

Curriculum Vitae

Name:	Athanasios	Surname:	Zacharopoulos
Fathers Name:	Dimitrios	Date of Birth:	July 1975
Nationality:	Greek	Sex:	Male
Family Status:	Married/1child	Email:	azacharo@iesl.forth.gr

Research Expertise

- Image Processing - Medical Imaging Processing.
- Clinical and Pre-clinical Hybrid Molecular Imaging Techniques
- Fluorescence Molecular Tomography - Diffuse Optical Tomography
- Numerical Methods - Boundary Element Method – Finite Elements Method
- Inverse Problems - 3D Image Reconstruction algorithms
- Parametric description of 3D surfaces
- Shape Based approach to 3D image reconstruction
- Computer Vision - Biomedical Imaging
- 3D printing – Phantom Development
- Microscopy - Optical Projection Tomography
- Light Sheet Fluorescence Microscopy (SPIM)
- Image registration and fusion
- Image processing for Cultural Heritage

Academic Training

PhD: November 2001 till April 2005. Thesis title “**Three-Dimensional Shape-Based Reconstructions in Medical Imaging**” from the Computer Science Department in U.C.L. under the supervision of Simon R. Arridge and Andrew Todd-Pokropek, funded by EPSRC/MRC Interdisciplinary Research Collaboration (IRC) 'From medical images and signals to clinical information'.

MSc: September 1999 till September 2000. **Vision Imaging and Virtual Environments** from the Computer Science Department of the University College of London.

BSc: September 1993 till September 1999. **Degree in Mathematics**, in the Department of Mathematics in the School of Science at the Aristotle’s University of Thessaloniki.

Work Experience

Oct. 2017 - Aug 2021 : Research Associate in the In Vivo Imaging Lab in the Inst. of Electronic Structure & Laser in FORTH, Greece.

Oct. 2016 - Jan. 2017 : Research Associate in the In Vivo Imaging Lab in the Inst. of Electronic Structure & Laser in FORTH, Greece.

Nov. 2015 - July 2016 : Research Associate in the Inst. Of Computer Science in FORTH, Greece.

May 2015 - Sept. 2015: Research Associate in the In Vivo Imaging Lab in the Inst. of Electronic Structure & Laser in FORTH, Greece.

Mar. 2012 - May 2015 : Awarded a “Supporting Postdoctoral Researchers” grant by the General Secretariat for Research and Technology Greece.

Dec. 2009 - Feb. 2012 : Research Associate in the In Vivo Optical Imaging Group in the Inst. of Electronic Structure & Laser in FORTH, Greece.

- Sept. 2012 - Aug. 2015: Honorary Research Associate in the Department of Computer Science UCL, UK.
- Sept. 2005 - Feb. 2012: Research Fellow in the Department of Computer Science UCL, UK.
- Dec. 2004 - Aug. 2005: Researcher in Mathematics in the Departamento de Matemáticas Universidad Carlos III de Madrid, Madrid, Spain.
- July 2004 : Visiting Researcher in the Optical Imaging Lab, NMR Center, Massachusetts General Hospital, Harvard Medical School, Boston, USA.
- Sep. 2003 – Oct. 2003 : Visiting Researcher in the Department of Applied Physics, University of Kuopio, Finland.

Professional Training

- 12-15 Sept. 2005 : Summer school in Molecular Imaging, Kolumbari, Crete.
- 12-20 Nov. 2003 : Computational Methods and Emerging Applications, Inverse Problems Workshop Series II, Institute for Pure and Applied Mathematics (IPAM), UCLA, LA.
- 12-21 July, 2001 : 9th International Summer School in Image Processing in Szeged Hungary. (First Award for group project)
- October 2001 : “Personal and Professional Management Skills”, off-campus skills development course in Cwm, part of the PPSRP .

