

MICHALAKIS (MIKE) AVERKIOU

Curriculum Vitae

Bioengineering
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EDUCATIONAL HISTORY

The University of Texas at Austin, Austin, TX
Ph.D., Mechanical Engineering, May 1994
"Experimental investigation of propagation and reflection phenomena in finite amplitude sound beams"

The University of Texas at Austin, Austin, TX
M.S., Mechanical Engineering, August 1989
"Reflection of Focused Sound from Curved Rigid Surfaces"

The University of Texas at Austin, Austin, TX
B.S., Mechanical Engineering, August 1987

EMPLOYMENT HISTORY

University of Washington, Seattle, WA, USA
Associate Professor, Department of Bioengineering, 2015-
Core faculty, Ultrasound-based Washington Molecular Imaging and Therapy Center (uWAMIT), 2015-

University of Cyprus, Nicosia, Cyprus
Associate Professor (tenured), Department of Mechanical and Manufacturing Engineering, 2010-2014
Assistant Professor (tenure track), Department of Mechanical and Manufacturing Engineering, 2005-2010
Director of Biomedical Ultrasound Lab, 2005-2014

Philips Medical Systems, Bothell, Washington, USA
Corporate Technical Staff, Oncology Investigations Lead, Research and Development, 1999-2005

ATL Ultrasound (acquired by Philips in 1999), Bothell, Washington, USA
Principal Engineer/Systems Design Engineer, 1996-1999

University of Washington, Seattle, Washington, USA
Postdoctoral Research Scientist, Applied Physics Laboratory, Department of Acoustics and Electromagnetics, 1994-1996

Cyprus National Guard
Second Lieutenant, 1981-1983

AWARDS AND HONORS

Faculty Appreciation for Career Education & Training (FACET, UW) Award, 2019
Institute of Electrical and Electronics Engineers (IEEE) Senior Member, since 2011
Acoustical Society of America, Fellow, since October 2009
European Commission, Marie Curie Chair of Excellence (highest award level), 2006-2009
Philips Medical Systems, Engineering Excellence Award, 1997, 1999, 2000
ATL Ultrasound, Technical Fellow Award, for developing Tissue Harmonic Imaging, 1998
Fulbright/AMIDEAST Scholarship, University of Texas at Austin, 1985-1987
Engineering Scholar, University of Texas at Austin, 1985, 1986, 1987
Dean's List, University of Texas at Austin, 1983-1987
National Deans List 1984 & 1987
Tau Beta Pi Engineering Honor Fraternity
Pi Tau Sigma Honorary Mechanical Engineering Fraternity
Beta Alpha Phi International Honor Society

AFFILIATIONS AND OTHER APPOINTMENTS

Affiliate Associate Professor, Applied Physics Laboratory, Center for Industrial and Medical Ultrasound, University of Washington, Seattle, WA, USA, 2013-2014

Visiting Professor, Experimental Medicine, Hammersmith Hospital, Imperial College London, London, UK 2011-2014

PUBLICATIONS

Citations (as of January 2020)

Scopus: 2043 Citations, h-index 25

Web of Science: 1566 Citations, h-index 24

Google Scholar: 4679 Citations, h-index 36

Refereed archival journal publications

1. Averkiou MA, Bruce MF, Powers JE, Sheeran PS, Burns PN. "Imaging Methods for Ultrasound Contrast Agents," *Ultrasound Med Biol.* 2020 Mar;46(3):498-517.
2. Butler M, Perperidis A, Zahra JLM, Silva N, Averkiou M, Duncan WC, McNeilly A, Sboros V. "Differentiation of vascular characteristics using contrast enhanced ultrasound imaging" *Ultrasound Med Biol.* 2019. June 14, *Ultrasound Med Biol.* 2019 Sep;45(9):2444-2455.
3. Kanoulas E, Butler M, Rowley CL, Voulgaridou V, Diamantis K, Fox K, Duncan WC, McNeilly AS, Averkiou M, Wijkstra H, Mischi M, Wilson RS, Lu W, Sboros V. "Super-Resolution Contrast Enhanced Ultrasound Methodology for the Identification of in-Vivo Vascular Dynamics in 2D." *Invest Radiol.* 2019 Aug;54(8):500-516.
4. Lai TY, Bruce M, Averkiou MA. "Modeling of the Acoustic Field Produced by Diagnostic Ultrasound Arrays in Plane and Diverging Wave Modes." *IEEE Trans Ultrason Ferroelectr Freq Control.* 2019 Jul;66(7):1158-1169.

5. Monsky W, Keravnou C, Averkiou M. "Contrast-enhanced ultrasound to ultrasound fusion during microwave ablation: feasibility study in a perfused porcine liver model." *J Ultrasound*. 2019 Sep;22(3):323-335.
6. Keller S, Bruce M, Averkiou MA. Ultrasound Imaging of Microbubble Activity during Sonoporation Pulse Sequences. *Ultrasound Med Biol*. 2019 Mar; 45(3):833-845.
7. Juang EK, De Cock I, Keravnou C, Gallagher MK, Keller SB, Zheng Y, Averkiou M. Engineered 3D microvascular networks for the study of ultrasound-microbubble-mediated drug delivery. *Langmuir*. 2019 Aug 6;35(31):10128-10138.
8. Dietrich CF, Averkiou M, et al. How to perform Contrast-Enhanced Ultrasound (CEUS). *Ultrasound Int Open* 2018 Jan; 4(1): E2-E15.
9. Averkiou MA, Keravnou C, Izamis ML, Leen E. Evaluation of perfusion quantification methods with ultrasound contrast agents in a machine-perfused pig liver. *Ultraschall Med*. 2018 Feb;39(1):69-79.
10. Keravnou C, De Cock I, Lentaker I, Izamis ML, Averkiou MA. Microvascular injury and perfusion changes induced by ultrasound and microbubbles in a machine-perfused pig liver. *Ultrasound Med Biol*. 2016 Nov;42(11):2676-2686.
11. Christofides D, Leen E, Averkiou M. Evaluation of the accuracy of liver lesion DCEUS quantification with respiratory gating. *IEEE Trans Med Imaging*. 2016 Feb;35(2):622-9.
12. Christophides D, Leen EL, Averkiou MA. Improvement of the accuracy of liver lesion DCEUS quantification with the use of automatic respiratory gating. *Eur Radiol*, 2016 Feb;26(2):417-24.
13. Keravnou CP, Izamis ML, Averkiou MA. Method for Estimating the Acoustic Pressure in Tissues Using Low-Amplitude Measurements in Water. *Ultrasound Med Biol*. 2015 Nov;41(11):3001-12.
14. Keravnou C, Mannaris C, Averkiou MA. Accurate measurement of microbubble response to ultrasound with a diagnostic ultrasound scanner. *IEEE Trans Ultrason Ferroelectr Freq Control*., 2015 Jan; 62(1):176-84.
15. Powers J, Averkiou M. Principles of cerebral ultrasound contrast imaging. *Front Neurol Neurosci*. 2015;36:1-10.
16. Dharmarajah B, McKinnon TA, Keravnou C, Averkiou MA, Leen EL, Davies AH. Contrast-Enhanced Ultrasound for Thrombus Dissolution in an In Vitro Model of Acute Deep Venous Thrombosis. *J Vasc Surg Venous Lymphat Disord*. 2015 Jan;3(1):121.
17. Perperidis A, Thomas D, Averkiou M, Duncan C, McNeilly A, Butler M, Sboros V. Automatic dissociation between microvasculature and larger vessels for ultrasound contrast imaging. *Conf Proc IEEE Eng Med Biol Soc*. 2014 Aug;2014:5076-9.
18. Izamis ML, Efstathiades A, Keravnou C, Georgiadou S, Martins PN, Averkiou MA. Effects of air embolism size and location on porcine hepatic microcirculation in machine perfusion. *Liver Transpl*. 2014 May;20(5):601-11.
19. Keravnou CP, Averkiou MA. Harmonic generation with a dual frequency pulse. *J Acoust Soc Am*. 2014 May;135(5):2545-52.
20. Izamis ML, Efstathiades A, Keravnou C, Leen EL, Averkiou MA. Dynamic contrast-enhanced ultrasound of slaughterhouse porcine livers in machine perfusion. *Ultrasound Med Biol*. 2014 Sep;40(9):2217-30.
21. Christophides D, Leen E, Averkiou MA. "Automatic Respiratory Gating for Contrast Ultrasound Evaluation of Liver Lesions." *IEEE Trans Ultrason Ferroelectr Freq Control*. 2014 Jan; 61(1): 25-32. (front cover image)
22. Mannaris C, Efthymiou E, Meyre ME, Averkiou MA. In vitro localized release of thermosensitive liposomes with ultrasound-induced hyperthermia. *Ultrasound Med Biol*. 2013 Nov;39(11):2011-20.

