



## CURRICULUM VITAE

### Personal Information

- Marital Status: Married
- Nationality: Greek
- Birth Date: 16-05-1972
- Address: 08 Dimodidaskalou & Ag. Varvaras Str. Spata Athens – Greece. P.O Box 19004.
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### Education

- 1990-1994 Technological Educational Institution of Athens.  
*B.Sc. in Medical Instruments Technology.*
- 1994 -1995 University of Dundee Scotland, United Kingdom.  
*M.Sc. in Biomedical Instrumentation Engineering.*
- 2000 - 2001 PA.TE.S - S.E.L.E.T.E ATHENS,  
*Degree in Educational Studies.*
- 2017-2020 University of Patras, Medical School.  
*Ph.D. in Medical Physics, Department of Medicine.*

## **Professional Experience**

- 1993-1994 Technician of X-ray systems. PANMED S.A MEDICAL INSTRUMENTS. 269 Mesogion Str Athens P.O Box 5231. This position required the repair, maintenance and calibration of X-ray systems.
- 1995-1997 Technician of Medical Instruments. Greek Army. During this period, I was doing my service at the Greek army. I was mainly stationed at the Hospital of Limnos as well as the 401-military hospital in Athens providing services in the field of Biomedical Engineering.
- 1997-2001 G.M.B Ltd. Technical Support Manager. From this position I was organizing the installation maintenance and repair procedures, of the Cardiology and Cardiosurgery equipment.
- 2001 till today I am working at the National and Kapodistrian University of Athens, University Hospital "Aretaieion" as Head of the Biomedical Engineering Department.

## **Teaching Experience**

- Since the academic year of 2002 till 2011, I was working as a Laboratory Collaborator at the department of Medical Instruments Technology - Technological Educational Institution of Athens.

### Teaching Subjects:

- Ionization Radiation Technology
  - Biomedical Instrumentation based on microprocessors
  - Electronic and Electrical design
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- Since 2020 I am teaching as an invited lecturer at the University of West Attica, Faculty of Engineering, Biomedical Engineering Dept, at the MSc level program entitled: Advanced Systems and Methods in Biomedical Engineering.

## **International Journal Publications**

1. **G. Saatsakis.**, Kassner Andrea., Lerski R.A (1997). Acoustic effects in Nuclear Magnetic Resonance Experiments. Medical and Biological Engineering and Computing, Vol 35, Supp part2, Page 772.
2. P. Gonias, N. Bertsekas, N. Karakatsanis, **G. Saatsakis**, A. Gaitanis, D. Nikolopoulos, G. Loudos, L. Papaspyrou, N. Sakellios, X. Tsantilas , A. Daskalakis, P. Liaparinos, K. Nikita, A. Louizi, D. Cavouras, I. Kandarakis and G.S. Panayiotakis. (2007). Validation of a Gate model for the simulation of the Siemens Biograph™ 6 scanner. Nuclear Instruments and Methods in Physics Research, Vol A571, Page 263-266.
3. N. Tsirikos Karapanos, D. Bramos, K. Tsiftsi, **G. Saatsakis**, E. Skaltsiotis A. Kalantaridou, D. Takos, A. Tsaroucha, E. Kairi, G. Kottis, S. Mouloupoulos, S. Toumanidis (2011). What is the Impact of Cardiac Output and Left Ventricular Pressure on Coronary Flow and on Diastolic Coronary Perfusion? A Quantitative Coronary Flow Analysis Model for Cardiovascular Surgical Research . Journal of Surgical Research, Vol 172, Issue 2, Page 187.
4. N. Tsirikos Karapanos, A.P. Kalogeropoulos, S.H Suddendorf, D. Bramos, Z. Li, M. Huebner, V.V. Georgiopolou, E. Skaltsiotis, **G. Saatsakis**, G. Kottis, S.D. Cassivi, C. Deschamps, L.D. Joyce, R.C. Daly, S. Toumanidis, S. Baseline macro and microhemodynamics in anesthetized landrace large white swine:reference values for cardiovascular surgical research studies. Journal of Surgical Research, Vol 172, Issue 2, Page 187.
5. N. Tsirikos Karapanos, D. Bramos, E. Skaltsiotis, **G. Saatsakis**, K. Tsiftsi, G. Kottis, S. Toumanidis (2012). Circumferential coronary artery dissection on the beating heart for perivascular flow probe placement using ball burnisher: A new use for and old old instrument and refined surgical technique. Journal of Surgical Research, Vol 172, Issue 2, Page 187.
6. N. Tsirikos Karapanos, A.P. Kalogeropoulos, S.H. Sunddendorf, D. Bramos, Z. Li, M. Huebner, V. V. Georgiopolou, E. Skaltsiotis, **G. Saatsakis**, G. Kottis, S. D. Cassivi, C. Deschamps, S. Toumanidis, S. J. Park (2012). Common Carotid Artery Flow and Pulsatility Index Correlations in Swine. Journal of Surgical Research, Vol 172, Issue 2, Page 349.