Teaching Experience

- Teaching assistant in the Computer Science Department of the University of Crete, Heraklio, 2024-25
- Secondary Education Mathematics Teacher, 3rd General Lyceum of Heraklion.
- Secondary Education Mathematics Teacher, Asimi High School, 2022-2023
- Secondary Education Mathematics Teacher in the Greek-speaking section, School of European Education of Heraklion, 2021-2022
- Invited educational lecture “Analysis, segmentation and reconstruction of tomographic data”, BIOIMAGING-GR Workshop, HCMR, Heraklio Greece, 29 Oct 2019
- Tutor of “Digital Signal Processing”, course in the The Department of Informatics Engineering of the Technological Educational Institute of Crete (TEI), 2nd Semester 2018-19.
- Tutor of the “Informatics I”, course in the Department of Accounting and Finance School of Management and Economics (S.M.E.), Technological Educational Institute (T.E.I) of Crete, 1st semester, 2018-19.
- Organizer and tutor of the “In vivo optical image analysis” practical work track, in the Optical Imaging - from Molecules to Humans, 2nd Imaging Technology Summer Workshop of the ESMI- TOPIM TECH, MAICH, Chania, Greece, 10-15 July 2017.
- Course tutor on Biophotonics And Molecular Imaging (BIMI) Summer School Heraklion, Crete, Greece 27–31 July, 2015
- Invited Educational Talk, “Image reconstruction methods: The principles of Diffuse Light Propagation. From datasets to 3D tomographic images”, World Molecular Imaging Congress, Seoul, Korea, 17-20 Sept., 2014.
- Course tutor on Biophotonics And Molecular Imaging (BIMI) Summer School Heraklion, Crete, Greece 28 July–1 Aug., 2014
- Course tutor on Advanced Optical Imaging for the European Master in Molecular Imaging, (EMMI) program. Heraklion, Greece, 2011.
- Course tutor on Advanced Optical Imaging for the European Master in Molecular Imaging, (EMMI) program. Heraklion, Greece, 2010.

- Tutoring “Mathematical Methods Algorithms and Implementation” for the VIVE Master of Science students in the Computer Science Department, UCL, UK. 1st semester 2002.
- Tutoring “Mathematical Methods Algorithms and Implementation” for the VIVE Master of Science students in the Computer Science Department, UCL, UK. 1st semester 2001.

supervision of doctoral dissertations

(Unofficial) supervision of PhD students at the In Vivo Imaging Lab (IVIL) of the Foundation for Research and Technology - Hellas (FORTH),

- Daniele Ancora
- Stylianos Psycharakis

Graduate student supervision

1. I. Kyparissidis-Kokkinidis, “Development comparison and utilization of Image fusion Algorithms for 3D image fusion in Selective plane illumination Microscopy”, intradepartmental postgraduate program of studies “**OPTICS AND VISION**” with the participation of the University of Crete Departments of Medicine, Physics and Mathematics. (2015-2017)
2. G. Giasafaki “Development and application of phase sensitive algorithms for improving three dimensional imaging through turbid media” , intradepartmental postgraduate program of studies “**OPTICS AND VISION**” with the participation of the University of Crete Departments of Medicine, Physics and Mathematics. (2015).
3. M. Bekollari, “Development of an advanced system for in-vivo Mouse Optical Neuro-imaging Applications”, intradepartmental postgraduate program of studies “**OPTICS AND VISION**” with the participation of the University of Crete Departments of Medicine, Physics and Mathematics. (2014-2015).

Undergraduate research supervision (Diploma theses)

1. I. Kyparissidis-Kokkinidis, “Utilization of rigid and non-rigid image registration for temporal and spatial image alignment, in Selective Plane Illumination Microscopy”, Department of Physics, University of Crete / IESL-FORTH (2014)
2. S. Avtzi, “Fabrication and characterization of a 3-D non-homogeneous tissue-like mouse phantom for optical imaging”, Department of Physics, University of Crete / IESL-FORTH (2014)

Memberships

- European Society for Molecular Imaging, ESMI, since 2010.
- Member of the Centre for Medical Image Computing since 2005.
- Member of the Vision imaging and Virtual Environments Group, since 2001.
- Member of the Medical Imaging Theme in UCL, since 2000.

