF, Tampa.
> Continued research on medical physics performing quality control and
> assurance of mammographic units and nuclear medicine systems, image processing
> and data analysis. Research included phosphor technology, amorphous
> semiconductors, and CCD applications to digital mammography. Teaching Physics
> of Mammography as a part of a Medical Imaging Technology graduate course in
> Computer Science and Engineering at USF

Assistant Professor 1995-1999
> Department of Radiology, College of Medicine, USF, Tampa.

Associate Professor of Radiology 8/2000–6/2006
> Department of Radiology, College of Medicine, USF, Tampa.

Joint Associate Professor of Interdisciplinary Oncology 6/2002 – 6/2003
> Joint Appointment to the faculty of the Department of Interdisciplinary Oncology,
> College of Medicine, USF, Tampa.

Courtesy Professor of Physics 2003- 2006
> Courtesy Appointment to the faculty of the Department of Physics, College of Arts &
> Sciences, USF, Tampa

Consultant 9/2006 – 12/2007
> Breast Imaging and Interventional Center, George Washington Medical Center,
> The George Washington University, Washington, DC

Associate Professor since 7/2006
> Biomedical Engineering – Digital Imaging and Radiotherapy
> Department of Biomedical Engineering
> Technological Educational Institute of Athens (TEIA)

Visiting Investigator since 9/2006
> Division of Nuclear Medicine
> Biomedical Research Foundation of the Academy of Athens (BRFAA)

6.   ADMINISTRATIVE EXPERIENCE

Interim Program Leader 1/99-5/99
        Digital Medical Imaging Program of the H. Lee Moffitt Cancer Center
        & Research Institute.
Program Leader 6/1999-12/2004
        Digital Medical Imaging Program of the H. Lee Moffitt Cancer Center
        & Research Institute.
Director 6/1999-12/2004
        Division of Imaging Science Research, Department of Radiology,
        College of Medicine, University of South Florida.
Member - USF College of Medicine Research Committee 1999-2006
Senator - USF Faculty Senate 2000-2003
Member – USF College of Medicine Faculty Council ……………………….……… 2001-2004
Member - USF Federal Effort-Reporting Systems (PARs) Replacement Committee 2001-2002
Member – USF Physics Department Committees for Faculty Search,   2000-2004
        Positions in Biomedical Physics/Biophysics and Materials Physics/Nanophysics
Member – Coordinating Committee of MS program in Biomedical Engineering   2014-2016
        Department of Biomedical Engineering, TEI of Athens

6.   EDUCATIONAL EXPERIENCE

High School, IB all levels and SAT, mathematics and physics 1984-1985

Graduate Teaching Assistant, Department of Physics, USF, Tampa 1986-1987
        Teaching all sections of calculus and non-calculus based introductory
        laboratory physics courses.

Graduate Course on Medical Imaging .... Fall 1993
        Lectures on x-ray imaging physics and computer assisted diagnosis for graduate
        computer science and engineering students.

Preparatory course for radiology residents for certification examinations 1993-2001
        Lectures on physics of Nuclear Medicine, Radiation Protection, Statistics,
        and Digital Radiography.

Faculty of *Breast Imaging Update*, CME course of Moffitt and USF .... May 1997-present
        Lectures to radiologists and radiology technologists on digital mammography
        and computer assisted diagnosis (above average evaluations).

Graduate course on computer assisted diagnosis for radiology ………………… Fall 2000
        Established new graduate course for basic science and engineering
        students dealing with special topics related to medical imaging and CAD.
        This course became part of the formal USF curriculum in Fall 2001.

Participation in H. Lee Moffitt's Project LINK Program as Mentor ……………… Summer 2001
        (Fellow: Okheyla Knight – 2001-2002)

Continuing Medical Education course on Digital Mammography ……………. 2002-2007
        Co-Director and faculty of CME course for radiologists and technologists
        to satisfy 8-hours of FDA required training for Digital Mammography. Course
        includes CAD training and is offered independently (5 times per year) or
        prior to the annual BIU course.

Greek Undergraduate Courses .... 09/2006 – to date
Department of Biomedical Engineering – TEI of Athens
    (1) Electrical Measurements (Theory & Lab – Sophomore year)
    (2) Bioautomatisms (Theory – Senior year)
    (3) Automated Control and Bioautomatisms (Theory & Lab – Sophomore year)
    (4) Organization, Management, and Marketing for Engineers (Theory – Sophomore year')
    (5) Project Development and Project Management for Engineers (Theory – Junior year)
    (6) Mathematical Models in Biology and Physiology (Laboratory – Sophomore year)
    (7) Micro- and nano-technology applications in molecular diagnostics, therapy, and
        prosthetics (Theory – Graduate level)

Supervision of MASTER'S & DOCTORAL theses:
(In brackets, the current occupation/position of the graduates]

1. Peeples OD. *Collimator requirements and restoration conditions of gamma camera imaging of positron emitting radionuclides.* Master's Thesis, Department of Physics, University of South Florida. August 1995. (**Major Professor and Mentor**.) [Working for Smith Kline Beecham Laboratories].
2. Heine JJ. *Multiresolution Statistical Analysis of High Resolution Digitized Mammograms and Other Gray Scaled Images.* Ph.D. Dissertation, Department of Physics, University of South Florida. September 1996. (**Committee Chairperson.**) [Associate Professor at Moffitt Cancer Center & Research Institute.]
3. Gavrielides M. *Shape analysis of mammographic calcification clusters.* Master's Thesis, Department of Electrical Engineering, University of South Florida, December 1996. (**Major Professor and Mentor**.) [Completed PhD degree at Duke University, postdoctoral studies in Greece and UK, FDA fellow conducting research in medical imaging.]
4. Ruth E. *Estimating the minimal sample size of calcification clusters which approximates the Bayes risk of diagnosis.* Master's Thesis, Department of Mathematics, University of South Florida. August 1997. (**Co-Major Professor and Mentor**.)
5. Battler M. (Radiation Therapy). Master's Thesis, Department of Physics, University of South Florida. May 1998. (**Committee member**.)
6. Battler P. (Radiation Therapy). Master's Thesis, Department of Physics, University of South Florida. May 1998. (**Committee member**.)
7. Vossberg M. (Diagnostic Radiology - CAD). *Statistical Analysis of Tissue Density in Digital Mammograms.* Master's Thesis, Department of Physics, University of South Florida. May 1998. (**Committee member and Co-Mentor**.) [Working for a major German mobile communications company and pursuing a PhD degree in telecommunications.]
8. Monroe J. *A new high energy scintillating fiber optic SPECT detector.* Ph.D. Dissertation, Departments of Physics and Electrical Engineering, University of South Florida, May 1998 (**Committee member**). [Postdoctoral fellowship at Mallinckrodt Institute of Radiology, St. Louis.]
9. Li HD. *Monochrome and multichrome image processing: Application to communications and biomedicine.* PhD Dissertation, Department of Electrical Engineering, University of South Florida, December 1999 (**Mentor** - Provided all experimental data and supervised the application part of his work; also reviewed and corrected his doctoral thesis manuscript). [Working for a software company in Silicon Valley, CA.]
10. Chetelat SM. *Generating a three dimensional view from the two standard projections in mammography.* Master's Thesis, Department of Computer Science and Engineering, University of South Florida, May 2000. [Military.]
11. Komaravolu PK. *Digital mammography.* Master's Thesis, Department of Computer Science & Engineering, University of South Florida, December 2000. (**Co-Major Professor and Mentor**.) [Working for a software company in Silicon Valley, CA.]
12. Alexander D. *Full Field Digital Mammography Clinical Trial.* Master's Thesis, Department of

Epidemiology, College of Public Health, University of South Florida, August 2001. (**Co-Major Professor and Mentor**.) [Completed doctoral degree at the University of Alabama at Birmingham; offered full scholarship.]

13. Fernandez D. *Fourier-Transform Infrared Spectroscopic Imaging of Prostate Histopathology.* Ph.D. Dissertation, Department of Pathology, College of Medicine, University of South Florida, in collaboration with the National Cancer Institute. May 2003. (**Committee member**). [NIH Fellow; attended Cornell Medical School.]

14. Tembey M. Master's Thesis, Department of Computer Science & Engineering, University of South Florida, December 2003. (**Co-Major Professor and Mentor**) [Working for a private hospital in Chicago.]

15. Kim YR. Ph.D. Dissertation, Department of Physics and Marine Science, College of Arts & Sciences, University of South Florida. December 2004. (**Committee Member and Mentor.**) [Postdoctoral Research Associate in Marine Science Dept., USF, Spring 2005.]

16. Mason N. Ph.D. Dissertation, Department of Physics, University of South Florida. October 2004. (**Committee Chairperson.**) [Certified medical physicist; owner of Tampa Bay Oncology Center.]