7. CS Mammas, A.Lazaris, S.Geropoulos, **G. Saatsakis**, Chr. Lemonidou, E. Patsouris. Telemedicine Systems In Organ Transplantation: A Feasibility And Reliability Study Of The Integrated Tele-Radiological and Tele-Pathological Evaluation Of Liver Graft. Proceedings of the ICIMTH 2013 conference and publication in the PUB-MED (after 6th of July 2013), IOSPress, Athens.
8. CS Mammas, A.Lazaris, S.Geropoulos, **G. Saatsakis**, Chr. Lemonidou, E. Patsouris. Tele-medicine Systems in Organ Transplantation: A Feasibility And Reliability Study Of The Integrated Tele-radiological and Tele-Pathological Evaluation Of Pancreas Graft. Proceedings of the ICIMTH 2013 conference and publication in the PUB-MED (after 6th of July 2013), IOSPress, Athens.
9. Mammas, A.Lazaris, S.Geropoulos, **G. Saatsakis**, Chr. Lemonidou, E. Patsouris. Tele-medicine Systems in Organ Transplantation: A Feasibility And Reliability Study Of The Integrated Tele-radiological and Tele-Pathological Evaluation Of Renal Graft. Proceedings of the ICIMTH2013 conference and publication in the PUB-MED (after 6th of July 2013), IOSPress, Athens.
10. CS Mammas, S. Geropoulos, **G. Saatsakis**, A. Konstantinidou, Chr. Lemonidou, E. Patsouris. Tele-pathology as a method to optimize quality in organ transplantation: a Feasibility and Reliability Study of the Virtual Benchmarking of Liver Graft. Proceedings of the ICIMTH2013 conference and publication in the PUB-MED (after 6th of July 2013), IOSPress, Athens.
11. CS Mammas, S. Geropoulos, **G. Saatsakis**, A. Lazaris, Chr. Lemonidou, E. Patsouris. Tele-pathology as a method to optimize quality in organ transplantation: a Feasibility and Reliability Study of the Virtual Benchmarking of Pancreas Graft. Proceedings of the ICIMTH2013 conference and publication in the PUB-MED (after 6th of July 2013), IOSPress, Athens.
12. CS Mammas, S. Geropoulos, **G. Saatsakis**, N.Kavantzias, Chr. Lemonidou, E. Patsouris. Tele-pathology as a method to optimize quality in organ transplantation: a Feasibility and Reliability Study of the Virtual Benchmarking of Renal Graft. Proceedings of the ICIMTH2013 conference and publication in the PUB-MED (after 6th of July 2013), IOSPress, Athens.
13. Mammas CS, Geropoulos S, Markou G, **Saatsakis G**, Lemonidou C, Tentolouris N. Mobile tele-medicine systems in the multidisciplinary

approach of diabetes management: the remote prevention of diabetes complications. *Studies in Health Technologies and Informatics*, 2014;202:307-10, and publication in the PUB-MED PMID:25000078.

14. Constantinos S. Mammias, Nikolaos Kavantzias, Spyros Geropoulos, Achilles Chanjiioannou, Constantinos Doteiras, **George Saatsakis**, Chryssa Lemonidou, Eustratios Patsouris. Integrated Tele-radiological and Tele-pathological Evaluation of Pulmonary Grafts for Reducing the Rate of Injured and Diseased Grafts, in Lung Transplant. *Studies in Health Technologies and Informatics*. 2014; 202:291-4. Volume 202: Integrating Information Technology and Management for Quality of Care. Pages 291 – 294, DOI 10.3233/978-1-61499-423-7-291 and publication in the PUB-MED PMID: 25000074.
15. Stefanos C. Angelakis, **Giorgos Saatsakis**, Dimitris Prionas and Ioannis Valais, Electrical Safety of Medical Equipment: An Experimental Approach (2014) *e-Journal of Science & Technology, (e-JST)* 9(4):25-30.
16. **Saatsakis, G.**, Michail, C., Fountzoula, C., Kalyvas, N., Bakas, A., Ninos, K., Fountos, G., Sianoudis, I., Kandarakis, I., Panayiotakis, G.S., Valais, I., 2019. Fabrication and Luminescent Properties of Zn–Cu–In–S/ZnS Quantum Dot Films under UV Excitation. *Applied Sciences* 9, 2367.
17. **Saatsakis, G.**, Kalyvas, N., Michail, C., Ninos, K., Bakas, A., Fountzoula, C., Sianoudis, I., Karpetas, G.E., Fountos, G., Kandarakis, I., Valais, I., Panayiotakis, G., 2019. Optical Characteristics of ZnCuInS/ZnS (Core/Shell) Nanocrystal Flexible Films Under X-Ray Excitation. *Crystals* 9, 343.
18. Valais, C. Michail, C. Fountzoula, D. Tseles, P. Yannakopoulos, D. Nikolopoulos, A. Bakas, G. Fountos, **G. Saatsakis**, I. Sianoudis, I. Kandarakis, G. Panayiotakis: On the response of alloyed ZnCdSeS Quantum Dot films. *Results in Physics* 05/2017