23. Escoffre JM, Mannaris C, Geers B, Novell A, Lentacker I, Averkiou M, Bouakaz A. Doxorubicin liposome-loaded microbubbles for contrast imaging and ultrasound-triggered drug delivery. *IEEE Trans Ultrason Ferroelectr Freq Control*. 2013 Jan;60(1):78-87.
24. Dietrich CF, Averkiou MA, Correas JM, Lassau N, Leen E, Piscaglia F. An EFSUMB introduction into Dynamic Contrast-Enhanced Ultrasound (DCE-US) for quantification of tumour perfusion. *Ultraschall Med*. 2012 Aug;33(4):344-51. Epub 2012 Jul 27.
25. Mannaris C, Averkiou MA. Investigation of microbubble response to long pulses used in ultrasound-enhanced drug delivery. *Ultrasound Med Biol*. 2012 Apr;38(4):681-91.
26. Leen E, Averkiou M, Arditi M, Burns P, Bokor D, Gauthier T, Kono Y, Lucidarme O. Dynamic contrast enhanced ultrasound assessment of the vascular effects of novel therapeutics in early stage trials. *Eur Radiol*. 2012 Jul;22(7):1442-50.
27. Thapar A, Shalhoub J, Averkiou M, Mannaris C, Davies AH, Leen EL. Dose-dependent artifact in the far wall of the carotid artery at dynamic contrast-enhanced US. *Radiology*. 2012 Feb;262(2):672-9.
28. Gauthier TP, Averkiou MA, Leen EL. Perfusion quantification using dynamic contrast-enhanced ultrasound: the impact of dynamic range and gain on time-intensity curves. *Ultrasonics*. 2011 Jan;51(1):102-6.
29. Sboros V, Averkiou M, Lampaskis M, Thomas DH, Silva N, Strouthos C, Docherty J, McNeilly AS. Imaging of the ovine corpus luteum microcirculation with contrast ultrasound. *Ultrasound Med Biol*. 2011 Jan;37(1):59-68.
30. Strouthos C, Lampaskis M, Sboros V, McNeilly A, Averkiou M. Indicator dilution models for the quantification of microvascular blood flow with bolus administration of ultrasound contrast agents. *IEEE Trans Ultrason Ferroelectr Freq Control*. 2010 Jun;57(6):1296-310.
31. Lampaskis M, Averkiou M. Investigation of the relationship of nonlinear backscattered ultrasound intensity with microbubble concentration at low MI. *Ultrasound Med Biol*. 2010 Feb;36(2):306-12.
32. Averkiou M, Lampaskis M, Kyriakopoulou K, Skarlos D, Klouvas G, Strouthos C, Leen E. Quantification of tumor microvascularity with respiratory gated contrast enhanced ultrasound for monitoring therapy. *Ultrasound Med Biol*. 2010 Jan;36(1):68-77.
33. Powers J, Averkiou M, Bruce M. Principles of cerebral ultrasound contrast imaging. *Cerebrovasc Dis*. 2009;27 Suppl 2:14-24.
34. Leen E, Kumar S, Khan SA, Low G, Ong KO, Tait P, Averkiou M. Contrast-enhanced 3D ultrasound in the radiofrequency ablation of liver tumors. *World J Gastroenterol*. 2009 Jan 21;15(3):289-99.
35. Fowlkes, J.B., Abramowicz, J.S., Church, C.C., Holland, C.K., Miller, D.L., O'Brien Jr., W.D., Sanghvi, N.T., Stratmeyer, M.E., Zachary, J.F., Deng, C.X., Harris, G.R., Herman, B.A., Hynynen, K.H., Merritt, C.R.B., Thomenius, K.E., Bailey, M.R., Carson, P.L., Carstensen, E.L., Frizzell, L.A., Nyborg, W.L., Barnett, S.B., Duck, F.A., Edmonds, P.D., Ziskin, M.C., Abbott, J.G., Dalecki, D., Dunn, F., Greenleaf, J.F., Salvesen, K.A., Siddiqi, T.A., Averkiou, M.A., Brayman, A.A., Everbach, E.C., Wible Jr., J.H., Wu, J. & Simpson, D.G., "American Institute of Ultrasound in Medicine consensus report on potential bioeffects of diagnostic ultrasound: Executive summary", *Journal of Ultrasound in Medicine*, **27**(4), pp. 503-515, 2008.
36. Miller DL, Averkiou MA, Brayman AA, Everbach EC, Holland CK, Wible JH Jr, Wu J. Bioeffects considerations for diagnostic ultrasound contrast agents. *J Ultrasound Med*. 2008 Apr;27(4):611-32; quiz 633-6. Review.
37. M. Averkiou and J. Powers, "Ultrasound contrast media in the characterization of soft tissue lesions: ongoing research," *MEDICAMUNDI*, 51/2+3, 80-94, 2007.
38. V. A. Khokhlova, A. E. Ponomarev, M. A. Averkiou, and L. A. Crum, "Nonlinear pulsed ultrasound beams radiated by rectangular focused diagnostic transducers," *Ac. Physics* **52**(4), 560-570, 2006.