17. Kovalchuk N. Ph.D. Dissertation, Department of Physics, University of South Florida. May 2008. (**Major Professor/Committee Member**.) [Postdoctoral Research Associate at Mayo Clinic, Cleveland, OH]

18. Behera M. Master's Thesis, Department of Chemical Engineering, Biomedical Engineering Program, University of South Florida. July 2004. (**Committee Member and Co-Mentor.**) Ph.D. Dissertation, Department of Biomedical Engineering, University of South Florida. Completed in February 24, 2012. (**Committee Member and Co-Mentor.**) [Manager of Research, Winship Cancer Institute, Emory University]

19. Anand M. Ph.D. Dissertation, Department of Biomedical Engineering, University of South Florida. To be completed in 2014. (**Committee Member**.) [IT senior research analyst at Moffitt Cancer Center & Research Institute]

In addition, in the period 1995-2005, I served as mentor and supervisor to numerous high school and undergraduate students participating as scholars, fellows, or interns in research projects and workshops of the Imaging Science Research Division of the Moffitt Cancer Center & Research Institute and the University of South Florida in Tampa, Florida.

Since 2006, I serve as a regular member in senior thesis examination committees at the Department of Biomedical Engineering (BME) of TEI of Athens (TEIA); the directly supervised and successfully completed projects are listed below.

Supervised SENIOR THESES projects (original in Greek):

1. Mantadakis E and Menichtas D. *Teleradiology Applications*. Department of Medical Instruments Technology, Technological Educational Institute of Athens. June 4, 2009.

2. Markopoulos A and Tsilis K. *Survey of the quality of screen/film mammography systems in Greece.* Department of Medical Instruments Technology, Technological Educational Institute of Athens. July 6, 2009.

3. Farsaris M and Skopelitis M. *Cost comparison of full field digital mammography and screen film mammography*. Department of Medical Instruments Technology, Technological Educational Institute of Athens. May 2010.

4. Kontili M and Kiriazi N. Single view v. two- view CAD performance in full field digital mammography. Department of Medical Instruments Technology, Technological Educational Institute of Athens. July 2011.

5. Mpakogiannis N. *X-ray applications in medicine and industry: Comparison of the Philips duo DIAGNOST radiography system and the airport security x-ray inspection unit Smiths Heimann 6040i.* Department of Medical Instruments Technology, Technological Educational Institute of Athens. March 2011.

6. Stratikopoulos I. *Automated noise monitoring system in neonatal care units.* Department of

Medical Instruments Technology, Technological Educational Institute of Athens. March 2011.

7. Kleftogianni L and Mathioudi E. *Visually lossless wavelet compression of full field digital mammograms.* Department of Medical Instruments Technology, Technological Educational Institute of Athens (in collaboration with the Department of Mathematics, Purdue University, USA). December 2011.

8. Roussos S and Tzimas A. *PET/CT for thyroid cancer: standard and automated tumor volume measurements.* Department of Medical Instruments Technology, Technological Educational Institute of Athens. May 2012.

9. Theopoulou C. *New applications of bioluminescence and fluorescence imaging.* Department of Medical Instruments Technology, Technological Educational Institute of Athens. May 2012.

10. Papoutsis V. *Health sector personnel evaluation: Comparison of a public and a private hospital.* Department of Medical Instruments Technology, Technological Educational Institute of Athens. May 2013.

11. Fanourakis S. *Design of a quality control program for a large, urban hospital.* Department of Biomedical Engineering, Technological Educational Institute of Athens. April 2014.

12. Pappa A and Lamprou I. Backup power system using photovoltaic panels and fuel cells in the intensive care unit of the general hospital of Lamia. Department of Biomedical Engineering, Technological Educational Institute of Athens. January 2014.

13. Velmahos I and Zekio M. *Robotic knee model.* Department of Biomedical Engineering, Technological Educational Institute of Athens. May 2014.

14. Kouzas G and Kotsianidis V. *PET/CT systems: Market review and applications.* Department of Biomedical Engineering, Technological Educational Institute of Athens. May 2014.

15. Papathanasiou D. *Financial and technical analysis for the purchase and installation of Cyberknife.* Department of Biomedical Engineering, Technological Educational Institute of Athens. November 2014.

16. Golfinopoulou A, Gremos A, and Preppa Ch. *FFDM and Breast Tomosynthesis: Impact on personnel, workflow, and digital infrastructure.* Department of Biomedical Engineering, Technological Educational Institute of Athens. November 2014.

17. Tsiaousidou A. *Medical tourism in Greece.* November 2014.

18. Politis N. *Metabolic tumor volume measurements pre- and post-treatment.* In progress.

7. PUBLICATIONS

8.1. Books and Book Chapters
(**Bold** indicates publication as senior or co-senior author)

1. Clarke LP, Qian W, **Kallergi M**, Venugopal P, and Clark RA. Hybrid Wavelet Transform for Image Enhancement for Computer-Assisted Diagnosis and Telemedicine Applications. In: *The Frequency and Wavelets in Biomedical Signal Processing.* Akay M (Ed.), IEEE Press Series in Biomedical Engineering, New York, 1998, Chapter 21, pp. 519-532.

2. Deans SR, Gangadharan D, Heine J, Kallergi M, Qian W, and Clarke LP. Wavelet Transforms. In *Encyclopedia of Electrical and Electronics Engineering.* Webster JG, Editor. J. Wiley & Sons, Inc, New York, 1999.

3. **Kallergi M**, Heine JJ, and Tembey M. Computer Aided Diagnosis of Mammographic Calcification Clusters: Impact of Segmentation. In: *Handbook of Medical Image Analysis: Segmentation and Registration Models*, Suri, Wilson, and Laxminarayan (Eds.), IEEE Press Series, 2004.

4. **Kallergi M**, Hersh M, and Manohar A. Automated segmentation of pancreatic tumors in computed tomography. In *Handbook of Medical Image Analysis, Volume I: Segmentation and Registration Models*, Suri, Wilson, and Laxminarayan (Eds.), IEEE Press Series, pp. 176-226, 2004.

5. **Kallergi M**. Evaluation of computer aided detection and diagnosis algorithms for medical imaging. In *Applied Medical Image Analysis Methods*, Costaridou L (Ed.), CRC Press, Electrical Engineering and Applied Signal Processing Series, 2005.

6. **Kallergi M,** Manohar A, and Kovaltchuk N. A new imaging technique for the stereoscopic

representation of the breast using mammography. In *Emerging Technologies in Breast Imaging and Mammography*, Suri (Ed.), American Scientific Publishers, 2007.

8.2.   Articles in International Peer Reviewed Journals
(IF=impact factor)

1. **Kallergi M**, Aubel J, and Sundaram S. Modulated reflectance study of strain in epitaxial GaAs on silicon. *J Appl Phys* 1989; 66:4862. (IF=2.171)
2. Roughani B, Kallergi M, Aubel J, and Sundaram S. Raman scattering of epitaxial GaAs on Si substrate. *J Appl Phys* 1989; 66:4946. (IF=2.171)
3. **Kallergi M**, Roughani B, Aubel J, Sundaram S, Chu T, Chu S, and Green R. Modulated reflectance and Raman scattering studies of metalorganic chemical vapor deposited homolayers of GaAs. *J Vac Sci Technol* A 1990; 8:1907. (IF=1.628)
4. **Kallergi M**, Roughani B, Aubel J, and Sundaram S. Correlation of interference effects in photoreflectance spectra with GaAs homolayer thickness. *J Appl Phys* 1990; 68:4656. (IF=2.171)
5. Huang D, Kallergi M, Aubel J, Sundaram S, DeSalvo J, and Comas J. Lattice damage and atomic mixing induced by As^{++} implantation and thermal annealing in AlAs/GaAs multiple quantum well structures. *J Appl Phys* 1991; 70(8):4181-4189. (IF=2.171)
6. **Kallergi M**, Woods K, Clarke LP, Qian W, and Clark RA. Image Segmentation in Digital Mammography: Comparison of Local Thresholding and Region Growing Algorithms. *Comp Med Imag Graph* 1992; 16(5):323-331. (IF=1.158)
7. Qian W, **Kallergi M**, and Clarke LP. Order Statistic-Neural Network Hybrid Filters for Gamma Camera-Bremsstrahlung Image Restoration. *IEEE Trans Med Imag* 1993; 12(1):58-64. *[Co-senior author; performed all experimental work and wrote the paper]* (IF=3.755)
8. Qian W, Clarke LP, Kallergi M, and Clark RA. Tree structured nonlinear filters in digital mammography. *IEEE Trans Med Imag* 1994; 13(1):25-36. (IF=3.755)
9. Lucier BJ, **Kallergi M**, Qian W, DeVore RA, Clark RA, Saff EB, and Clarke LP. Wavelet compression and segmentation of mammographic images. *J Dig Imag* 1994; 7(1):27-38. *[Co-senior author; this work was done in collaboration with University of South Carolina and Purdue University; performed all the work at USF and wrote the part of the paper that refers to the application and evaluation*] (IF=0.953)
10. Priebe CE, Solka JL, Lorey RA, Rogers GW, Poston WL, Kallergi M, Qian W, Clarke LP, and Clark RA. The application of fractal analysis to mammographic tissue classification. *Cancer Letters*, 1994; 77(2,3):183-189. (IF=2.614)
11. Clarke LP, **Kallergi M**, Qian W, Li HD, Clark RA, and Silbiger ML. Tree-structured nonlinear filter and wavelet transform for microcalcification segmentation in digital mammography. *Cancer Letters* 1994; 77(2,3):173-181. *[Co-senior author; performed the application and wrote the paper with the first author]* (IF=2.614)
12. Li H-D, **Kallergi M**, Clarke LP, Jain VK, and Clark RA. Markov Random Field for Tumor Detection in Digital Mammography. *IEEE Trans Med Imag* 1995; 14(3):565-576. *[Co-senior author; supervised the student in his work, provided the database, did the evaluation and writing of the manuscript].* (IF=3.755)
13. Yang Z, **Kallergi M**, DeVore R, Lucier BJ, Qian W, Clark RA, and Clarke LP. Effect of wavelet bases on compressing digital mammograms. *IEEE Engineering in Medicine and Biology Magazine* 1995; 14(5):570-577. *[Co-senior author; this work was done in collaboration with University of South Carolina and Purdue University; performed all the work at USF and wrote the part of the paper that refers to the application and evaluation; also supervised the student Yang during his fellowship at USF]* (IF=0.649)
14. Li H-D, **Kallergi M**, Qian W, Clarke LP, and Jain VK. Neural network for maximum entropy restoration of nuclear medicine images. *Optical Engineering* 1995; 34(5):1431-1440. *[Co-senior author; provided experimental data to the student and supervised his work and application; wrote and corrected the manuscript]* (IF=0.877)
15. Qian W, Clarke LP, Zheng B, Kallergi M, and Clark RA. Computer assisted diagnosis for digital