Participation in Projects

- (2012-2015). "Development and evaluation of new algorithms for diffusion optical tomography in tissue specimens, three-dimensional cell cultures and biopsy samples", "Skin-DOCTOR", an ARISTEIA Action part of the action "Education and Lifelong Learning" co-financed by the European Union (the European Social Fund) and national funds. 1778 (GR).
- (2012-2015). "A complete all-optical neuroimaging system for in-vivo mouse: utilising functional and parametric anatomical priors to maximise Resolution and Quantification", "Neureka!", "Supporting Postdoctoral Researchers" grant by the General Secretariat for Research and Technology. 341 - LS7 (GR). **(Personal Grant 150.000 €)**
- (2009-2011). "Hybrid fluorescence molecular tomography and X-ray computed tomography system and method" "FMTXCT", project funded by FP7 EU.
- (2007-2009). "Parameter and Structure Identification in Optical Tomography" project funded by the EPSRC no. EP/E034950/1 (UK).
- (2006-2007). "Integrated Technologies for in-vivo molecular imaging", project funded by FP6 EU contract LSHG-CT-2003-503259, (UK)
- (2005-2006). "Modelling of Light Transport for Optical Tomography." Funding from the EPSRC no. GR/R86201/01, (UK),
- (2005). "HYperbolic and Kinetic Equations: Asymptotics, Numerics, Analysis." A network financed by the European Union no. HPRN-CT-2002-00282 part of the 5th Framework Programme "Improving the Human Potential" (IHP), (Spain),
- (2000-2004). "Medical Images and Signals to Clinical Information", MIAS Inter-disciplinary Research Consortium (IRC) Financed by EPSRC GR/N14248/01 and the UK Medical Research Council Grant No. D2025/31, (UK), **(Funding grant for the PhD.)**

Publications (peer reviewed)

1. A.Vogiatzi, K.Keklikoglou, K.Makris, DS. Argyrou, A. Zacharopoulos, V. Sotiropoulou, N. Parthenios, A. Gkikas, M. Kokkori, MSW. Richardson, AL Fenwick, S. Archontidi, C. Arvanitidis, J. Robertson, J. Parthenios, G. Zacharakis, SRF Twigg, AOM. Wilkie, G. Mavrothalassitis, "Development of Erf-Mediated Craniosynostosis and Pharmacological Amelioration", Int J Mol Sci. Apr 27;24(9):7961. (2023)
2. C. Razcha, A. Zacharopoulos, D. Anestis, G. Mikrogeorgis, G. Zacharakis, K. Lyroudia, "Micro-Computed Tomographic Evaluation of Canal Transportation and Centering Ability of 4 Heat-Treated Nickel-Titanium Systems", Journal of Endodontics, (2020)
3. S. E. Psycharakis, E. Liapis, A. Zacharopoulos, M-E Oraiopoulou, C. Aivalioti, V. Sakkalis, J. Papamatheakis, J. Ripoll, and G. Zacharakis "High resolution 3D imaging of primary and secondary tumor spheroids using multicolor multi-angle Light Sheet Fluorescence Microscopy (LSFM)", Proc. SPIE 11076, Advances in Microscopic Imaging II, 1107600. (2019)
4. A. Zacharopoulos, K. Hatzigiannakis, P. Karamaoynas, V. M. Papadakis, M. Andrianakis, K. Melessanaki, X. Zabulis, "A method for the registration of spectral images of paintings and its evaluation", Journal of Cultural Heritage, 29, 10-18. (2018)
5. M. Rieckher, S. Psycharakis, D. Ancora, E. Liapis, A. Zacharopoulos, J. Ripoll, N. Tavernarakis, and G. Zacharakis, "Demonstrating improved multiple transport-mean-free-path imaging capabilities of light sheet microscopy in the quantification of fluorescence dynamics", Biotechnology Journal, 13, 1, (2017)
6. D. Ancora, D. Di Battista, G. Giasafaki, S. Psycharakis, E. Liapis, A. Zacharopoulos, G. Zacharakis, "Optical projection tomography via phase retrieval algorithms for hidden three dimensional imaging", Proc. SPIE 10074, Quantitative Phase Imaging III, 100741E (2017)
7. D. Ancora, D. Di Battista, G. Giasafaki, S. Psycharakis, E. Liapis, A. Zacharopoulos, G. Zacharakis, "Phase-retrieved optical projection tomography for 3D imaging through scattering layers", Proc. SPIE 9718, Quantitative Phase Imaging II, 97181B (2016)