39. J. Guan, T. J. Matula, and M. Averkiou, "Imaging the destruction of individual ultrasound contrast microbubbles with diagnostic ultrasound," *Acoustic Research Letters Online* **5**, pp. 165-169, 2004.
40. Bruce M, Averkiou M, Tiemann K, Lohmaier S, Powers J, Beach K. Vascular flow and perfusion imaging with ultrasound contrast agents. *Ultrasound Med Biol.* 2004 Jun;30(6):735-43.
41. Averkiou M, Powers J, Skyba D, Bruce M, Jensen S. Ultrasound contrast imaging research. *Ultrasound Q.* 2003 Mar;19(1):27-37.
42. Sboros V, Moran CM, Anderson T, Gatzoulis L, Criton A, Averkiou M, Pye SD, McDicken WN. An in vitro system for the study of ultrasound contrast agents using a commercial imaging system. *Phys Med Biol.* 2001 Dec;46(12):3301-21.
43. Simpson DH, Burns PN, Averkiou MA. Techniques for perfusion imaging with microbubble contrast agents. *IEEE Trans Ultrason Ferroelectr Freq Control.* 2001 Nov;48(6):1483-94.
44. Averkiou MA. Tissue harmonic ultrasonic imaging. *Comptes Rendus de l'Academie des Sciences - Series IV: Physics, Astrophysics.* 2001;2(8):1139-51.
45. Kashcheeva SS, Sapozhnikov OA, Khokhlova VA, Averkiou MA, Crum LA. Nonlinear distortion and attenuation of intense acoustic waves in lossy media obeying a frequency power law. *Ac. Physics.* 2000;46(2):170-177.
46. Makin IR, Averkiou MA, Hamilton MF. Second-harmonic generation in a sound beam reflected and transmitted at a curved interface. *J Acoust Soc Am.* 2000 Oct;108(4):1505-13.
47. Burns PN, Hope Simpson D, Averkiou MA. Nonlinear imaging. *Ultrasound Med Biol.* 2000 May;26 Suppl 1:S19-22.
48. Sboros V, Moran CM, Anderson T, Criton A, Averkiou M, McDicken WN. Assessment of the properties of ultrasound contrast agents using a commercial scanner: Preliminary results. *Ultrasound Med Biol.* 2000;26(SUPPL. 2).
49. Averkiou MA, Cleveland RO. Modeling of an electrohydraulic lithotripter with the KZK equation. *J Acoust Soc Am.* 1999 Jul;106(1):102-12.
50. Becher H, Tiemann K, Schlosser T, Pohl C, Nanda NC, Averkiou MA, Powers J, Lüderitz B. Improvement in Endocardial Border Delineation Using Tissue Harmonic Imaging. *Echocardiography.* 1998 Jul;15(5):511-518.
51. Morgan KE, Averkiou M, Ferrara K. The effect of the phase of transmission on contrast agent echoes. *IEEE Trans Ultrason Ferroelectr Freq Control.* 1998;45(4):872-5.
52. Averkiou MA, Hamilton MF. Nonlinear distortion of short pulses radiated by plane and focused circular pistons. *J Acoust Soc Am.* 1997 Nov;102(5 Pt 1):2539-48.
53. Averkiou MA, Hamilton MF. Measurements of harmonic generation in a focused finite-amplitude sound beam. *J Acoust Soc Am.* 1995 Dec;98(6):3439-42.
54. Averkiou MA, Lee YS, and Hamilton MF. Self demodulation of amplitude and frequency modulated pulses in a viscous fluid. *J. Acoust. Soc. Am.* 1993; 94, 2876-2883.

Conference proceedings and other non-journal articles

- ***Fully refereed publications***

1. Keller S, Matsuyoshi N, & Averkiou M. "Cavitation therapy monitoring of commercial microbubbles with a clinical scanner." *25st European Symposium on Ultrasound Contrast Imaging*, pg. 120-123, Rotterdam, The Netherlands, Jan. 2020. (won the 1st prize poster award)
2. Keller S, Suo D, Wang YN, Kenerson H, Sestero A, Yeung R, & Averkiou M. "Vascular disruption and enhanced drug penetration performed in a mouse model of HCC with a clinical scanner." *25st European Symposium on Ultrasound Contrast Imaging*, pg. 154-156, Rotterdam, The Netherlands, Jan. 2020.

3. Clark A, Bonilla S, Suo D, Averkiou M. "Enhanced heating with microbubbles in high intensity focused ultrasound applications." *25st European Symposium on Ultrasound Contrast Imaging*, pg. 157-160, Rotterdam, The Netherlands, Jan. 2020.
4. Keller, S., Suo, D., Wang, Y. N., Kenerson, H., Sestero, A., Yeung, R., & Averkiou, M. (2019, October). Image-guided doxorubicin delivery with ultrasound and microbubbles in a mouse model of hepatocellular carcinoma using a diagnostic ultrasound system. In *2019 IEEE International Ultrasonics Symposium (IUS)* (pp. 1527-1530). IEEE.
5. Lai, T. Y., Kou, S., Bruce, M., Loupas, T., & Averkiou, M. A. (2019, October). Harmonic Generation in Tissue with Matrix Arrays for 4D Cardiac THI. In *2019 IEEE International Ultrasonics Symposium (IUS)* (pp. 1834-1837). IEEE.
6. S. Keller, M. Averkiou, "Real-time Cavitation Therapy Monitoring with a Clinical Scanner," *24st European Symposium on Ultrasound Contrast Imaging*, pg. 199-201, Rotterdam, The Netherlands, Jan. 2019.
7. D. Suo, E. Juang, S. Keller, C. Pitts, M. Averkiou, "Image-guided bubble-enhanced thermal ablation," *24st European Symposium on Ultrasound Contrast Imaging*, pg. 73-75, Rotterdam, The Netherlands, Jan. 2019.
8. Lai, T. Y., & Averkiou, M. A. (2018, October). The Linear and Nonlinear Ultrasound Field of Convex Arrays Operating in a Diverging Wave Mode. In *2018 IEEE International Ultrasonics Symposium (IUS)* (pp. 1-4). IEEE.
9. T. Lai, M. Bruce, M. Averkiou, "Modeling the acoustic field produced by diagnostic ultrasound arrays in plane wave mode," *23st European Symposium on Ultrasound Contrast Imaging*, pg. 132-135, Rotterdam, The Netherlands, Jan. 2018.
10. S. Keller, M. Bruce, M. Averkiou, "High Resolution Ultrafast Imaging of Microbubble Activity During Sonoporation," *23st European Symposium on Ultrasound Contrast Imaging*, pg. 85-88, Rotterdam, The Netherlands, Jan. 2018. (won the 1st prize poster award)
11. Keller, S., Zong, R., Hannah, A., Bruce, M., & Averkiou, M. (2017, September). High resolution ultrafast imaging of microbubble destruction during sonoporation. In *2017 IEEE International Ultrasonics Symposium (IUS)* (pp. 1-4). IEEE.
12. E. Juang, I. De Cock, C. Keravnou, S. Keller, M. Gallagher, Y. Zeng, M. Averkiou, "Engineered 3D microvessels for the study of angiogenesis and sonoporation," *22st European Symposium on Ultrasound Contrast Imaging*, pg. 104-107, Rotterdam, The Netherlands, Jan. 2017. (won the 1st prize poster award)
13. I. De Cock, E. Juang, C. Keravnou, S. Keller, M. Gallagher, Y. Zeng, M. Averkiou, "Sonoporation in 3D endothelialized microvascular networks," *22st European Symposium on Ultrasound Contrast Imaging*, pg. 23-25, Rotterdam, The Netherlands, Jan. 2017.
14. Rousou CM, Christofides D, Polyviou P, Marcou Y, Kakouri E, Averkiou MA, "Evaluation of patient response to neoadjuvant therapy with the use of dynamic contrast enhanced ultrasound (DCEUS): Work in progress," *IFMBE Proceedings*, volume 57, pg. 742-745, 2016.
15. M. Averkiou, C. Keravnou, ML. Izamis, and E. Leen, "Can bolus wash-in/washout analysis measure flow changes in the liver microvasculature?" *21st European Symposium on Ultrasound Contrast Imaging*, pg. 132-133, Rotterdam, The Netherlands, Jan. 2016.
16. S. Turco, C. Keravnou, R. van Sloun, H. Wijkstra, M. Averkiou, M. Mischi, "Effects of perfusion and vascular architecture on contrast dispersion: validation in ex-vivo porcine liver under machine perfusion," in *Proceedings of the 2016 IEEE Ultrasonics Symposium*, pp. 1-4, 2016.