mammography. *IEEE Engineering in Medicine and Biology Magazine* 1995; 14(5):561-569. (IF=0.649)

16. Qian W, Kallergi M, Clarke LP, Li HD, Venugopal P, Song D, and Clark RA. Tree structured wavelet transform segmentation of microcalcifications in digital mammography. *Medical Physics* 1995; 22(8):1247-1254. (IF=2.305)

17. **Kallergi M**, Clarke LP, Qian W, Gavrielides M, Venugopal P, Berman CG, Holman-Ferris SD, Miller MS, and Clark RA. Interpretation of calcifications in screen/film, digitized, and wavelet-enhanced, monitor-displayed mammograms: A receiver operating characteristic study. *Academic Radiology* 1996; 3:285-293. (IF=1.409)

18. **Kallergi M**. Digital mammography: From theory to practice. *Cancer Control* 1997; 5(1):72-79.

19. Qian W, Li HD, Kallergi M, Song D, and Clarke LP. Adaptive neural network for nuclear medicine image restoration. *Journal of VLSI Signal Processing* 1998; 18:297-315. (Special issue on *Applications of Neural Networks in Biomedical Imaging/Image Processing.*) (IF=0.593)

20. **Kallergi M**, Gavrielides MA, He L, Berman CG, Kim JJ, and Clark RA. A simulation model of mammographic calcifications based on the ACR BIRADS. *Academic Radiology* 1998; 5:670-679. (IF=1.409)

21. **Kallergi M**, Carney G, and Gaviria J. Evaluating the performance of detection algorithms in digital mammography. *Medical Physics* 1999; 26(2):267-275. (IF=2.305)

22. Li L, Zheng Y, Kallergi M, and Clark RA. Improved method for automatic identification of lung regions on chest radiographs. *Academic Radiology* 2001; 8:629-638. (IF=1.409)

23. **Kallergi M**. Computer-aided diagnosis of mammographic microcalcification clusters. *Medical Physics* 2004; 31(2):314-326. Also selected for publication in the *Virtual Journal of Biological Physics Research* published by the American Physical Society and the American Institute of Physics, issue of February 1, 2004. (IF=2.305)

24. **Kallergi M**, Heine JJ, Berman CG, Hersh MR, Romilly AP, and Clark RA. Improved interpretation of digitized mammography with wavelet processing: A localization response operating characteristic study. *AJR* 2004; 182:697-703. (IF=2.474)

25. **Kallergi M,** Berman CG, Cressman JB, Loeffler WE, Romilly AP, Szabunio MM, Vedam PK, Venugopal PR, and Walker JK. Clinical evaluation of a new digitization device for improved mammography. *Academic Radiology*, 2004; 11(11):1242-1250. (IF=1.409)

26. **Kallergi M**, Lucier BJ, Berman CG, Hersh MR, Kim JJ, Szabunio MS, and Clark RA. High-Performance Wavelet Compression for Mammography: Localization Response Operating Characteristic Evaluation**.** *Radiology* 2006; 238(1):62-73. (IF=4.815)

27. Wismüller A, Meyer-Bäse A, Lange O, Schlossbauer T, Kallergi M, and Reiser MF. Segmentation and classification of dynamic breast MR image data. *Electronic Imaging*, 2006; 15(1):1-13. (IF=0.694)

28. Li L, Wu Z, Salem A, Chen Z, Chen L, George F, Kallergi M, and Berman C. Computerized analysis of tissue density effect on missed cancer detection in digital mammography. *Comput Med Imaging Grap*h 2006; 30(5):291-297. Epub 2006 Jul 11. (IF=1.158)

29. Krupinski EA and **Kallergi M.** Special Review: Choosing a Radiology Workstation: Technical and Clinical Considerations. *Radiology* 2007; 242(3):671-682. Epub 2007, Jan 17. (IF=4.815)

30. Land WH, Margolis D, **Kallergi M**, and Heine JJ. A kerner approach for ensemble decision combinations with two-view mammography applications. *International Journal of Functional Informatics and Personalised Medicine* 2010; 3(2):157-182.

31. Chatziioannou SN, Rizos EN, **Kallergi M**, Douzenis A, Apostolopoulos A, Bacalis S, and Lykouras L. Tardive dyskinesia related to quetiapine and confirmed by a DAT scan. *Journal of Clinical Psychopharmacology* 2011; 31(4):535-538. (IF=5.092)

32. Chatziioannou S, Pianou N, Georgakopoulos A, Kafiri G, Pavlou S, and **Kallergi M**. Recurrent Thyroid Cancer Diagnosis: ROC Study of the Effect of a High-Resolution Head and Neck ^{18}F-FDG PET/CT Scan. *Academic Radiology 2014;* 21(1):58-63. (IF=1.914)

33. Chatziioannou S, **Kallergi M**, Karampina P, Zotou P, Bakalis S, Lyra V, Lamprakopoulos G, Armeniakos I, and Pneumaticos S. Association between bone scintigraphy features of spinal degeneration and anthropometric and demographic variables. Accepted for publication, Journal of Back and Musculoskeletal Rehabilitation, April 2014. (IF=1.541)

34. Lyra V, Chatziioannou S, and **Kallergi M**. A Psychometric Assessment of Patient Anxiety and its Effect on Patient Motion during Myocardial Perfusion SPECT Imaging. Submitted to Journal of Nuclear Cardiology, April 2014. (IF=2.847)
35. **Kallergi M**, Menychtas D, Pianou N, Georgakopoulos A, Kafiri G, Pavlou S, and Chatziioannou S. Quantitative evaluation of the memory bias effect in ROC studies with PET/CT and association to image characteristics. Manuscript in preparation to be submitted to *Academic Radiology*. (IF=1.914)