8. D. Ancora, A. Zacharopoulos, J. Ripoll, G. Zacharakis, "The role of cerebral spinal fluid in light propagation through the mouse head: improving fluorescence tomography with Monte Carlo modeling", Proc. SPIE 9700, Design and Quality for Biomedical Technologies IX, 970015 (2016)
9. D. Ancora, A. Zacharopoulos, J. Ripoll, G. Zacharakis "Fluorescence Diffusion in the presence of Optically Clear Tissues in a Mouse Head model", IEEE Transactions on Medical Imaging, Vol. PP, Issue 99, (2016).
10. M. Rieckher, I. Kyparissidis-Kokkinidis, A. Zacharopoulos, G. Kourmoulakis, N. Tavernarakis, J. Ripoll, G. Zacharakis, "A Customized Light Sheet Microscope to Measure Spatio-Temporal Protein Dynamics in Small Model Organisms.", PLoS ONE 10(5), (2015).
11. D. Ancora, A. Zacharopoulos, J. Ripoll, G. Zacharakis, "Light propagation through weakly scattering media: a study of Monte Carlo vs. diffusion theory with application to neuroimaging", Proc. SPIE 9538, Diffuse Optical Imaging V, 95380G, (2015)
12. S. Psycharakis, A. Zacharopoulos, J. Ripoll, G. Zacharakis, M. Rieckher, N. Tavernarakis, "Optical projection tomography and light sheet microscopy for imaging in biological specimens a comparison study", Proc. IEEE International Conference on Imaging Systems and Techniques (IST) Oct 14, Santorini, Greece, IEEE, (pp. 211-215), (2014)
13. E. Tzamali, G. Tzedakis, K. Marias, G. Zacharakis, A. Zacharopoulos, V. Sakkalis, "Simulating cancer behavior based on in silico modeling and in vivo molecular imaging approaches: Prospects and limitations", Proc. IEEE International Conference on Imaging Systems and Techniques (IST) Oct 14, Santorini, Greece, IEEE, (pp. 211-215), (2014)
14. S. Avtzi, A. Zacharopoulos, S. Psycharakis, G. Zacharakis, "Fabrication and characterization of a 3-D non-homogeneous tissue-like mouse phantom for optical imaging.", Proc. SPIE 9032, Biophotonics—Riga, (2013)
15. A. Tosca, A. Kokolakis, K. Lasithiotakis, A. Zacharopoulos, X. Zabulis, I. Marnelakis, J. Ripoll, C. Stephanidis, "Development of a three dimensional surface imaging system for melanocytic skin lesion evaluation", J. Biomed. Opt. 18 (1), (2013.)
16. R. Favicchio, G. Zacharakis, K. Oikonomaki, A. Zacharopoulos, C. Mamalaki, and J. Ripoll, "Kinetics of T-cell receptor-dependent antigen recognition determined in vivo by multi-spectral normalized epifluorescence laser scanning", J. Biomed. Opt. 17, (2012.)
17. M. Schweiger, O. Dorn, A. Zacharopoulos, I. Nissila, S. R. Arridge, "3D level set reconstruction of model and experimental data in Diffuse Optical Tomography", Optics Express, 18, 150-164, (2010).
18. A.Zacharopoulos, A. Garofalakis, J. Ripoll, S. Arridge "Development of iv-vivo fluorescence imaging with the Matrix-Free method", J. Phys.: Conf. Ser. 255 (2010.)
19. A.Zacharopoulos, M. Schweiger, V. Kolehmainen, S. Arridge, "3D shape based reconstruction of experimental data in Diffuse Optical Tomography", Opt. Express 17, 18940-18956, (2009)
20. A.D. Zacharopoulos, P. Svenmarker, J. Axelsson, M. Schweiger, S. R. Arridge, and S. Andersson-Engels, "A matrix-free algorithm for multiple wavelength fluorescence tomography," Opt. Express 17, 3042-3051, (2009)
21. S R Arridge, O Dorn, V Kolehmainen, M Schweiger, A Zacharopoulos, "Parameter and structure reconstruction in optical tomography", Proceedings of 6th International Conference on Inverse Problems in Engineering : Theory and Practice, 15-19 June 2008, Dourdan (Paris), France, Journal of Physics: Conference Series 124, 012001, IOP Publishing. (2008)
22. P. Svenmarker, J. Axelsson, M. Schweiger, A. Zacharopoulos, S. R. Arridge, and S. Andersson-Engels, "Multispectral Fluorescence Enhanced Diffuse Optical Tomography Evaluated with Weight Matrix Free Algorithm," in Biomedical Optics, OSA Technical Digest, (Optical Society of America, paper BMC2. (2008).
23. S.R. Arridge, O. Dorn, J.P. Kaipio, V.Kolehmainen, M. Schweiger, T. Tarvainen, M. Vauhkonen and A. Zacharopoulos, "Reconstruction of subdomain boundaries of piecewise constant coefficients of the Radiative Transport equation from Optical Tomography data", Inverse Problems. 22, No 6, 2175-2196, (2006)
24. A.Zacharopoulos, S. Arridge, O. Dorn, V. Kolehmainen, and J. Sikora, "3D Shape Reconstruction in Optical Tomography Using Spherical Harmonics and BEM", Journal of Electromagnetic Waves and Applications. 20, 1827-1836, (2006)
25. A. Zacharopoulos, S. Arridge, O. Dorn, V. Kolehmainen, and J. Sikora, "Three dimensional reconstruction of shape and piecewise constant region values for Optical Tomography using spherical harmonic parameterisation and a Boundary Element Method", Inverse Problems. 22, No 5, 1509-1532, (2006)