## **International Conference Publications**

1. P. Gonias, N. Bertsekas, N. Karakatsanis, **G. Saatsakis**, A. Gaitanis, D. Nikolopoulos, G. Loudos, L. Papaspyrou, N. Sakellios, X. Tsantilas , A. Daskalakis, P. Liaparinos, K. Nikita, A. Louizi, D. Cavouras, I. Kandarakis and G.S. Panayiotakis. Validation of a Gate model for the simulation of the Siemens Biograph™ 6 scanner. Euromedim 2006, 1st European Conference on Molecular Imaging Technology, Marseille, France, 9-12 May 2006»
2. P. Gonias, N. Bertsekas, N. Karakatsanis, **G. Saatsakis**, D. Nikolopoulos, G. Loudos, X. Tsantilas, N. Sakellios, , A. Gaitanis, L. Papaspyrou, A. Daskalakis, P. Liaparinos, D. Cavouras, I. Kandarakis and G.S. Panayiotakis. Validation of a Gate model for the simulation of scatter fraction and count rate performance of the Siemens Pet/Ct Biograph™ 6 scanner. 2nd IC-SCCE, “From Scientific Computing to Computational Engineering, Athens, Greece, 5-8 July 2006
3. P. Gonias, N. Bertsekas, N. Karakatsanis, **G. Saatsakis**, D. Nikolopoulos, G. Loudos, N. Sakellios, X. Tsantilas, A. Gaitanis, L. Papaspyrou, A. Daskalakis, P. Liaparinos, A. Louizi, D. Cavouras, G.S. Panayiotakis and I. Kandarakis. Validation of a monte carlo model for the simulation of the Siemens Pet/Ct Biograph™ 6 scanner using Gate. Eanm '06 – Annual Congress Of The European Association of Nuclear Medicine, September 30 – October 4, 2006 Athens, Greece.
4. **Saatsakis G.**, Siapikas D., Liaparinos P., Tsantis S., Kandarakis I. Development of an educational software for teaching positron emission tomography fundamentals. WSEAS International Conference on Engineering Education. 8-10 July 2005 Vouliagmeni, Athens, Greece.
5. Bramos D, Toumanidis S, Tsirikos N, Kottis G, Kordalis A, Kostopoulou V, Trika XO, **Saatsakis G**, Mouloupoulos SD. Acute increase of right ventricular dimension due to echo-contrast agent in pigs. Barcelona World Congress in Cardiology. 2-6 September 2006 Barcelona, Spain.
6. N. Tsirikos Karapanos, D. Bramos, A. Tsiftsi, **G. Saatsakis**, E. Skaltsiotis, A. Kalantaridou, D. Takos, A. Tsaroucha, E. Kairi, G. Kottis, S. Mouloupoulos, S. Toumanidis. What is the Impact of Cardiac Output and Left Ventricular Pressure on Coronary Flow and on Diastolic Coronary Perfusion? A

Quantitative Coronary Flow Analysis Model for Cardiovascular Surgical Research. 6th Annual Academic Surgical Congress February 1-3, 2011 in Huntington Beach, CA.