8.3.   Articles in International Peer Reviewed Conference Proceedings

1. Kallergi M, Qian W, Clarke LP, and Gondeck AR. Bremsstrahlung imaging with the gamma camera. *Proceedings of the SPIE Symposium on Medical Imaging VI, Image Instrumentation Conference 1651*, Newport Beach, CA; February 23-27, 1992.
2. Qian W, Kallergi M, Clarke LP, Woods K, and Clark RA. Application of nonlinear filtering in mammograms. *Proceedings of the SPIE Symposium on Medical Imaging VI, Image Processing Conference 1652*, Newport Beach, CA; February 23-27, 1992.
3. Clarke LP, Qian W, Kallergi M, and Clark RA. Computer Assisted Diagnosis (CAD) in Mammography. *Proceedings of the Symposium for Computer Assisted Radiology (SCAR)*, Baltimore, Maryland; June 14-17, pp. 116-122, 1992.
4. Kallergi M, Qian W, Clarke LP, and Li HD. Neural network restoration of gamma camera bremsstrahlung images. *Proceedings of the 14th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Paris, France; October 29 - November 1, 1992.
5. Qian W, Clarke LP, Kallergi M, and Clark RA. Three-level median filters for digital mammography. *Proceedings of the 14th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Paris, France; October 29 - November 1, 1992.
6. Qian W, Clarke LP, Kallergi M, Li HD, Velthuizen RP, Clark RA, and Silbiger ML. Tree-structured nonlinear filter and wavelet transform for microcalcification segmentation in mammography. *Proceedings of the IS&T/SPIE Annual Symposium on Electronic Imaging, Science & Technology*, San Jose, California; January 31 - February 5, 1993.
7. Li HD, Qian W, Clarke LP, and Kallergi M. Neural Network for Maximum Entropy Restoration of Nuclear Medicine Images. *Proceedings of the International Conference on Acoustics, Speech, and Signal Processing*, Minneapolis, Minnesota; April 27-30, 1993.
8. Li HD, Kallergi M, Clarke LP, Qian W, and Clark RA. Markov random field model for mammogram segmentation. *Proceedings of the 15th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, San Diego, CA, October 28-31, 1993.
9. Qian W, Clarke LP, Kallergi M, Li HD, Clark RA, and Silbiger ML. Adaptive order statistic filtering and wavelet transform for feature enhancement in mammography. *Proceedings of the 15th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, San Diego, CA, October 28-31, 1993.
10. Qian W, Clarke LP, Kallergi M, and Abernathy M. Neural filters and hybrid neural networks for gamma camera-bremsstrahlung image restoration. *Proceeding of the International Neural Network Society Annual Meeting, World Congress on Neural Networks*, San Diego, CA, June 4-9, p. I-109, 1994.
11. Qian W, Clarke LP, Kallergi M, Venugopal P, Clark RA, and Silbiger ML. Application of wavelet transform for image enhancement in medical imaging. In: Intelligent Engineering Systems Through Artificial Neural Networks. Dagli CH, Fernandez BR, Ghosh J, and Kumara RTS, eds. *Proceedings of the Artificial Neural Networks in Engineering Conference (ANNIE'94)*, November 13-16, St. Louis, Missouri, 1994; 4:651-660. ASME Press Series on International Advances in Design Productivity.
12. Qian W, Clarke LP, Kallergi M, Song DS, Clark R, and Silbiger M. Application of wavelet transform for image segmentation in mammography. *Proceedings of the IPMI Conference*, June 26-30, 1995.
13. Kallergi M, Gavrielides MA, Gross WW, Clarke LP. Evaluation of a CCD-based film digitizer for digital mammography. *SPIE* 1997; 3032:282-291.

14. Gohel HJ, Kallergi M, Vossberg M, Gavrielides MA, Clarke LP, and Thomas JA. A workstation interface for ROC studies in digital mammography. *SPIE* 1997; 3031:440-447.

15. Gavrielides MA, Kallergi M, and Clarke LP. Automatic shape analysis and classification of mammographic calcifications. *SPIE* 1997; 3034:869-876.

16. Kallergi M, Clark RA, and Clarke LP. Medical image databases for CAD applications in digital mammography: Design issues. *Proceedings of the Medical Informatics Europe, 14th International Congress, May 25-29, Sithonia, Greece,* 1997. In *Medical Informatics Europe '97*, Pappas, C., Maglaveras, N., and Scherrer, J. R., (Eds.), IOS Press, Amsterdam, pp. 601-605, 1997. {Stud. Health Technol. Inform. 1997; 43 Pt B:601-605.}

17. Heine JJ, Kallergi M, Chetelat SM, and Clarke LP. Multiresolution Wavelet Approach for Separating the Breast Region from the Background in High Resolution Digital Mammography. In *Digital Mammography, Nijmegen, 1998.* Karssemeijer N, Thijssen M, Hendriks J, and van Erning L, eds. *Proceedings of the Fourth International Workshop on Digital Mammography*, June 2-6, Nijmegen, The Netherlands, 1998. Kluwer Academic Publishers, pp. 295-298.

20. Kallergi M, He L, Gavrielides M, Heine J, and Clarke LP. Resolution effects on the morphology of calcifications in digital mammograms. In *Medicon '98'*, Proceedings of VIII Mediterranean Conference on Medical and Biological Engineering and Computing, Lemesos, Cyprus, (June 14-17, 1998). CD-ROM, ISBN 9963-607-13-6.

21. Bruce LM and Kallergi M. Effects of image resolution and segmentation method on automated mammographic mass shape classification. SPIE 1999; 3661:940-947.

19. Bruce LM, Kallergi M, and Mendoza A. Wavelet scalar-energy features for recognition of mammographic mass shapes. SPIE 1999; 3723:156-162.

20. Zheng Y, Li L, Kallergi M, Qian W, and Clark RA. An improved method for automatic identification of lung regions in chest radiographs. Proc. SPIE 2000; 3979:1138-1146.

21. Malhotra P, Kallergi M, Alexander D, Berman CG, Gardner M, Hersh MR, Hooper L, Kim JJ, and Venugopal P. Discrepancies between film and digital mammography interpretations. Proc. SPIE Image Perception, Observer Performance, and Technology Assessment 2002; 4686:119-128.

27. Kallergi M, Hersh MR,and Thomas JA. Using BIRADS categories in ROC experiments. Proc. SPIE Image Perception, Observer Performance, and Technology Assessment 2002; 4686:60-67.

28. Kallergi M, Qian W, CAPT Thomas JA, Eberhard JW, Claus BEH, and Clark RA. CAD methodology transfer from 2D to 3D digital mammography for calcification enhancement and segmentation: A feasibility study. In "Digital Mammography IWDM 2002", Peitgen HO (Ed.), p. 331, Springer-Verlag, New York, 2003. (Proc. 6th IWDM, Bremen Germany, June 22-25, 2002.)

29. Kallergi M, Berman CG, Heine JJ, Hersh MR, Hooper LD, Kim JJ, Miller MM, Galbo CE, Thomas JA, and Clark RA . Effect of default display and presentation protocol on softcopy mammography. In "Digital Mammography IWDM 2002", Peitgen HO (Ed.), pp. 446-448, Springer-Verlag, New York, 2003. (Proc. 6th IWDM, Bremen Germany, June 22-25, 2002.)

30. Kallergi M and Manohar A. Stereoscopic representation of the breast from two mammographic views with external markers. Proc. SPIE, Visualization, Image-Guided Procedures, and Display 2003; 5029:368-375.

31. Li L, Wu Z, Chen L, George F, Chen Z, Salem A, Kallergi M, and Berman C. Breast Tissue Density and CAD Cancer Detection in Digital Mammography. Proc. IEEE Eng. Med. Biol. Soc. 2005; 3:3253-3256.

32. Kallergi M, Heine JJ, and Lucier BJ. Observer Evaluations of Wavelet Methods for the Enhancement and Compression of Digitized Mammograms. In "Digital Mammography IWDM 2006," Astley S, Brady M, and Swigeelaar R (Eds.), Springer-Verlag, London, 2006. (Proc. 8th IWDM, Manchester, UK, June 18-21, 2006.)

33. Kallergi M, Wollin E, Heine JJ, Kovalchuk N, and Manohar A. Magnetic Resonance Electrical Impedance Mammography: A Pilot Study. In "Digital Mammography IWDM 2006," Astley S, Brady M, and Swigeelaar R (Eds.), Springer-Verlag, London, 2006. (Proc. 8th IWDM, Manchester, UK, June 18-21, 2006.)

34. Land WH, Heine JJ, Margolis D, and Kallergi M. A complex adaptive decision mechanism (CADM) for two view mammography. ANNIE 2009, November 2-4, 2009. Conference Proceedings published by the American Society of Mechanical Engineers (ASME) Press, Eds., Dagli, Bryden,

Gen, Corns, Süer, and Tumer, Nov. 2009.

35. Kallergi M, Pianou N, Georgakopoulos A, Kafiri G, Pavlou S, and Chatziioannou S. Quantitative evaluation of the memory bias effect in ROC studies with PET/CT. SPIE Medical Imaging Conference, San Diego, CA, Feb. 4-10, 2012.

36. Kallergi M, Menychtas D, Georgakopoulos A, Pianou N, Metaxas M, and Chatziioannou S. Can technical characteristics predict clinical performance in PET/CT imaging? A correlation study for thyroid cancer diagnosis. SPIE Medical Imaging Conference, Orlando, FL, Feb. 9-14, 2013.

8.4. <u>Abstracts in International Conference Proceedings</u>

1. Kallergi M, Aubel J, and Sundaram S. Modulated reflectance of MBE-grown AlAs. *Proceedings of the 16th Annual Symposium of the Florida Chapter of the American Vacuum Society*. Clearwater: American Vacuum Society; 1987:15-16.

2. Kallergi M, Sundaram S, Anderson TJ, and Edgar J. Laser-enhanced spots on epitaxial Layers of AlGaAs. *Proceedings of the 17th Annual Symposium of the Florida Chapter of the American Vacuum Society*. Clearwater: American Vacuum Society; 1988:17.

3. Kallergi M, Sundaram S, Aubel J, Comas J, and Davis J. Modulated reflectance spectra of MBE-grown InSb. *Proceedings of the Annual March Meeting of the American Physical Society*, New Orleans, LA. Bulletin of APS 1988; 33:585.

4. Kallergi M, Chi J, Sundaram S, and Aubel J. Modulated reflectance of InGaAs and InAlAs. *Proceedings of the Annual March Meeting of the American Physical Society*, New Orleans, LA. Bulletin of APS 1988; 33:527.