26. M. Schweiger and S. R. Arridge O. Dorn and A. Zacharopoulos V. Kolehmainen, "Reconstructing absorption and diffusion shape profiles in optical tomography using a level set technique", *Optics Letters*. 31, 471-473, (2006).
27. J. Sikora, A. Zacharopoulos, A. Douiri, M. Schweiger, L. Hior, S. Arridge and J. Ripoll, "Diffuse Photon Propagation in MultiLayered Geometries", *Physics in Medicine and Biology*, 51 497-516, (2006).
28. A.Zacharopoulos, , O. Dorn, S. R. Arridge, V. Kolehmainen, J. Sikora, " Reconstruction of Simple Geometric Objects in 3D Optical Tomography Using an Adjoint Technique and a Boundary Element Method", Chapter in *Progress in Industrial Mathematics at ECMI 2006*, Vol 12 of the series *Mathematics in Industry* pp 603-607. (2006)
29. A.Zacharopoulos, S. Arridge, "Surface mesh creation for 3D objects with sphere topology by homeomorphism on a unit sphere", *Proc. CPEE*, Pages 211-214, (2002)

Patents

- I. Zacharakis S. Avtzi, A. Zacharopoulos, "Multilayer, tissue-like, Three-dimensional Phantoms for Imaging and calibrations with 3D printing", GR2003063 (Y) - 2016-01-19.