17. Dharmarajah B, McKinnon TA, Keravnou C, Averkiou M, Laffan MA, Leen ELS, Davies AH, "Thrombus dissolution using contrast enhanced ultrasound in an in-vitro model of acute deep vein thrombosis," *BRITISH JOURNAL OF SURGERY* Volume: 102 Supplement: 5 Pages: 37-38 2015.
18. Perperidis A, Thomas D, Averkiou M, Duncan C, McNeilly A, Butler M, Sboros V., "Automatic dissociation between microvasculature and larger vessels for ultrasound contrast imaging," *Conf Proc IEEE Eng Med Biol Soc.* 2014 Aug;2014:5076-9.
19. M. Averkiou, D. Christofides, A. Nicolaidis, B. Dharmarajah, A. Thapar, Alun Davies and E. Leen, "Evaluation of carotid plaque perfusion using DCEUS," *19th European Symposium on Ultrasound Contrast Imaging*, pg. 179-181, Rotterdam, The Netherlands, Jan. 2014.
20. ML Izamis, C. Keravnou, D. Christophides, E. Leen, and M. Averkiou, "Basic bolus kinetics explored in an ex vivo liver machine perfusion model," *19th European Symposium on Ultrasound Contrast Imaging*, pg. 90-93, Rotterdam, The Netherlands, Jan. 2014.
21. D. Christophides, E. Leen, and M. A. Averkiou, "Improvement of accuracy of liver lesion DCEUS quantification using automatic respiratory gating," *19th European Symposium on Ultrasound Contrast Imaging*, pg. 69-71, Rotterdam, The Netherlands, Jan. 2014.
22. C. Keravnou, ML Izamis, and M. Averkiou, "A method for calculating acoustic pressure in the liver using linear measurements in water," *19th European Symposium on Ultrasound Contrast Imaging*, pg. 119-123, Rotterdam, The Netherlands, Jan. 2014. (won the 1st prize poster award)
23. C. Keravnou, M. Averkiou, "Harmonic generation with a dual frequency pulse," in *Proceedings of the 2013 IEEE Ultrasonics Symposium*, pp. 1998-2001, 2013.
24. D. Christophides, E. Leen, and M. A. Averkiou, "Automatic respiratory gating for perfusion quantification of DCEUS," in *Proceedings of the 2013 IEEE Ultrasonics Symposium*, pp. 1154-1157, 2013.
25. ML Izamis, A. Efstathiades, C. Keravnou, and M. A. Averkiou, "Quantitative evaluation of ex vivo livers in machine perfusion with dynamic contrast-enhanced ultrasound," *18th European Symposium on Ultrasound Contrast Imaging*, pg. 68-71, Rotterdam, The Netherlands, Jan. 2013.
26. D. Christophides, E. Leen, and M. A. Averkiou, "Automatic respiratory gating for the quantification of liver therapy monitoring," *18th European Symposium on Ultrasound Contrast Imaging*, pg. 58-61, Rotterdam, The Netherlands, Jan. 2013.
27. M. A. Averkiou, "Perfusion quantification: the known knowns, the known unknowns, and the unknown unknowns," *18th European Symposium on Ultrasound Contrast Imaging*, pg. 16, Rotterdam, The Netherlands, Jan. 2013.
28. Novell A, Escoffre J-, Al-Sabbagh C, Mannaris C, Fattal E, Tsapis N, Averkiou MA, Bouakaz A. Role of thermal and mechanical effects on drug release from thermosensitive nanocarriers. *IEEE International Ultrasonics Symposium*, pp.1873-1876, 2012.
29. M. A. Averkiou, "Ultrasound-enhanced drug delivery with a diagnostic scanner?," *17th European Symposium on Ultrasound Contrast Imaging*, pg. 93-94, Rotterdam, The Netherlands, Jan. 2012.
30. M. A. Averkiou, C. Keravnou, C. Mannaris, "Dual frequency excitation for broadband nonlinear imaging," *17th European Symposium on Ultrasound Contrast Imaging*, pp. 116-120, Rotterdam, The Netherlands, Jan. 2012.
31. C. Mannaris, JM Escoffre, A. Buakaz, M. E. Meyer, M. Germain, and M. A. Averkiou, "Ultrasound-induced temperature elevation for in-vitro controlled release of thermosensitive

- liposomes,” *17th European Symposium on Ultrasound Contrast Imaging*, pg. 60-64, Rotterdam, The Netherlands, Jan. 2012.
32. J.M. Escoffre, C. Mannaris, A. Novell, L. Rio, M.E. Meyre, M. Germain, M. Averkiou, A. Bouakaz, "High-intensity focused ultrasound-mediated doxorubicin delivery with thermosensitive liposomes," in *Proceedings of the 11th International Symposium on Therapeutic Ultrasound*, New-York, USA, *AIP conference proceedings* 1481, pp. 81-87, 2012.
33. M. Averkiou, "Bubble detection for perfusion: Are we at the end of our technological development?" *16th European Symposium on Ultrasound Contrast Imaging*, Rotterdam, The Netherlands, Jan. 2011.
34. M. A. Averkiou, C. Mannaris, and A. Nicolaidis, "Quantification of the plaque neovascularization and the hyperplastic vasa-vasorum network with DCE-US, *16th European Symposium on Ultrasound Contrast Imaging*, Rotterdam, The Netherlands, Jan. 2011.
35. D. H. Thomas, M. Lampaskis, N. Silva, C. Strouthos, M. Averkiou, A. M. McNeilly, and V. Sboros, "Development of quantitative contrast ultrasound imaging using the ovine ovarian model," *15th European Symposium on Ultrasound Contrast Imaging*, Rotterdam, The Netherlands, Jan. 2010.
36. C. Mannaris, K. Stylianou, N. de Jong, and M. Averkiou, "Experimental investigation of microbubble response to ultrasonic pulses used in therapeutic applications," *15th European Symposium on Ultrasound Contrast Imaging*, Rotterdam, The Netherlands, Jan. 2010.
37. C. Strouthos, M. Lambaskis, V. Sboros, J. Docherty, A. McNeilly, and M. Averkiou, "Quantification of the microvascular blood Flow of the ovine corpus luteum with contrast ultrasound," in *Proceedings of the 2003 IEEE Ultrasonics Symposium*, pp. 255-258, 2009.
38. M. Lampaskis, C. Strouthos, M. Averkiou, "Application of tracer dilution models for the quantification of perfusion with contrast enhanced ultrasound imaging," *14th European Symposium on Ultrasound Contrast Imaging*, Rotterdam, The Netherlands, 58-63, 2009.
39. M. A. Averkiou, C. Mannaris, M. Bruce and J. Powers, "Nonlinear pulsing schemes for the detection of ultrasound contrast agents", in *Proceedings of the 155th Meeting of the ASA, Acoustics'08 Paris*, pp 915-920, 2008.
40. M. Averkiou, M. Lampaskis, K. Kyriakopoulou, D. Skarlos, and E. Leen, "Quantification of tumor angiogenesis with ultrasound contrast agents: Measurement of tumor response to Avastin," *13th European Symposium on Ultrasound Contrast Imaging*, Rotterdam, The Netherlands, 71-76, 2008.
41. M. Averkiou, "Physical properties and imaging techniques of ultrasound contrast agents," 8th Conference of the Hellenic Society of Ultrasound in Medicine and Biology, Athens, Greece, June 2007.
42. M. Averkiou, K. Kyriakopoulou, M. Bruce, J. Powers, and P. Burns, "Challenges of quantitative tumor response imaging with microbubbles," *12th European Symposium on Ultrasound Contrast Imaging*, Rotterdam, The Netherlands, 32-34, 2007.
43. M. Averkiou, M. Bruce, S. Jensen, J. Powers, P. Rafter, and T. Brock-Fisher, "Current Ultrasound Contrast Imaging Methods and the Future Ahead," *11th European Symposium on Ultrasound Contrast Imaging*, Rotterdam, The Netherlands, 67-68 Jan. 2006.
44. T. Brock-Fisher, M. A. Averkiou, M. Bruce, S. Jensen, P. Rafter, and J. Powers, "Pulsing schemes for high MI contrast imaging," *10th European Symposium on Ultrasound Contrast Imaging*, Rotterdam, The Netherlands, Jan. 2005.
45. M. Bruce, M. A. Averkiou, S. Jensen, J. Powers, and K. Beech, "Pulse Inversion Doppler for Blood Flow Detection in the Macro-- and Micro—Circulation," in *Proceedings of the 2003 IEEE Ultrasonics Symposium*, vol. 1, 411-415, 2003.