5. Kallergi M, Aubel J, and Sundaram S. Modulated reflectance of epitaxial GaAs on Si substrate. *Proceedings of the Annual March Meeting of the American Physical Society*, St. Louis, MO. Bulletin of APS 1989; 34:.

6. Roughani B, Kallergi M, Aubel J, and Sundaram S. Raman scattering by epitaxial GaAs on Si substrate. *Proceedings of the Annual March Meeting of the American Physical Society*, St. Louis, MO. Bulletin of APS 1989; 34:.

7. Kallergi M, Roughani B, Aubel J, Sundaram S, Chu T, Chu S, and Green R. Modulated reflectance and Raman scattering studies of metalorganic chemical vapor deposited homolayers of GaAs. *Proceedings of the Annual National Meeting of the American Vacuum Society*, Boston, MA. Bulletin of AVS 1989.

8. Kallergi M, Roughani B, Huang D, Aubel J, and Sundaram S. Comparative study of interference effects in electroreflectance and photoreflectance spectra of GaAs. *Proceedings of the Annual March Meeting of the American Physical Society*, Cincinnati, OH. Bulletin of APS 1991: 36:649.

9. Kallergi M. Clark RA, Clarke LP, Qian W, and Woods K. Computer-Assisted Mammography. *15th Annual Cancer Research Seminar for the Researchers of Florida, American Cancer Society, Florida Division*, Orlando, FL; February 29, 1992.

10. Kallergi M, Qian W, and Clarke LP. Gamma camera images of beta emitters: neural network restoration. *Proceedings of the 39th Annual Meeting of the Society of Nuclear Medicine*, Los Angeles, CA; June 9-12; 1992.

11. Kallergi M, Clarke LP, and Qian W. Quantitative reconstruction of ^{32}P tomographic images: attenuation corrections and neural network restoration. *Proceedings of the 34th Annual Meeting of the AAPM*, Calgary, Alberta, Canada; August 23-27, 1992.

12. Woods K, Kallergi M, Clarke LP, Qian W, and Clark RA. Computerized parenchymal density measurements in digital mammography. *Proceedings of the 34th Annual Meeting of the AAPM*, Calgary, Alberta, Canada; August 23-27, 1992.

13. Clarke LP, Qian W, Woods KS, Kallergi M, Li HD, Velthuizen RP, and Clark RA. Non-linear filtering techniques for improved classification of mammographic parenchymal patterns in cancer screening. *Proceedings of the 34th Annual Meeting of AAPM*, Calgary, Alberta, Canada; August 23-27, 1992.

14. Li HD, Qian W, Clarke LP, Kallergi M, and Clark RA. Mammographic image feature extraction and enhancement by wavelet transform. *Proceedings of the 35th Annual Meeting of the AAPM*, Washington DC, August 8-12, 1993.

15. Kallergi M, Abernathy MJ, Li HD, Jain VK, Clarke LP. Yttrium-90 attenuation measurements before and after maximum entropy image restoration. *Proceedings of the SNM 41st Annual Meeting*, Orlando, Florida, June 5-8; *J Nuc Med* 1994; 35(5):161P.

16. Qian W, Clarke LP, Zheng B, and Kallergi M. Neural filter and neural network hybrid filter for gamma camera bremsstrahlung image restoration. *Proceedings of the SNM 41st Annual Meeting*, Orlando, Florida, June 5-8; *J Nuc Med* 1994; 35(5): 143P.

17. Kallergi M, Clarke LP, Qian W, Venugopal P, Berman CG, Holman SF, Gavrielides M, and Clark RA. Conventional and digital (pre- and post-wavelet enhancement) mammography: An ROC study. *Proceedings of the 80th Scientific Assembly and Annual Meeting of the Radiological Society of North America,* Chicago, IL, November 27 - December 2, 1994.

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19. Clarke LP, Qian W, Song D, Li H, Venugopal P, and Kallergi M. Four-channel filter banks and wavelets for segmentation of MCC's in mammography. *Proceedings of the 37th Annual Meeting of the AAPM*, Boston, MA, July 23-27; *Med Phys* 1995; 22(6):903.

20. M, Gavrielides MA, Qian W, Song D, Venugopal PR, Clark RA, and Clarke LP. Morphology and distribution of calcifications in wavelet-processed digital mammograms. *Proceedings of the 81st Scientific Assembly and Annual Meeting of the Radiological Society of North America,* Chicago, IL, November 26 - December 1; *Radiology* 1995; 197(P):392.

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22. Clarke LP, Thomas J, Qian W, Kallergi M, Li L, and Velthuizen R. CAD: Wavelet segmentation for improved feature extraction. RSNA InfoRad, Radiology 1997a; 205(P):740.

23 Clarke LP, Qian W, Velthuizen R, Li L, Mao F, Kallergi M, and Thomas J. Computer assisted diagnosis (CAD) methods for x-ray imaging and teleradiology. The 26th AIRP Workshop, Washington D.C., October 15-17, 1997.

24. Kallergi M, Chetelat S, He L, and Clarke LP. Automatic calcification diagnosis in stereotactic biopsy images. Proc. of AAPM 40th Annual Meeting, San Antonio, Texas, August, 1998.

25. Kallergi M, Hersh MR, Kim JJ, Chetelat SM, Avants BB, and Thomas JA. A workstation- user interface for softcopy reading of mammograms and CAD. Proc. of AAPM 41st Annual Meeting, Nashville, Tennessee, July 25-29, 1999; Med Phys 1999; 26(6):1082.

26. Kallergi M, Hersh MR, Clark RA, Avants BB, Chetelat SM, and Thomas JA. Film versus softcopy interpretation of mammograms. Proc. of VI International Conference on Medical Physics, Patras, Greece, September 1-4, 1999.

27. Velthuizen RP, Kallergi M, Qian W, Li L, Heine JJ, and Clark RA. Teleradiology Using Internet2. 1st International Workshop on Digital and Computational Video. Tampa, FL, December 10, 1999 (http://ee.eng.usf.edu/DCV99).

28. Alexander DD, Malhotra P, Hersh MR, Berman CG, Hooper L, Gardner M, Kim JJ, and Kallergi M. Digital vs. Film Mammography: Calcification Interpretation. Proc. of AAPM 43rd Annual Meeting, Salt Lake City, Utah, July 22-26, 2001.

29. Kallergi M and Manohar A. Generating a 3D view of the breast from the two standard mammographic projections. Proceedings of DOD's ERA of HOPE Meeting, Orlando, FL, September 25-29, 2002.

30. Kallergi M, Thomas JA, Berman CG, Hersh MR, Li L, Clark RA, {Hooper LD, Kim JJ, Miller MM, Qian W, Tsalla E, and Galbo CE}. Impact of false positive CAD detections on mammography. Proceedings of 88th Scientific Assembly and Annual Meeting of RSNA (oral presentation), December 1-6, Chicago, IL, 2002.

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RSNA, December 1-6, Chicago, IL, 2002.

32. Romilly AP, Kallergi M, Berman CG, Cressman JB, Szabunio MM, and Venugopal PR. Pilot Clinical Evaluation of a New Digital System for Mammography. Proceedings of 89th Scientific Assembly and Annual Meeting of RSNA (Hot Topics – oral presentation), November 3 - December 5, Chicago, IL, 2003.
33. Kovalchuk N, Kallergi M, Wollin E, Heine JJ, and Manohar A. Magnetic Resonance Electrical Impedance Mammography: A Feasibility Study. Proc. AAPM, Orlando, FL, July 30 – Aug. 2, 2006.
34. Kallergi M, Heine JJ, and Manohar A. Computer aided diagnosis for breast calcification clusters: two-view approach. Proc. AAPM, Houston, TX, July 27-31, 2008.
35. Grika E, Vlachogiannopoulos P, Manavaki R, Chatziioannou S, Pianou N, and Kallergi M. Detection of Ischemic Lesions in Patients with Antiphospholipid Syndrome (APS) using Positron Emitting Tomography (PET/CT) and Magnetic Resonance Imaging (MRI). EULAR, Rome, IT, June 16-19, 2010.
36. Kallergi M and Vourtsi A. CAD in two-view digital mammography. AAPM, Philadelphia, PA, July 18-22, 2010.
37. Chatziioannou S, Pianou N, Georgakopoulos A, Kafiri G, Pavlou S, and Kallergi M. Increased sensitivity of whole body F-18 FDG PET/CT scan with an extra, high resolution head & neck imaging protocol in detecting recurrent thyroid carcinoma: an ROC study. Proc. Annual Meeting of SNM, San Antonio, TX, June 4-8, 2011.
38. Kallergi M, Heine JJ, and Wollin E. Magnetic Resonance Electrical Impedance Mammography: A new approach to breast cancer imaging. ESR 2014, Vienna AU, March 6-10, 2014.
39. Kallergi M, Georgakopoulos A, Pianou N, Menychtas D, and Chatziioannou S. Recurrent thyroid cancer: Comparison of SUV_{max} and SUV_{mean} as diagnostic factors. EPOS ESR 2014, Vienna AU, March 6-10, 2014.
40. Mantzavinos Ch, Manousaridis G, Metaxas M, Spyropoulos B, and Kallergi M. Improving the quality management system of a PET/CT facility. Proc. 8th European Conference on Medical Physics (EFOMP), Athens, GR, September 11-13, 2014.
41. Markou E, Spyropoulos B, and Kallergi M. Following the innovation tendencies related to pancreas medical imaging and radiotherapy as depicted in published industrial property documents. Proc. 8th European Conference on Medical Physics (EFOMP), Athens, GR, September 11-13, 2014.
42. Gkolfinopoulou A, Gkremos A, Preppa Ch, and Kallergi M. Impact of Breast Tomosynthesis and Full Field Digital Mammography on Hospital Personnel, Mammography Workflow, and Imaging Infrastructure. Proc. 8th European Conference on Medical Physics (EFOMP), Athens, GR, September 11-13, 2014.
43. Politis N, Botsivali M, Georgakopoulos G, Metaxas M, Chatziioannou S, and Kallergi M. Three-dimensional metrics for quantitative monitoring of treatment effects with PET/CT. Proc. 8th European Conference on Medical Physics (EFOMP), Athens, GR, September 11-13, 2014.