7. S. Angelakis, **G. Saatsakis**, D. Prionas and I. Valais. Electrical Safety of Medical Equipment an Experimental Approach. BIOMEPE 2013 - 2nd International Conference on Bio-Medical Instrumentation and related Engineering and Physical Sciences, June 21-22, 2013 TEI of Athens.
8. **Saatsakis, G.**, Michail, C., Fountzoula, C., Kalyvas, N., Ninos, K., Bakas, A., Sianoudis, I., Kandarakis, I., Fountos, G., Panayiotakis, G., Valais, I., 2019. Luminescence Efficiency of Zn-Cu-In-S/ZnS Quantum Dot films, in: 2019 14th International Conference on Design & Technology of Integrated Systems In Nanoscale Era (DTIS). Presented at the 2019 14th International Conference on Design & Technology of Integrated Systems In Nanoscale Era (DTIS), IEEE, Mykonos, Greece, pp. 1–4.
9. **George Saatsakis**, Christos Michail, Christina Fountzoula, Athanasios Bakas, Nektarios Kalyvas, Konstantinos Ninos, George Fountos, Ioannis Kandarakis, Ioannis Valais and George Panayiotakis, 2019. Poly(Methyl Methacrylate) Structure Modification through Zn-Cu-In-S/ZnS Quantum Dot Nanocrystals Dispersion. 1st Virtual Conference on Structural Integrity - VCSI1
10. **Saatsakis, G.**, Valais, I., Michail, C., Fountzoula, C., Fountos, G., Koukou, V., Martini, N., Kalyvas, N., Bakas, A., Sianoudis, I., Kandarakis, I., Panayiotakis, G.S., 2017. Preliminary Study of ZnS:Mn<sup>2+</sup> Quantum Dots Response Under UV and X-Ray Irradiation. Journal of Physics: Conference Series 931, 012030.
11. I. Valais, C. Michail, C. Fountzoula, G. Fountos, **G. Saatsakis**, A. Karabotsos, G.S. Panayiotakis and I. Kandarakis, Polymer Based Thin Film Screen Preparation Technique, IOP Conf. Series: Journal of Physics: Conf. Series 931 (2017) 012035.

## National Conference Publications and Journals

[1] Dimakakos V., **Saatsakis G.**, Katsenis K., Arapoglou V., Tsiganis Th., Georgiakakis A., Dimakakos P. Skin temperature as an effect of chronic venous deficiency. 10ο Πανελλήνιο Συνέδριο Αγγειολογίας-Αγγειοχειρουργικής. Αθήνα 20-22 Ιανουάριος 2006.

[2] Μπράμος Δ, Τσιρίκος Ν., Κόττης Γ., Κωστοπούλου Β., Τρίκκα Χ., **Σαατσάκης Γ .**, Παμπούκας Κ., Τουμανίδης Σ. Οξεία επίδραση του υπερηχογραφικού παράγοντα αντίθεσης στις διαστάσεις και τη συστατικότητα της δεξιάς κοιλίας. 27ο Πανελλήνιο Καρδιολογικό Συνέδριο. Αθήνα 2-4 Νοεμβρίου 2006

[3] P. Gonias, N. Bertsekas, N. Karakatsanis, **G. Saatsakis**, G. Loudos, A. Gaitanis, D. Nikolopoulos, A. Daskalakis, K. Nikita, A. Louizi, G.S. Panayiotakis, D. Cavouras and I. Kandarakis. Scatter fraction and noise equivalent count rate performance of the Siemens Biograph 6 Positron Emission Tomography (PET) scanner: Comparison of a Gate model with NEMA NU 2-2001 protocol experimental data. e-Journal of Science and Technology 2006.

[4] Ilias S. Stratikopoulos, **G. Saatsakis**, Maria Kallergi. Noise monitoring and alarm system for infant incubators. e-Journal of Science and Technology 2013.

## Thesis - Dissertations

- **B.Sc. Dissertation:** Quality Control in Mammography Systems. The study was investigating the quality control of different mammography systems. The systems were of different manufacturers and they were tested under different settings (kVp, mA, sec). Also, different combinations of screen-films were incorporated. The measurements were gathered and analyzed.
- **M.Sc. Dissertation:** Acoustic effects in nuclear magnetic resonance (NMR) experiments. The aim of this study was the investigation of the effects of the ultrasound waves on the T1 and T2 relaxation times. Since the contrast of the MRI (Magnetic Resonance Imaging) images is mainly dependent on the relaxation times T1 and T2, then by changing these factors using



ultrasound waves at specific frequencies, the MRI image contrast will also be changed. The investigation included mainly the in vitro measurement of the relaxation times by using an NMR analyzer in cooperation with a PZT transducer.

- **Ph.D. Thesis:** Optical characteristics of quantum dots embedded in polymer films for use in medical imaging. The aim of this study was to systematically study the optical properties of the ZnCuInS/ZnS nanoparticles. The fabricated thin films of the QD-PMMA compounds were exposed to X-ray and ultraviolet (UV) radiation. Absolute Efficiency (AE) was measured using X-ray radiation, while Energy Quantum Efficiency (EQE) was measured with ultraviolet radiation.

### **Research Activity**

- Member of the Radiation Physics, Materials technology and Biomedical Imaging Laboratory (AKTYBA) at the University of West Attica, Faculty of Engineering, Biomedical Engineering Dept.
- Member of a research team, participating in research protocols in the area of Cardiovascular, Heart surgery and General Surgery. Research protocols mainly take place, but not limited to, the Experimental Surgery Lab of the Aretaieio University Hospital in Athens.

### **Languages**

Excellent knowledge of the English and Greek (native) language.