Abstract

Multilayer, tissue-like, multispectral enabled, three-dimensional tissue mimicking phantom devices are disclosed. The phantoms are targeted to be used with imaging modalities for calibration, optimization and standardization purposes. The manufacturing process results in a phantom with accurate geometry and realistic properties (e.g. optical). The above characteristics distinguish this approach from the currently available phantoms or manufacturing methods that neither have simple geometrical shapes (cubes, slabs, cylinders) nor use homogeneous approximations of the tissue properties and are usually calibrated for single wavelength tissue characterization. The embodiments described concern the fabrication of nonhomogeneous phantoms with realistic anatomic geometry and optical properties matching the characteristics of any animal or human tissue type. Anatomical information is extracted from structural imaging modalities (MRI, XCT) or atlases and used to design digital phantoms. Prototypes are then manufactured by accurate 3D printing, which allows complex objects to be built layer by layer with submillimeter resolution. Then these prototypes are used to create negative molds with silicone that may be used for the finalized phantom. The final product may be constructed by loading the molds with the appropriate material (e.g. resin) with the desired tissue properties.

Conference Presentations

1. A. Zacharopoulos, S. Psycharakis, G. Zacharakis. "3D registration of Light Sheet Fluorescence Microscopy datasets using decomposition to 2D projections ," EMIM 2020 , Virtual Edition August 24-28, 2020. (Virtual presentation)
2. A. Zacharopoulos, S. Psycharakis, G. Zacharakis. "Robust projections registration of multiangle 3D Light Sheet Fluorescence Microscopy datasets in the absence of landmarks," EMIM 2019, Glasgow, UK March19-22 2019. (Poster presentation)
3. A. Zacharopoulos, S. Psycharakis, I. Kyparissidis-Kokkinidis, M.E. Oraiopoulou, G. Zacharakis. "Increasing the information content of tomographic microscopy data by using automatic feature based projection registration," TOPIM-TECH, BIG DATA in IMAGING, Chania, Greece, 9-14 July 2018. (Poster presentation)
4. A. Zacharopoulos, M. Schweiger, G. Zacharakis, J. Ripoll, "Enhancing fluorescence diffuse optical tomography (fDOT) system by creating prior information by means of elastically deformed generic mouse atlases," ECBO, Munich 21-25 June 2015. (Poster presentation)
5. S. Psycharakis, A. Zacharopoulos, J. Papamatheakis, J. Ripoll, G. Zacharakis, "" High resolution 3D volumetric imaging of live tumor spheroids using Selective Plane Illumination Microscopy (SPIM)", ECBO, Munich 21-25 June 2015. (Oral Presentation)