46. V. Sboros, S. D. Pye, T. Anderson, C. M. Moran, M. Averkiou, C. A. MacDonald, J. Gomatam, and W. N. McDicken, "The measurement of backscatter from individual contrast agent microbubbles," *Proceedings of the IEEE Ultrasonics Symposium* **2**, 1945-1947, 2002.
47. V.A.Khokhlova, A.E.Ponomarev, M.A.Averkiou, and L.A.Crum, "Generation of Nonlinear Signals by Rectangular Ultrasound Sources in Biological Media," in *Nonlinear Acoustics at the Beginning of the 21st Century: Proceedings of 16th ISNA*, edited by O. Rudenko and O. Sapozhnikov, vol.1, 363-370, 2002.
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49. M. F. Bruce, M. A. Averkiou, D. M. Skyba, and J. E. Powers, "A generalization of pulse inversion Doppler," in *Proceedings of the 2000 IEEE Ultrasonics Symposium*, San Juan, Puerto Rico, vol. 1, 1903-1906, 2000.
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Patents submitted and/or awarded

- 40+ US and European Patents. Most recent patent submitted Dec. 2017.
- Key patents in the areas of tissue harmonic imaging, real-time perfusion imaging, therapeutic applications of ultrasound, perfusion quantification, and therapy monitoring.

- Member of the IP committee of Philips Medical Systems (1999-2005) that evaluated and selected the patentable ideas and drafted the IP strategy.
 - Founding member of the University of Cyprus Patent Committee (2005-2013)
1. M. Averkiou, M. Lampaskis, K. Kyriakopoulou, "Respiratory-gated therapy assessment with ultrasonic contrast agent," United States Patent 8,529,453 B2, Sept. 10, 2013.
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35. M. Averkiou, D. Christophides, and E. Leen, "Evaluation of Carotid Plaque Using Contrast Enhanced Ultrasonic Imaging," provisional US patent submitted, Jan. 23, 2014
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Workshops—Courses at professional meetings (selection)

1. M. Averkiou, Lecture on Biomedical Acoustics, Physical Acoustics Summer School, PASS 2016, *Acoustical Society of America*, Heber City Utah, 15-21 June 2016.
2. M. Averkiou, Lecture on Biomedical Acoustics, Physical Acoustics Summer School, PASS 2014, *Acoustical Society of America*, Heber City Utah, 28 May – 3 June 2014.
3. M. Averkiou, "Ultrasound: Physics, Imaging, Contrast Agents," special course on MR guided focused ultrasound, EC Integrated Project "Sonodrugs", Bordeaux, France, 11-15 May 2009.
4. M. Averkiou, "Nonlinear imaging techniques for ultrasound contrast agents," 2nd Joint Workshop of French and Russian Acoustical Societies: Linear and nonlinear acoustics: Modern trends and applications, Les Houches, France, March 2008.
5. M. Averkiou and S. Yarmenitis, "The hypervascular focal liver lesion in contrast enhanced ultrasound: Malignant or benign?" 5th Aegean Postgraduate Radiology Course, Sept. 2007.
6. M. Averkiou, "Technique for contrast enhanced ultrasonography," 8th Conference of the Hellenic Society of Ultrasound in Medicine and Biology, Athens, Greece, June 2007.
7. M. Averkiou, "Σύγχρονες εφαρμογές ενισχυτικών ουσιών στην υπερηχογραφία," Μετεκπαιδευτικά μαθήματα ακτινολογίας, Τομέας Ακτινολογίας, Πανεπιστήμιο Κρήτης, Περίοδος Ζ, Σειρά 17, Οκτώβριος 2006 – Μάιος 2007.
8. J. B. Fowlkes and M. A. Averkiou, "Physics of Ultrasound Minicourse: Doppler and Nonlinear Ultrasound—Contrast and Tissue Harmonic Imaging," Refresher Course, 89th *Scientific Assembly and annual meeting of the Radiological Society of North America (RSNA)*, Nov. 2003.
9. M. A. Averkiou, "Imaging of Complex Media with Acoustic and Seismic Waves: Nonlinear Acoustics in Medical Imaging," Summer school course by Laboratoire Ondes et Acoustique, Paris, France, Sept. 2003.
10. M. A. Averkiou, "Ultrasound contrast agents imaging techniques," Plenary Session: Advances in Harmonic and contrast Imaging, 10th Congress of the World Federation for Ultrasound in Medicine and Biology (WFUMB), American Institute of Ultrasound in Medicine, Montreal, Canada, 2003.
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12. J. B. Fowlkes and M. A. Averkiou, "Update Course in Diagnostic Radiology Physics: CT and US Cross-sectional Imaging—Doppler and Nonlinear US, Contrast and Tissue Harmonic

Imaging,” Refresher Course, *87th Scientific Assembly and annual meeting of the Radiological Society of North America (RSNA)*, Nov. 2001.

13. M. A. Averkiou, “Microbubbles and ultrasound – Principles and Instrumentation: How to exploit the physics and how to use the instrumentation,” Fifth annual symposium on Contrast Echocardiography, *American Society of Echocardiography*, Chicago, IL, June, 2000.
14. J. B. Fowlkes and M. A. Averkiou, “Contrast and tissue harmonic imaging,” Categorical Course in CT and US, *86th Scientific Assembly and annual meeting of the Radiological Society of North America (RSNA)*, November 2000.
15. M. A. Averkiou, “Physical insight into the properties of tissue harmonic imaging”, Categorical course on Nonlinear imaging of tissue and contrast agents, *44th AIUM Annual Convention*, San Francisco, California, 2000.

OTHER SCHOLARLY ACTIVITY

Invited lectures and seminars.

1. Averkiou M, Gallagher M, Monserate M. QIBA CEUS perfusion quantification standardization. *The 33rd Annual Advances in Contrast Ultrasound Bubble Conference*, Chicago 2018.
2. McCarville B and Averkiou M. Therapeutic Monitoring of Intermediate and High-Risk Rhabdomyosarcoma: A Pilot Study. *The 33rd Annual Advances in Contrast Ultrasound Bubble Conference*, Chicago 2018.
3. M. Averkiou, “Quantification approaches with contrast-enhanced ultrasound,” *AIUM*, New York 2018 (invited, abstract book not published yet—J Ultrasound Medicine).
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6. Averkiou MA, Keravnou C, De Cock I. Microvascular injury and perfusion changes induced by sonoporation. *The 31st Annual Advances in Contrast Ultrasound Bubble Conference*, Chicago 2016.
7. M. Averkiou, DCEUS: Developments and new applications, 27th Congress of the European Federation of Societies for Ultrasound in Medicine and Biology (EFSUMB), *EUROSON 2015*, Athens, Greece, 2015.
8. M. Averkiou, Ultrasound-mediated, image-guided drug delivery approaches, 27th Congress of the European Federation of Societies for Ultrasound in Medicine and Biology (EFSUMB), *EUROSON 2015*, Athens, Greece, 2015.
9. M. Averkiou, DCEUS Technique for monitoring outcomes of therapies targeting angiogenesis, 27th Congress of the European Federation of Societies for Ultrasound in Medicine and Biology (EFSUMB), *EUROSON 2015*, Athens, Greece, 2015.
10. Averkiou MA, Keravnou C, Izamis ML, Leen E. Evaluation of perfusion quantification methods with ultrasound contrast agents in a machine-perfused pig liver. *The 30th Annual Advances in Contrast Ultrasound Bubble Conference*, Chicago 2015.
11. M. Averkiou, “Ultrasound and microbubbles for monitoring therapies targeting tumor vascularity,” International Conference on Nanotheranostics ICoN, Larnaca, Cyprus, 26-28 September 2013.