8.5. Articles in Greek Journals

1. Stratikopoulos IS, Saatsakis G, and Kallergi M. Noise monitoring and alarm system for infant incubators. *e-Journal of Science & Technology* 2012; 7(3):73-77 ; http://e-jst.teiath.gr/issue_26/Stratikopoulos.pdf.
2. Papoutsis V and Kallergi M. Evaluation of Hospital Personnel: Comparison of Public and Private Sector. *e-Journal of Science & Technology* 2014; 9(3):61-69 ; http://e-jst.teiath.gr/issue_36/Papoutsis_36.pdf

8.6. Abstracts in Greek Conference Proceedings (in Greek or English)

1. Μανταδάκης Ε, Μενύχτας Δ, Χατζηιωάννου Σ, Παπασπύρου ΣΛ, και Καλλέργη Μ. Τηλεϊατρική με PET/CT. 3η Διεθνής Ιατρική Έκθεση MedicExpo Αθήνα, 27-30 Μαρτίου, 2008.
2. Καλλέργη Μ. Εξελίξεις στην ιατρική απεικόνιση: Μοριακή Απεικόνιση και Απεικόνιση Πολλαπλών Τεχνολογιών. 3η Διεθνής Ιατρική Έκθεση Medic Expo, Αθήνα, 27-30 Μαρτίου, 2008.

3. Μενύχτας Δ, Μανταδάκης Ε, Χατζηιωάννου Σ, Παπασπύρου ΣΛ, και Καλλέργη Μ. Θέματα διαδικτυακής ασφάλειας για τηλεϊατρικές εφαρμογές. 4η Διεθνής Ιατρική Έκθεση MedicExpo, Αθήνα, 3-5 Απριλίου, 2009.
4. Φαρσάρης Μ, Σκοπελίτης Μ, Βούρτση Α, και Καλλέργη Μ. Ανάλυση κόστους ψηφιακής και αναλογικής μαστογραφίας στην Ελλάδα. 4η Διεθνής Ιατρική Έκθεση MedicExpo, Αθήνα, 3-5 Απριλίου, 2009.
5. Καλλέργη Μ. Νανοτεχνολογία & Ιατρική. 4η Διεθνής Ιατρική Έκθεση MedicExpo, Αθήνα, 3-5 Απριλίου, 2009.
6. Καλλέργη Μ. Απεικόνιση μαστού: 1913-2010. 5η Διεθνής Ιατρική Έκθεση MedicExpo, Αθήνα, 23-25 Απριλίου, 2010.
7. Μενύχτας Δ και Καλλέργη Μ. REVIEW – Ρομποτική στην Ιατρική. 6η Διεθνής Ιατρική Έκθεση MedicExpo, Αθήνα, 25-27 Φεβρουαρίου, 2011.
8. Στρατικόπουλος Η, Σαατσάκης Γ, και Καλλέργη Μ. Αυτόματο Σύστημα Παρακολούθησης της Στάθμης Θορύβου σε Μονάδες Εντατικής Θεραπείας. 6η Διεθνής Ιατρική Έκθεση MedicExpo, Αθήνα, 25-27 Φεβρουαρίου, 2011.
9. Κοντίλη Μ, Κυριαζή Ν, και Καλλέργη Μ. Αξιολόγηση συστήματος CAD για δύο προβολές ψηφιακής μαστογραφίας. 6η Διεθνής Ιατρική Έκθεση MedicExpo, Αθήνα, 25-27 Φεβρουαρίου, 2011.
10. Κλεφτόγιαννη Ε, Μαθιούδη Ε, και Καλλέργη Μ. Συμπίεση ψηφιακών μαστογραφιών χωρίς ορατές απώλειες. 6η Διεθνής Ιατρική Έκθεση MedicExpo, Αθήνα, 25-27 Φεβρουαρίου, 2011.
11. Στρατικόπουλος Η, Σαατσάκης Γ, και Καλλέργη Μ. Αυτόματο Σύστημα Παρακολούθησης της Στάθμης Θορύβου σε Θερμοκοιτίδες προς Αποφυγή Νευρολογικών Παθήσεων στα Νεογνά. Συνέδριο Ελληνικής Εταιρείας Βιοϊατρικής Τεχνολογίας (ΕΛΕΒΙΤ) Αθήνα, 20-21 Ιανουαρίου 2012.
12. Kallergi M, Tzimas A, Roussos E, Georgakopoulos A, Pianou N, Metaxas M, and Chatziioannou S. Correlation of technical and clinical characteristics of whole body and dedicated, high resolution, head neck FDG PET/CT imaging of thyroid cancer. Proceedings of Workshop on Bio-Medical Instrumentation and related Engineering and Physics Sciences (BIOMEP), Athens, July 6, 2012.
13. Kallergi M, Kondili M, and Kiriazi N. Single and two-view CAD in full field digital mammography. Proceedings of 1st International Conference on Bio-Medical Instrumentation and related Engineering and Physics Sciences (BIOMEP), Athens, July 6, 2012.
14. Stratikopoulos I, Saatsakis G, and Kallergi M. Noise monitoring and alarm system for infant incubators. Proceedings of 1st International Conference on Bio-Medical Instrumentation and related Engineering and Physical Sciences (BIOMEP), Athens, July 6, 2012.
15. Papoutsis V and Kallergi M. Evaluation of hospital personnel: comparison of public and private sector. Proc. 2nd BIOMEP 2013, June 21-22, 2013.

8.7.   Invited Lectures - Seminars

1. Clarke LP, Blaine GJ, Doi K, Yaffe MJ, Shtern F, Brown GS, Winfield DL, and Kallergi M. Digital mammography cancer screening: factors important for image compression. *Proceedings of the Space and Earth Science Data Compression Workshop (NASA Conference Publication 3191)*, Invited Presentation, Snowbird, Utah, April 2, pp. 63-74, 1993.
2. Clarke LP, Kallergi M, Qian W, Li HD, Velthuizen RP, and Clark RA. Digital mammography: Review of advanced computer assisted diagnostic (CAD) methods. *President's Symposium; Proceedings of the 35th Annual Meeting of the AAPM*, Invited Presentation, Washington DC, August 8-12, 1993.
3. Qian W, Clarke LP, Kallergi M, and Lucier BJ. Wavelet transform for image segmentation and analysis. *President's Symposium; Proceedings of the 35th Annual Meeting of the AAPM*, Invited Presentation, Washington DC, August 8-12, 1993.
4. Kallergi M, Qian W, Venugopal PR, Clark RA, and Clarke LP. Wavelets in digital mammography: enhancement, segmentation, and compression. *Workshop of Computer-Aided Diagnosis in Medical Imaging*, Invited Speaker and Computer Demonstration, Georgetown University Medical Center, Washington D.C., July 5-6, 1994.