6. A.Zacharopoulos, “Fluorescence Difuse Optical Tomography (fDOT) prior information for Brain imaging”, AIP- 2015, Applied Inverse Problems, Helsinki, Finland, May 25-29, 2015. (Oral Presentation)
7. I. Kyparissidis Kokkinidis, A. Zacharopoulos, M. Rieckher, N. Tavernarakis, J. Ripoll, G. Zacharakis, “3D Image Co-Registration of Multi-spectral data from Selective Plane Illumination Microscopy (SPIM) using Mutual Information”, EMIM 2015, Tubingen, Germany, 18-20 Mar. 2015. (Poster presentation)
8. E. Liapis, S. Psycharakis, A. Zacharopoulos, J. Papamatheakis, J. Ripoll, G. Zacharakis, “High resolution imaging of live tumour spheroids using Single Plane Illumination Microscopy (SPIM)”, EMIM 2015, Tubingen, Germany, 18-20 Mar. 2015. (Poster presentation)
9. A. Zacharopoulos, M. Schweiger, G. Zacharakis, M. Becollari, J. Ripoll, “Creating optical reconstruction priors using elastically deformed mouse atlases”, EMIM 2015, Tubingen, Germany, 18-20 Mar. 2015. (Oral Presentation)
10. E. Tzamali, G. Tzedakis, K. Marias, G. Zacharakis, A. Zacharopoulos, V. Sakkalis, “Simulating cancer behavior based on in silico modeling and in vivo molecular imaging approaches: Prospects and limitations”, IEEE Imaging Systems and Techniques, Santorini, Greece, 14-17 Oct. 2014. (Oral Presentation)
11. S. Psycharakis, G. Zacharakis, A. Zacharopoulos, J. Ripoll, “Optical Projection Tomography and Light Sheet Microscopy for Imaging in Biological Specimens a Comparison Study.”, IEEE Imaging Systems and Techniques, Santorini, Greece, 14-17 Oct. 2014. (Oral Presentation)
12. A. Zacharopoulos, “Image reconstruction methods: The principles of Diffuse Light Propagation. From datasets to 3D tomographic images.” Invited Educational Talk, WMIC 2014, Seoul, Korea, 17-20 Sept 2014. (Oral Presentation)
13. M. Rieckher, G. Kourmoulakis, A. Zacharopoulos, J. Ripoll, N. Tavernarakis, G. Zacharakis, “A combined optical projection tomography and selective plane illumination microscopy system for in vivo imaging of protein dynamics in *Caenorhabditis elegans*.”, EMIM-2014, Antwerp, Belgium, 4-6 June 2014. (Poster presentation)
14. A. Zacharopoulos, G. Zacharakis, S. Arridge, J. Ripoll, “Efficient Optimization of non-contact acquisition in Fluorescence Molecular Tomography, with the use of a large number of datapoints”, EMIM-2014, Antwerp, Belgium, 4-6 June 2014. (Poster presentation)
15. A. Arranz, J. Grandjean, A. Zacharopoulos, M. Rudin, J. Ripoll, “Multi-spectral FMT enables tumor growth and protease activity imaging in an iRFP-expressing glioma model”, EMIM-2014, Antwerp, Belgium, 4-6 June 2014. (Poster presentation)
16. A. Zacharopoulos, “Creating and utilising prior anatomical information for preclinical brain imaging with Fluorescence Molecular Tomography”, SIAM Conference on IMAGING SCIENCE (SIAM-IS14), Hong Kong, 12-14 May 2014 (Oral Presentation)
17. A Avtzi, A. Zacharopoulos, S. Psycharakis, G Zacharakis, “Fabrication & Characterization of a 3-D Non-Homogeneous Tissue Like Mouse Phantom For Optical Imaging” Photonics meets Biology 2nd Summer School, Hersonissos, Crete Greece, 29 Sept.- 02 Oct. 2013. (Oral Presentation)
18. Rieckher M., Zacharakis G., Zacharopoulos A., Tavernarakis N., Ripoll J., “High throughput imaging of *C. elegans* by combined selective plane illumination microscopy and optical projection tomography in a microfluidics device”, World Molecular Imaging Conference, Savannah Georgia, September 18 – 21, 2013. (Poster presentation)
19. A. Zacharopoulos, “Fast reconstruction techniques for 360 degrees in-vivo tumour imaging, using datasets from a hybrid Fluorescence Molecular Tomography - X Ray Computed Tomography system to incorporate prior information”. WMIC/EMIM, Dublin, Ireland, 5-8 Sept 2012. (Poster presentation)
20. A. Arranz, J. Grandjean, A. Zacharopoulos, M. Rudin, J. Ripoll, “FMT as a tool to follow up tumor growth and cathepsin B activity in a glioma tumor model”, 2nd Inflammation, Cancer and Novel Therapeutics Conference and Summer School, Crete, Greece, 24-28 Sept 2012. (Poster presentation)
21. A. Zacharopoulos, “Reconstruction of 3D images from boundary measurements”, Wave propagation in complex media and applications, Heraklion, Crete, May 7 – 11, 2012. (Oral Presentation)
22. A. Arranz, F. Stuker, S. Burgi, A. Zacharopoulos, K. Dikaiou, R. Keist, D. Vats, J. Ripoll, M. Rudin, “Imaging protease activity in a glioma model with a brain-FMT imager”, 6th European Molecular Imaging Meeting – Leiden 19-21 June, 2011. (Poster presentation)