12. M. A. Averkiou, "Nonlinear imaging modes: optimization," Microbubble Ultrasound Imaging Course, *Euroson School*, Edinburgh, Scotland, June 25-26, 2012.
13. M. A. Averkiou, "DCE-US monitoring treatment of liver metastases," Microbubble Ultrasound Imaging Course, *Euroson School*, Edinburgh, Scotland, June 25-26, 2012.
14. M. A. Averkiou, "DCE-US technique for the monitoring of chemotherapy of liver metastases," *44th Annual Scientific Meeting of the British Medical Ultrasound Society*, Telford, UK, 2012.
15. M. A. Averkiou, "Ultrasound-enhanced drug delivery with a diagnostic scanner?," *17th European Symposium on Ultrasound Contrast Imaging*, pg. 93-94, Rotterdam, The Netherlands, Jan. 2012.
16. M. Averkiou, "Bubble detection for perfusion: Are we at the end of our technological development?" *16th European Symposium on Ultrasound Contrast Imaging*, Rotterdam, The Netherlands, Jan. 2011.
17. M. A. Averkiou, "Nonlinear pulsing schemes for diagnostic ultrasound," *J. Acoust. Soc. Am.* **126**(4) Pt. 2, 2202(A), 2009.
18. M. Averkiou, "New Developments on Breast Lesion Imaging with Ultrasound Contrast Agents," *10th European Society of Surgery (ESS) Conference*, Limassol, Cyprus, 9-11 Nov. 2006.
19. M. Averkiou and A. Nicolaides, "Macro and Micro-Vascular Imaging with Ultrasound Contrast Agents," *International Aristotle Vascular Experts' Meeting 2006*, Thessaloniki, Greece, May 29-30, 2006.
20. M. Averkiou, "Απεικόνιση και Ποσοτικοποίηση της Αγγειογένεσης Όγκων με Σκιαγραφικό Υπερήχων," *2^ο Κυπρο-Ελλαδικό Συνέδριο Ακτινολογίας*, Nicosia, Cyprus, 29-30 April 2006.
21. M. Averkiou, "Ultrasound Contrast Agents in Liver Lesions," *8th Marianna Lordos Seminar*, Marianna Lordos Cancer Memorial Fund, Larnaca, Cyprus, 10-12 Feb. 2006.
22. M. A. Averkiou, M. Bruce, S. Jensen, P. Rafter, T. Brock-Fisher, and J. Powers, "Pulsing schemes for the detection of nonlinear echoes from contrast microbubbles," *9th European Symposium on Ultrasound Contrast Imaging*, Rotterdam, The Netherlands, Jan. 2004.
23. M. A. Averkiou, "Ultrasound contrast agents imaging techniques," Plenary Session: Advances in Harmonic and contrast Imaging, *10th Congress of the World Federation for Ultrasound in Medicine and Biology (WFUMB)*, American Institute of Ultrasound in Medicine, Montreal, Canada, 2003
24. M. A. Averkiou, D. M. Skyba, and M. F. Bruce, "Real time perfusion imaging with ultrasound contrast agents," *The 5th Heart Centre Symposium on Ultrasound Contrast Imaging*, Rotterdam, Netherlands, Jan. 2000.
25. M. A. Averkiou, "Pulse Inversion imaging: in search of a bubble detection scheme," *The 4th Heart Centre Symposium on Ultrasound Contrast Imaging*, Rotterdam, The Netherlands, Jan. 1999.
26. J. Powers, M. A. Averkiou, and M. Bruce, "Contrast Imaging--The ATL Approach," *The 2nd European Symposium on Contrast Imaging*, Rotterdam, Netherlands, Jan. 1997.
27. M. A. Averkiou, L. A. Crum, and M. F. Hamilton, "Theoretical modeling of the acoustic pressure field produced by commercial lithotripters," *J. Acoust. Soc. Am.* **98**, 2941, 1995.

Professional society memberships.

- Acoustical Society of America, *Fellow* (since 22 May 2009). Technical Committees: Biomedical Ultrasound, Physical Acoustics, since 1987
- IEEE, *Senior Member*, since 17 Sept. 2011.

- IEEE Ultrasound Ferroelectrics and Frequency control, since 1995
- European Federation of Societies for Ultrasound in Medicine and Biology, 2004
- The International Contrast Ultrasound Society

Committees/Editorial Board:

- Quantitative Imaging Biomarkers Alliance Contrast-enhanced ultrasound (QIBA-CEUS) Co-chair (http://qibawiki.rsna.org/index.php/Ultrasound_CEUS_BC)
- Journal of Ultrasound, Editorial Board Member
- Echo Research and Practice, Editorial Board Member
- EFSUMB (European Federation of Societies in Ultrasound in Medicine and Biology) Quantification Committee—Creation of guidelines for angiogenesis therapy monitoring with ultrasound contrast agents in Europe
- Experimental Cancer medicine Centres (ECMC) Imaging Network Group (UK)
- ASA Technical Committee on Biomedical Ultrasound
- ASA Technical Committee on Physical Acoustics
- Radiology Advisory Board of Philips Ultrasound
- European Symposium on Ultrasound Contrast Imaging, scientific board member

Journal Reviews/Funding Agencies Reviews:

- The Journal of the Acoustical Society of America, since 1994
- Journal of Ultrasound in Medicine, since 1998
- Ultrasound in Medicine and Biology, since 1999
- IEEE Transactions on Medical Imaging, since 1999
- IEEE Ultrasonics Ferroelectrics and Frequency Control, since 2000
- Journal of Engineering in Medicine, since 2009
- Investigative Radiology, since 2013
- Computers in Biology and Medicine, since 2014
- European Commission, REA/C/04, evaluation of proposals: FETOPEN-2014-2015, FETOPEN-2014-2015, MSCA-IF Call 2017
- Ultraschall, European Journal of Ultrasound, since 2014
- European Journal of Vascular and Endovascular Surgery, since 2014
- European Radiology, since 2015
- Physics in Medicine and Biology, since 2015
- Scientific Reports, Nature, since 2016
- World Journal of Gastroenterology, since 2017

Conference Session Organizer/Chair:

- EUROSON School of CEUS 2012, Microbubble Ultrasound Imaging Course, Edinburgh, 25-26 June 2012.
- EUROSON School 2009, Contrast enhanced ultrasound in liver, biliary, pancreatic and gastrointestinal disease, Under the Auspices of EFSUMB, Bologna, Italy, Sept. 2009.
- 149th *Acoust. Soc. Am.*, Gene Therapy and Molecular Imaging, Vancouver, Canada, 2005
- 10th Symposium on Ultrasound Contrast Imaging, Functional Imaging., Rotterdam, Netherlands, 2005
- 9th Symposium on Ultrasound Contrast Imaging, Radiology, Rotterdam, Netherlands, 2004
- 130th *Acoust. Soc. Am.*, Lithotripsy, St. Louis, MO, USA, 1995