5. Kallergi M. *Computer assisted diagnosis and digital mammography* (1 CME credit). AAPM Southeastern Chapter Annual Meeting, Orlando, FL, April 20-21, 1995.
6. Kallergi M. *Digital mammography and computer aided design* (1 CME credit). AAPM Southeastern Chapter Fall Meeting, Orlando, FL, November 20, 1998.
7. Kallergi M. *Digital mammography*. Faculty of the Bristol-Myers Squibb Oncology Preceptorship Program. Lectures to oncology nurses and physician assistants on digital mammography issues, March 1999.
8. Kallergi M. *Digital Mammography and Telemammography*. Guest Speaker of the Joint Cancer Conference of the Florida Universities, Orlando, FL, January 27-29, 2000.
9. Kallergi M. *Digital mammography, comparison to screen/film mammography, and quality control requirements*. MQSA Continuing Education Course, Conference of Radiation Control Program Directors – Committee on Mammography. Tampa, FL, May 12-14, 2000. January 2000
10. Kallergi M. Digital Mammography, CAD, and Telemammography. <u>Guest Speaker</u> of the Florida West Coast Section Meeting of the American Society of Mechanical Engineers. February 9, 2000 (Certificate of Appreciation).
11. Kallergi M. Digital Imaging, Breast Cancer. <u>Invited Speaker</u> at the Moffitt Cancer Center
12. Research Retreat. February 26, 2000, Tampa, FL.
13. Kallergi M. Digital Mammography Databases. <u>Invited Speaker</u> at the Technical Topics Conference of the Research Computing Group of the H. Lee Moffitt Cancer Center and Research Institute. October 18, 2000, Tampa, FL.
14. Kallergi M. Seminar on Digital Mammography. <u>Invited Speaker</u> of the Mammography Conference for Mammography Personnel - Seminars for Continuing Education. October 28, 2000, Tampa, FL.
15. Kallergi M. Digital Mammography Clinical Trial: An Update. Invited Speaker at the Cancer Control Research Interest Group Monthly Meeting. January 11, 2001, H. Lee Moffitt Cancer Center & Research Institute, Tampa, FL.
16. Kallergi M. QC for Digital Mammography. <u>Invited Speaker</u> of the Annual Meeting of the Florida Chapter of the AAPM. April 19-21, 2001, Orlando, FL.
17. Kallergi M. New technologies for breast imaging. <u>Invited Speaker and Panelist</u>. 4th Annual Breast Cancer Awareness Luncheon, Sarasota/Manatee/Moffitt, October 17, 2001.
18. Kallergi M. Digital Radiography Computer Aided Detection/Diagnosis – Breast Cancer. Invited speaker, Digital Radiography Mini-Course, RSNA 2002.
19. Kallergi M. Evaluation issues on computer aided detection and diagnosis methodologies. <u>Invited Speaker</u>, NCI Workshop on "Validation of Computer Assisted Diagnosis Procedures", Chevy Chase, MD, October 15, 2003.
20. Kallergi M. Digital Mammography and CAD. Hot Topics in Breast Cancer. Seminars in Oncology. H. Lee Moffitt Cancer Center & Research Institute. February 16, 2005.
21. Kallergi M. Advances in Breast Imaging. Breast Imaging Update 2005. Key West, FL, April 6-9, 2005.
22. Kallergi M. User Interface Optimization. SCAR University, Section 7, *Image Perception*. Proc. SCARU, pp. 78-80, Orlando, FL, June 2-5, 2005.
23. Kallergi M. Update on FFDM Systems. DC Metropolitan Radiological Society Breast Imaging Update 2005. Washington DC, October 28-30, 2005.
24. Kallergi M. Digital Mammography and Advanced Applications. DC Metropolitan Radiological Society Breast Imaging Update 2005. Washington DC, October 28-30, 2005.
44. Kallergi M. Breast Imaging Technologies. 8th European Conference on Medical Physics (EFOMP) and 3rd BIOMEP Workshop, Athens, GR, September 11-13, 2014.

8.8. <u>Editorials</u>

1. Kallergi M. *Computer assisted diagnosis in mammography: The role of artificial neural networks and wavelets*. Advance for Administrators in Radiology and Radiation Oncology, Guest Editorial, April 1995.
2. Kallergi M. *Building a Better Mammogram*. Invited contribution, The Moffitt Monographs, Vol. 1,

Number 2, pp. 18-21, 2003.
3. Kallergi M. Point/Counterpoint with Robert Nishikawa on CAD for screening mammography. C. Orton (Ed.), Med. Phys. April 2006.

8.9.   <u>**Book Reviews**</u>

1. Meyer-Bäse A. *Pattern Recognition for Medical Imaging.* Elsevier Academic Press, San Diego, CA 2004.
2. *Advanced Plaque Imaging: Pixel to Molecular Levels*. CRC Press 2004.
3. Beverly Hashimoto. *Practical Digital Mammography*. Thieme Press 2005.

9. CITATIONS

SCOPUS

Date of last search:	October 2014
Number of publications with citations since 1989:	55
Number of citations:	681
Maximum number of citations for one publication:	128
Index-**h** (for publications after 1995):	15

GOOGLE SCHOLAR

Date of last search:	October 2014
Number of publications with citations since 1989:	113
Number of citations:	1793
Maximum number of citations for one publication:	225
Index-**h**:	22
i10-index:	15

10 RESEARCH PROJECTS

10.1 Active Research Projects

Project Title: Automated three-dimensional techniques for treatment monitoring in oncology (ATMO)
Source of Support: Hellenic Ministry of Education (Program Archimedes III)
Role in Project: Principal investigator
Award amount (€): 100,000
Period covered: 01/01/2012 - 30/06/2015 (active)
Effort (%): 13 (7 calendar months total)
Brief Description: Evaluation of PET/CT for treatment monitoring of cancers and development of algorithms for the automated analysis and measurement of tumors as a function of treatment and time in three dimensions.

Project Title: Software and hardware development for ensuring continuity of care between primary hospitals and at-home care in Greece
Source of Support: Hellenic Ministry of Education (Program Archimedes III)
Role in Project: Co-Investigator (P.I. B. Spyropoulos, Ph.D.)
Award amount (€): 100,000
Period covered: 01/01/2012 - 30/06/2015 (active)
Effort (%): 13 (7 calendar months total)
Brief Description: The purpose of this project is the development of new software and hardware that will ensure the continuation of care between primary health care facilities and home after a patient is dismissed while conforming with Greek National, European, and International regulations and standards.

10.2 Completed Research Projects

Project Title: Digital enhancement of mammograms
Source of Support: ACS/Moffitt Cancer Center - Institutional Grant Program
Role in Project: Principal investigator
Award amount ($): 10,000 (per year)
Period covered: 02/1/1994 - 01/31/1995 (completed)
Effort (%): 10
Brief Description: Application and evaluation of algorithm for digital mammogram enhancement

Project Title: Quantitative imaging of beta emitters using the gamma camera
Source of Support: NIH Ioniz Rad Imag (DCT)
Role in Project: Co-Investigator (PI: LP Clarke)
Award amount ($): 136,942 (per year)
Period covered: 01/01/93 - 12/31/95 (completed)
Effort (%): 50
Brief Description: Imaging of beta emitters and development of software for image restoration and dosimetry measurements

Project Title: SPECT at 511 keV: Use of neural network image restoration filters for collimators with weight constraints.
Source of Support: ADAC Laboratories
Role in Project: Co-Investigator (PI: LP Clarke)
Award amount ($): 44,000 (per year)

Period covered:	11/0 1 /94 - 10/31/95 (completed)
Effort (%):	5
Brief Description:	Use a SPECT camera for positron imaging and apply restoration filters to improve image quality and quantitation

Project Title:	Advanced signal processing methods applied to digital mammography and other imaging modalities.
Source of Support:	NASA: Life and Microgravity Sciences and Application
Role in Project:	Co-Investigator for USF Subcontract (PI: K. Cullers)
Award amount ($):	74,970 (per year)
Period covered:	09/01/94 - 08/31/95 (completed)
Effort (%):	5
Brief Description:	Investigation of wavelets and noise modeling methods to identify normal mammograms.

Project Title:	Participation to the Medical Informatics Europe 1997 Congress
Source of Support:	University of South Florida; Faculty International Travel Award
Role in Project:	Principal Investigator
Award amount ($):	1,500
Period covered:	N/A (completed)
Effort (%):	N/A
Brief Description:	Participate and present paper on medical image databases to the Medical Informatics Europe Congress, Sithonia, Greece, May 25-29, 1997.

Project Title:	Digital mammography: Second opinion strategy using telemedicine.
Source of Support:	Susan G. Komen Breast Cancer Foundation
Role in Project:	Co-investigator (PI: RA Clark)
Award amount ($):	50,000 (per year)
Period covered:	5/01/98 - 4/30/99 (completed)
Effort (%):	5 (donated)
Brief Description:	Study the feasibility of telemammography and use of CAD enhancement methods based on wavelets to standardize remote diagnosis using breast cancer screening as a clinical model.

Project Title:	Digital x-ray mammogram: Multiple image display workstation for remote analysis of images.
Source of Support:	GTE & H. Lee Moffitt Cancer Center and Research Institute
Role in Project:	Principal Investigator
Award amount ($):	25,000
Period covered:	07/01/1998 - 06/30/99 (completed)
Effort (%):	5 (donated)
Brief Description:	This is a pilot telemammography study that aims at the development and evaluation of a workstation-user interface with two high resolution monitors for primary reading of digital mammograms.

Project Title:	Digital mammography: Computed radiographic diagnosis and multisite ROC evaluation.
Source of Support:	Navy Medical Research & Development, USUHS
Role in Project:	Co-Investigator (PI: RA Clark)
Award amount ($):	1,049,673
Period covered:	10/01/95 - 09/30/99 (completed)
Effort (%):	30
Brief Description:	Development and clinical evaluation of CAD methods for digitized screen-film mammography; multisite ROC evaluation by USUHS and USF/Moffitt

Cancer Center.