23. A. Zacharopoulos, A. Garofalakis, J. Ripoll, S. Arridge “Fast Matrix-Free method for Fluorescence Imaging”, 5th European Molecular Imaging Meeting - Warsaw 26-29 May, 2010. (Poster presentation)
24. A. Zacharopoulos, O. Dorn, S. Arridge, V. Kolehmainen, J. Sikora, “Reconstruction of ellipsoidal shapes in 3D optical tomography using an adjoint field technique and BEM”, ECMI 2006, Madrid, Spain 10-14 July 2006. (Oral Presentation)
25. A. Zacharopoulos, S. Arridge, O. Dorn, V. Kolehmainen, J. Sikora “3D shape reconstruction in Optical Tomography using Spherical Harmonics and BEM”, PIERS 2006 in Cambridge, Cambridge, USA, 26 - 29 March 2006. (Oral Presentation)
26. A. Zacharopoulos and O. Dorn, “Novel evolution strategies for the solution of 3D shape inverse problems in medical imaging with light.” Applied Inverse Problem 2005, Royal Agricultural College Cirencester, 26 - 30 June 2005. (Poster presentation)
27. A. Zacharopoulos and O. Dorn, “Novel evolution strategies for the solution of 3D shape inverse problems in medical and geophysical imaging”. A-HYKE-3 meeting, Rome, 13 - 15 April 2005. (Poster Presentation)
28. A. Zacharopoulos, “Reconstruction of 3D region boundaries in Optical Tomography using Parametric Surfaces and BEM” The Tenth Finnish Inverse Days at Sodankylä Geophysical Observatory (SGO) Finland, 15 - 17 December 2004. (Oral Presentation)
29. A. Zacharopoulos, J. Sikora, S. Arridge, “Reconstruction of 3D region boundaries in Optical Tomography using Parametric Surfaces and BEM”, IMA 3rd International Conference on Boundary Integral Methods: Theory and Applications, University of Reading, 14 - 18 September 2004. (Oral Presentation)
30. A. Zacharopoulos, J. Sikora, S. Arridge, “Parametric Surface Models in Medical Imaging”, Institute of Physics and Engineering in Medicine 10th Annual Scientific Meeting, York, 6 - 8 September 2004. (Oral Presentation)
31. A. Zacharopoulos, S. R. Arridge, “A Parametric Description of a surface from a 3D object and its application in the construction of surface”, Biophotonics 2002, FORTH-IELS, Heraklion, Greece, October 2002. (Poster presentation)
32. A. Zacharopoulos, S. Arridge, “Surface mesh creation for 3D objects with sphere topology by homeomorphism on a unit sphere”, CPEE, Zakopane, Poland, September 2002. (Oral Presentation)

Technical Reports

- P. Karamaounas, A. Zacharopoulos, K. Hatzigiannakis, M. Andrianakis, K. Melessanaki, X. Zabulis, “Multispectral image registration based on keypoint matching and homography estimation for cultural heritage artifacts.” (2016).
http://www.ics.forth.gr/tech-reports/2016/2016.TR464_multispectralImage.pdf

Honours

- Poster award for “High resolution imaging of live tumour spheroids using Single Plane Illumination Microscopy (SPIM)” by E. Liapis, S. Psycharakis, A. Zacharopoulos, J. Papamatheakis, J. Ripoll, G. Zacharakis, presented in EMIM 2015, Tubingen, Germany.
- The 2006 paper, “Three dimensional reconstruction of shape and piecewise constant region values for Optical Tomography using spherical harmonic parameterisation and a Boundary Element Method”, A. Zacharopoulos, S. Arridge, O. Dorn, V. Kolehmainen, and J. Sikora, Inverse Problems. 22, No 5, 15, was selected for the “Inverse Problems - highlights of 2006”.
- The group project in the 9th International Summer School in Image Processing in Szeged Hungary. Received the First Award 12-21 July, 2001.