GRADUATE STUDENTS

Chaired Doctoral Degrees

- D. Christophides, “Methods and algorithms for the quantification of blood flow in the microcirculation with contrast enhanced ultrasound,” PhD Thesis, University of Cyprus, August 2015. Current position: Clinical scientist, St. James's Institute of Oncology, NHS, Leeds, UK.
- C. Keravnou, “Ultrasound-mediated, image-guided approaches for drug delivery in a machine perfused pig liver,” PhD Thesis, University of Cyprus, August 2015. Current position: Predictive Maintenance Lead Engineer, Vassiliko Cements Work Ltd.
- C. Mannaris, “Ultrasound Enhanced Drug Delivery: Pressure and temperature activation approaches,” PhD Thesis, University of Cyprus, May 2014. Current position: Postdoctoral Fellow, Oxford University UK.
- Alicia Clark (Mechanical Engineering), co-advising, PhD Thesis, University of Washington, December 2018.

Current Doctoral Students

- Ting Lai, “Ultrafast contrast-enhanced ultrasound imaging of tumor angiogenesis,” PhD Thesis, University of Washington, expected May 2020.
- Sara Keller, “In vitro and in-vivo image-guided sonoporation,” PhD Thesis, University of Washington, expected May 2020.

Chaired Masters Degrees

- Eric Jiang, “Ultrasound- and microbubble-mediated Drug Delivery in Microvascular Networks,” MS Thesis, University of Washington, August 2017. Current position: Research associate, BIOE/UW
- C. Tapolou, “Study for the use of ultrasound contrast agents to accurately measure blood flow in vivo,” MS Thesis, University of Cyprus, May 2016. Current position: PhD student, UCY.
- E. Pieri, “A method for detecting stroke based on scattering from ultrasound contrast agents,” MS Thesis, University of Cyprus, May 2016. Current position: PhD student, UCY.
- C. Rousou, “Evaluation of breast cancer patient response to neoadjuvant therapy with the use of dynamic contrast enhanced ultrasound (DCEUS),” MS Thesis, University of Cyprus, May 2016. Current position: PhD student, Univ. of Utrecht.
- C. Papantonis, “Dual frequency pulsing schemes for ultrasound contrast imaging,” MS Thesis, University of Cyprus, May 2015. Current position: Mechanical Engineer Anaxagoras Pneumatics LTD, Cyprus.
- P. Damianou, “Changes of chemical properties of Doxorubicin after exposure to ultrasound and microbubbles,” MS Thesis, University of Cyprus, August 2014.
- E. Efthymiou, “Theoretical investigation of the ultrasound induced temperature elevation for drug delivery applications,” MS Thesis, University of Cyprus, May 2013. Current position: Air Traffic Control Engineer, Air Traffic Control, Department of Civil Aviation, Cyprus
- C. Kalli, “Ultrasound hyperthermia for drug activation with lightly focused and unfocused sources,” MS Thesis, University of Cyprus, Dec. 2012. Current position: Ultrasound Specialist/Clinical Scientist, GE, UK.

- C. Mannaris, “Experimental investigation of nonlinear pulsing schemes used in diagnostic ultrasound,” MS Thesis, University of Cyprus, Dec. 2008. Current position: Postdoctoral Fellow, Oxford University UK.

Current Masters Students

- Ryan Hammond, “Quantification of changes in blood flow after traumatic spinal cord injury using ultrasound and microbubbles,” MS/BS Program, Bioengineering, University of Washington, expected August 2019.

Other significant Training: Mentored Postdoctoral Fellows

- Alicia Clark, PhD University of Washington 2018, duration: March 2019-now, Bubble enhance heating for therapeutic ultrasound applications in the brain.
- Dingjie Suo, PhD North Carolina State University 2017, duration: Dec. 2017-now, Image-guided, ultrasound and microbubble-mediated HCC treatment with sonoporation.
- Ine De Cock, PhD University of Gent 2015, duration: 2015-2016, Ultrasound mediated drug delivery. Current position: Senior scientist/project leader, AmatsiSEPS, Zwijnaarde, Belgium.
- Christina Keravnou, PhD University of Cyprus 2015, duration: 2015-2016, Microvascular injury and perfusion changes induced by sonoporation in a machine perfused pig liver. Current position: Predictive Maintenance Lead Engineer, Vassiliko Cements Work Ltd, Cyprus.
- Maria Louisa Izamis, PhD Massachusetts Institute of Technology 2010, duration: 2012-2014, Evaluation of donor organ viability preserved by machine perfusion with contrast enhanced ultrasound. Current position: Clinical Scientist at Philips Research Netherlands.
- Costas Strouthos, PhD University of Illinois at Urbana-Champaign 1999, duration: 2008-2009, Quantification of Liver Cancer Microvasculature with Contrast Ultrasound for Monitoring Therapy. Current position: lecturer European University Cyprus.

Co-Advising/Member of Examination Committee

- Katrina Henrikson (Chair, PhD qualifying examination committee), “Socket Fit Assessment and Osseointegration for Transtibial Amputees,” Bioengineering, University of Washington, 2017.
- James-Kevin Tan, “Synthetic Polymer and Microbubble Systems for Gene Delivery to the Brain,” Bioengineering, University of Washington, (PhD reading committee) 2016.
- Tzu-Cheng (Efren) Lee, “Statistical Distributions of Ultra-Low Dose CT Sinograms in the Data Processing Stream,” Bioengineering, University of Washington (PhD general exam committee) 2016.
- E. Andreou, “Σχεδιασμός ρομποτικού συστήματος συμβατού με τη μαγνητική τομογραφία για διεξαγωγή ελάχιστα παρεμβατικών επεμβάσεων με απεικονιστική καθοδήγηση.-- Design of an MRI compatible robotic system for image guided minimally invasive interventions” MS Thesis, University of Cyprus, June 2011
- M. Tohntis, “Large Eddy Simulations of Particle Deposition in the Airways of the Human Respiratory System: A comparison of patients with COPD (Chronic Obstructive Pulmonary Disease) to healthy subjects,” MS Thesis, University of Cyprus, Dec. 2010.
- N. Aristokleous, “Στατική και Δυναμική Καρδιακή Μοντελοποίηση και Ποσοτικοποίηση Δεικτών Ολικής Μηχανικής Λειτουργίας από Εικόνες Μαγνητικής Τομογραφίας,” MS Thesis, University of Cyprus, Jan. 2010.

- J. Sijl, “Ultrasound Contrast Agents – Optical and Acoustical Characterization,” PhD Thesis, Physics of Fluids, Faculty of Science and Technology, University of Twente, The Netherlands, Dec. 2009.
- M. Constantinou, Μελέτη διασποράς σωματιδίων γύρω από κυβικό στερεό εμπόδιο σε τυρβώδεις ροές με προσομοίωση μεγάλων δινών, MS Thesis, University of Cyprus, Dec. 2009.
- E. Svoukis, “Development of the 3w method for thermal conductivity characterization of bulk samples and thin films,” MS Thesis, University of Cyprus, 2008.
- A. Kartakoullis, “Spectral analysis of optical coherence tomography signals,” MS Thesis, University of Cyprus, 2007.
- G. Katsambas, “Laplace equation in parallel,” MS Thesis, University of Cyprus, 2007.
- R. Themosthenous, “Linear analysis of turbulent plane strain flow in a rotating frame,” MS Thesis, University of Cyprus, 2007.