Project Title:	USF Bioengineering Institute
Source of Support	USF - Infrastructure grant
Role in Project:	Co-founder and member of steering committee
Award amount ($):	80,000 per 2 years
Period covered:	06/01/1999 - 05/31/01 (completed)
Effort (%):	5 (donated)
Brief Description:	The goal of this effort is the establishment of a comprehensive institute for bioengineering that will support and unite existing research and educational programs at USF dealing with all aspects of bioengineering related scientific areas.

Project Title:	Computer-aided diagnosis, digital x-ray imaging, and teleradiology research initiatives: Phase I
Source of Support:	Navy Medical Research & Development, USUHS
Role in Project:	Co-PI (PI: RA Clark)
Award amount ($):	1,200,000
Period covered:	10/01/99 - 06/01/01 (completed)
Effort (%):	50
Brief Description:	Clinical evaluation of a full-field digital mammography system. Development and clinical evaluation of CAD methods for screen/film mammography and translation to digital mammography. Multisite ROC evaluation of screen/film CAD by USUHS and USF/Moffitt Cancer Center.

Project Title:	Computer-aided diagnosis, digital x-ray imaging, and teleradiology research initiatives: Phase II
Source of Support:	Navy Medical Research & Development, USUHS
Role in Project:	Co-PI (PI: RA Clark)
Award amount ($):	600,000
Period covered:	06/01/01 - 12/31/01 (completed)
Effort (%):	50
Brief Description:	Continuing clinical evaluation of a full-field digital mammography system. Development and clinical evaluation of CAD methods for digital mammography. Computer evaluation of digital CAD on large databases.

Project Title:	Computer-aided diagnosis, digital x-ray imaging, and teleradiology research initiatives: Phase III
Source of Support:	Navy Medical Research & Development, USUHS
Role in Project:	Co-PI (PI: RA Clark)
Award amount ($):	230,000
Period covered:	01/01/02 - 03/31/02 (completed)
Effort (%):	50
Brief Description:	The goal of this project is to translate work from 2D digital mammography to 3D tomosynthesis. In particular, the goals are to perform preliminary studies and groundwork on (a) the characteristics of 3D tomosynthesis images, and identify similarities and differences to 2D digital mammography, and (b) the requirements for translating CAD algorithms developed for 2D breast imaging to phantom and clinical data obtained with the GE digital tomosynthesis system.

Project Title:	CAD for mammographic interpretation of calcifications.
Source of Support:	National Institutes of Health (FIRST Award)
Role in Project:	Principal Investigator

Award amount ($):	74,148 (per year)
Period covered:	07/01/1996 - 06/30/02 (completed)
Effort (%):	50
Brief Description:	Develop and evaluate a novel computer algorithm for the detection and classification of calcifications associated with breast cancer assisting radiologists in the diagnosis.

Project Title:	A system for computer-aided mammogram interpretation
Source of Support:	NCI/SBIR
Role in Project:	PI on subcontract (PI: K. Woods of Intelligent Systems)
Award amount ($):	6,800
Period covered:	09/01/00 - 06/30/02 (completed)
Effort (%):	2
Brief Description:	The major goal of this project is to develop CAD methods for breast cancer detection from mammograms. The role of the subcontract is to provide to Intelligent Systems the necessary data. Mammograms from the mammography screening program of the H. Lee Moffitt Cancer Center & Research institute will be provided for the evaluation of the CAD algorithms developed by the company.

Project Title:	Participation to the 6th International Workshop in Digital Mammography and the 16th International Congress and Exhibition of Computer Assisted Radiology and Surgery
Source of Support:	University of South Florida; Faculty International Travel Award
Role in Project:	Principal Investigator
Award amount ($):	1,500 (completed)
Period covered:	N/A
Effort (%):	N/A
Brief Description:	Participate and present papers on digital tomosynthesis at the IWDM and CARS 2002.

Project Title:	Three-dimensional representation of the breast with digital mammography
Source of Support:	DoD/U.S. Army/BCRP 2000 – Concept award
Role in Project:	Principal Investigator
Award amount ($):	72,500
Period covered:	07/01/01 - 6/30/03 (completed)
Effort (%):	10
Brief Description:	The major goal of this project is to develop a new imaging methodology and an algorithm for the three-dimensional reconstruction of the breast using the two mammographic views and spatial markers. The outcome may have applications to physical examinations, mammography, and breast cancer treatment.

Project Title:	Digital Mammography: Optimized CAD System for Mass Detection
Source of Support:	ACS
Role in Project:	Co-Investigator (PI: W. Qian)
Award amount ($):	119,362/yr (2 years)
Period covered:	01/01/00 - 12/31/03(completed)
Effort (%):	5 (cost-sharing)
Brief Description:	The major goal of this project is to develop and evaluate a CAD algorithm for the detection of masses in digital and digitized mammograms.

Project Title:	3D Digital Mammography -- Advanced Applications and Clinical Studies: Phase I

Source of Support: Navy Medical Research & Development, USUHS
Role in Project: Co-PI (PI: RA Clark)
Award amount ($):   450,000 (total)
Period covered: 07/01/02 - 09/30/04 (completed)
Effort (%):   30
Brief Description: The goals of this project are to continue (a) to study and determine the characteristics of tomosynthesis images, and identify similarities and differences to 2D digital mammography, and (b) to investigate the translation of CAD algorithms developed for 2D breast imaging to phantom and clinical data obtained with the GE digital tomosynthesis system.

Project Title: Robust detection of masses in digitized mammograms
Source of Support: DoD/US Army
Role in Project: Co-Investigator (PI: Lihua Li)
Award amount ($):   222,827 (direct) per 4 years
Period covered: 03/01/00-02/28/05(completed)
Effort (%):   2 (cost-sharing)
Brief Description: The major goal of this project is to develop and evaluate a robust CAD method for mass detection in digitized mammograms. The method will include image standardization, adaptive, and multi-mode processing, and hybrid classification for improved and robust segmentation, and classification of breast tumors.

Project Title: Digital vs. Screen-Film Mammography
Source of Support: Mammography Imaging Screening Trial (DMIST) of the American College of Radiology Imaging Network (ACRIN - 6652)
Role in Project: Co-Investigator (PI: Pisano E)
Award amount ($): $/patient
Period covered: 04/01/02 – 03/31/05 (completed)
Effort (%)   N/A
Brief Description: This was a multisite clinical trial. The goal of the project was to collect a large number of digital and corresponding screen/film mammograms to compare the two imaging modalities.
Project Title: Evaluation of flat panel displays for digital mammography.
Source of Support: National Display Systems
Role in Project: PI
Award amount ($): $20,000 - In-kind, equipment support
Period covered: 08/01/04 – 07/31/05 (completed)
Effort (%)   5
Brief Description: The goal of this project was to characterize and evaluate two new flat-panel, high-resolution monitors relative to standard CRTs for primary diagnosis of digitized and digital mammograms.

Project Title: Magnetic Resonance Electrical Impedance Mammography
Source of Support: NIH/NCI-STTR – Phase I
Role in Project: PI / Consultant to Moffitt Cancer Center & Wollin Ventures, Inc.
Award amount ($):   100,000 (direct)
Period covered: 04/01/2005 – 03/31/07 (completed)
Effort (%):   N/A
Brief Description: The major goal of this project is to implement, test, and evaluate the development of a new technique for breast cancer imaging that incorporates electrical impedance principles in MRI.

Project Title: Computerized Analysis and Detection of Missed Cancer in Screening

Mammogram

Source of Support: BCRP US Army MRMC 2002
Role in Project: Co-Investigator (PI: Lihua Li)
Award amount ($): 490,000 (direct)
Period covered: 03/01/03 - 2/28/07 (completed)
Effort (%): 10 (volunteered)
Brief Description: The goals of this project are to perform an analysis of the missed cancer cases in screening mammography, and develop new CAD algorithms for the detection and diagnosis of early breast cancer signs to significantly reduce perception errors.

Project Title: Pre-clinical and clinical evaluation of high resolution, mobile gamma camera and positron imaging devices
Source of Support: DOD – US Army - Subcontract
Role in Project: Co-Investigator (PI: David Gilland - UF; PI Subcontract: Claudia G. Berman - USF)
Award amount ($): 75,000 (total)
Period covered: 05/13/05 – 05/12/06 (completed)
Effort (%) 5
Brief Description: The goal of this project is to design, build and evaluate a compact and mobile gamma and positron imaging camera for the diagnosis, staging, and treatment of cancer and heart disease.

Project Title: Computer aided diagnosis in breast MRI
Source of Support: NIH/NCI-Mentored Quantitative Research Career Award
Role in Project: Co-Mentor (PI: Anke Meyer-Baese – FSU)
Award amount ($): 35,000
Period covered: 04/01/06-03/31/08 (completed)
Effort (%): N/A
Brief Description: The major goal of this project is the development of computer algorithms for breast MRI. It is a career transition award for Dr. Meyer-Baese. I am co-mentor to Dr. Meyer-Baese for this work.