Undergraduate Theses/Final Year Projects/Capstone Design Projects

- Conner Pitts, “Method and system for microbubble characterization for drug delivery,” Capstone Design Project, Bioengineering, University of Washington, expected June 2019. Secured summer internship: Philips Healthcare
- Sitai Kou, “The nonlinear field produced by imaging transducers operating in ultrafast plane wave mode,” Capstone Design Project, Bioengineering, University of Washington, expected June 2019.
- Miguel Monserate, “4D perfusion quantification with contrast enhanced ultrasound,” capstone Design Project, Bioengineering, University of Washington, expected June 2019.
- Ryan Hammond, “Quantification of changes in blood flow after traumatic spinal cord injury using ultrasound and microbubbles,” Capstone Design Project, Bioengineering, University of Washington, expected June 2018.
- Madison Gallaher, “Standardization of Flow Quantification Methods with Contrast Enhanced Ultrasound with Clinical Systems,” Capstone Design Project, Bioengineering, University of Washington, expected June 2018. Secured employment after graduation: Philips Healthcare
- Richard Zong, Mary Gates Scholar 2016-17, “In Vitro Study of HepG2 Viability under Ultrasound and Microbubbles,” Capstone Design Project, Bioengineering, University of Washington, June 2017. Current employer: Philips Healthcare
- Joanna Sun, “Detecting Diffuse Liver Disease with Tissue Harmonic Ultrasound Imaging,” Capstone Design Project, Bioengineering, University of Washington, June 2017. Current employer: Philips Healthcare
- Maria Nicolaou, “Theoretical modeling of the ultrasound field of transducers used in ultrasound-mediated drug delivery,” Final Year Project, University of Cyprus, May 2014.
- Elena Pieri, “Theoretical modeling of the ultrasound field of transducers used in ultrasound-mediated drug delivery,” Final Year Project, University of Cyprus, May 2014.
- C. Rousou, “Dissolution of chemical substances after exposure to high intensity ultrasound and microbubbles,” Final Year Project, University of Cyprus, May 2014.
- Christiana Tapolou, “Design and development of a liver flow phantom for the study of perfusion quantification with ultrasound contrast agents,” Final Year Project, University of Cyprus, May 2014.

- Penelope Koshi, “Design and development of a liver flow phantom for the study of perfusion quantification with ultrasound contrast agents,” Final Year Project, University of Cyprus, May 2014.
- Spyridon Menikou, “Design and development of a liver flow phantom for the study of perfusion quantification with ultrasound contrast agents,” Final Year Project, University of Cyprus, May 2014.
- A. Yianni, “Measurement and analysis of acoustic parameters from classes where students with hear impairment study,” Undergraduate Thesis Project, University of Cyprus, May 2010.
- C. Keravnou, M. Karayianni, C. Kalli, “Image-guided, ultrasound-induced, drug delivery,” Undergraduate Thesis Project, University of Cyprus, May 2010.
- L. Demetriou, “Programming and automation of a computer controlled 3-axes micropositioner suitable for ultrasonic measurements,” Undergraduate Thesis Project, University of Cyprus, May 2009.
- I. Tsokkou, “Experimental Investigation of imaging and quantification of blood flow in the microcirculation of organs and tissues,” Undergraduate Thesis Project, University of Cyprus, May 2009.
- S. Kyprianou, “Degradation of Diclofenac using high intensity ultrasound waves,” Undergraduate Thesis Project, University of Cyprus, August 2007.

TEACHING

University Courses Developed and Taught (at UW and UCY)

- Diagnostic and Therapeutic Ultrasound (UW: BIOEN 449/549, 2016: 12 students, evaluation rating: 4.7/5, 2017: 18 students, evaluation rating: 4.7/5, 2018: 19 students, evaluation rating: pending)
- Fundamentals of Magnetic Resonance and Ultrasound Imaging (UW: BIOEN 447/547, 2017: 14 students, evaluation rating: 4.6/5, 2018: 19 students, evaluation rating: 4.5/5)
- Professional Skills (UW: BIOEN 532, 2017: 26 students)
- Medical Imaging - Diagnostic Ultrasound (UCY: graduate level course, taught 2006-2014)
- Biomedical and Industrial Applications of Engineering Acoustics (UCY: graduate level course, taught 2006-2014)
- Therapeutic and diagnostic applications of ultrasound (UCY: senior elective course, taught 2006-2014)
- Numerical Methods (UCY: junior Mechanical Engineering main core course, taught 2005-2014)

List of other teaching contributions

Helped develop the imaging curriculum program (series of imaging courses) for the Master’s in Applied Bioengineering (MAB) program of the University of Washington.

SERVICE

Departmental service

- Graduate curriculum committee (8/2015 – 8/2017)
- Graduate Admissions Committee (8/2015– now)

- BIOENGAGE, Bioengineering Industry Engagement (8/2015– 8/2017, 8/2018– now)

University service (UW)

FCR (Faculty Council on Research) January 201– now
PRF grant reviewer 2015, 2016, 2017, 2018
STTR Grant Program Peer Review, 2017

Professional society and other service

(see above in “Other Scholarly Activity”)

Conference Session Organizer/Chair:

- EUROSON School of CEUS 2012, Microbubble Ultrasound Imaging Course, Edinburgh, 25-26 June, 2012.
- EUROSON School 2009, Contrast enhanced ultrasound in liver, biliary, pancreatic and gastrointestinal disease, Under the Auspices of EFSUMB, Bologna, Italy, Sept. 2009.
- 149th *Acoust. Soc. Am.*, Gene Therapy and Molecular Imaging, Vancouver, Canada, 2005
- 10th Symposium on Ultrasound Contrast Imaging, Functional Imaging., Rotterdam, Netherlands, 2005
- 9th Symposium on Ultrasound Contrast Imaging, Radiology, Rotterdam, Netherlands, 2004
- 130th *Acoust. Soc. Am.*, Lithotripsy, St. Louis, MO, USA, 1995

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- Quantitative Imaging Biomarkers Alliance Contrast-enhanced ultrasound (QIBA-CEUS) Co-chair
- Journal of Ultrasound, Editorial Board Member
- Echo Research and Practice, Editorial Board Member
- EFSUMB (European Federation of Societies in Ultrasound in Medicine and Biology) Quantification Committee—Creation of guidelines for angiogenesis therapy monitoring with ultrasound contrast agents in Europe
- Experimental Cancer medicine Centres (ECMC) Imaging Network Group (UK)
- ASA Technical Committee on Biomedical Ultrasound
- ASA Technical Committee on Physical Acoustics
- Radiology Advisory Board of Philips Ultrasound
- European Symposium on Ultrasound Contrast Imaging, scientific board member

Community service

- Consulting uBEAM Inc., Santa Monica, CA
- Consulting BURL Industries, San Diego, CA
- Consulting Halyard Health, Irvine, CA

International, national or governmental service

- Quantitative Imaging Biomarkers Alliance Contrast-enhanced ultrasound, Radiological Society of North America (RSNA) (QIBA-CEUS http://qibawiki.rsna.org/index.php/Ultrasound_CEUS_BC) Committee Co-chair

All other service

University of Cyprus

- Member of UCY ad-hoc committee on Intellectual Property (2007 – 2014).
- Member of School of Engineering Board (2009 - 2011)
- Member of Temporary/Permanent Buildings Committee – Mechanical and Manufacturing Engineering, School of Engineering (2005 - 2012).
- Project evaluator, Business Incubators of the Ministry of Commerce, Industry and Tourism, Cyprus Government (2005-2011)