

PERSONAL INFORMATION:

ELENI ORPHANIDOU-VLACHOU

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Nationality: Cypriot

**Radiologist with special interest in Breast Imaging.
 Actively involved in research.**

EDUCATION:

2013-2018 Radiology Residency, Nicosia General Hospital.
 Examination- Perifereia Kentrikis Macedonias/AHEPA Hospital

2007-2012 PhD- “Advanced Magnetic Resonance Imaging and Metabolic Studies of Low Grade Gliomas in Childhood”, University of Birmingham U.K.
 Funded by the Samantha Dickson Brain Tumour Trust

2001-2006 MBChB (Medical degree), University of Birmingham

2001 Graduation from secondary school (American Academy in Cyprus, English speaking)

FOREIGN LANGUAGES

English: Fluent
 Greek: Mother Tongue

CURRENT OCCUPATION

June 2020- Radiologist in private practice (GESY)

PREVIOUS OCCUPATION

Dec 2018-May 2020- Radiologist

2019-2022 Special Scientist, University of Cyprus Medical School, Radiology

2015 Honorary lecturer in Radiology at St. George’s Medical School at the University of Nicosia

2015-2016 & 2014-2015 Teaching at University of Nicosia, Fall Semester, Medical Imaging, Department of Physiotherapy

2011-2012 Teaching- Spring semester
 University of Cyprus, Special Scientist, Psychopharmacology

2006-2007 Foundation Year 1 doctor at Sandwell and West Birmingham NHS Trust (General and Vascular Surgery, ITU, Medicine/Respiratory Medicine)
 Hold full registration with General Medical Council (U.K.)

RESEARCH WORK	<ul style="list-style-type: none"> • Breast Imaging • Texture Analysis in Mammograms/Prediction Models • <i>In vivo</i> ¹H magnetic resonance spectroscopy- interpretation of data in paediatric brain tumours especially low grade gliomas • <i>In vivo</i> magnetic resonance spectroscopic imaging (chemical shift imaging) • Texture analysis of magnetic resonance images • Low grade glioma cell line work and <i>in vitro</i> ¹H NMR
SKILLS	INFORMATION TECHNOLOGY MS OFFICE: Word, Power Point, Excel, Access (design and use of databases) SPSS and Minitab statistics packages LCModel software- processing of magnetic resonance spectroscopy data MaZda Texture Analysis Software (and B11 statistics software) Image J Matlab- basic
	LABORATORY TECHNIQUES Cell culture Metabolite extraction for NMR Liquid state ¹ H NMR DNA extraction-small experience Immunohistochemistry, immunocytology- basic High Resolution Magic Angle Spinning- basic
	PREVIOUS TEACHING EXPERIENCE 2006-2007 Medical student in-hospital teaching, Birmingham, U.K. 2003-2004 Basic Life Support and AED Instructor for nursing, physiotherapy and medical students (3 hours weekly), University of Birmingham, U.K.
PUBLICATIONS	
JOURNAL ARTICLES	
<ol style="list-style-type: none"> 1. K. Loizidou, G. Skouroumouni, G. Savvidou, A. Constantinidou, E. Orphanidou Vlachou, A. Yiallourou, C. Pitris, and C. Nikolaou, “Subtraction of Temporally Sequential Digital Mammograms: Prediction and Localization of Near-Term Breast Cancer Occurrence,” <i>Journal of Imaging Informatics in Medicine</i>, 2025. 2. K. Loizidou, G. Skouroumouni, G. Savvidou, A. Constantinidou, E. Orphanidou Vlachou, A. Yiallourou, C. Pitris, and C. Nikolaou, “Subtraction of Temporally Sequential Digital Mammograms: Enhancing the Detection and Classification of Malignant Masses in Breast Imaging,” <i>IEEE Open Journal of Engineering in Medicine and Biology</i>, vol. 6, pp. 591-597, 2025. 3. Metabolite Levels in Paediatric Brain Tumours Correlate With Histological Features Orphanidou-Vlachou, E, Kohe, SE, Brundler, MA, MacPherson, L, Sun, Y¹, Davies, N, Wilson, MP, Pan, X, Arvanitis,T, Grundy R, Peet AC Pathobiology; 2018;85(3):157-168.DOI: 10.1159/000458423 4. Texture analysis of T_1- and T_2-weighted MR images and use of probabilistic neural 	

network to discriminate posterior fossa tumours in children Eleni Orphanidou-Vlachou*, Nikolaos Vlachos*, Nigel P. Davies, Theodoros N. Arvanitis, Richard G. Grundy and Andrew C. Peet *equal contribution NMR in Biomedicine 2014, 27 (6):632-9

5. Extramedullary Hemopoiesis Eleni Orphanidou-Vlachou, Chrysa Tziakouri-Shiakalli, Christos Georgiades Seminars in Ultrasound, CT and MRI 2014, 35 (3): 255-262
6. ¹H magnetic resonance spectroscopy in the diagnosis of paediatric low grade brain tumours. Orphanidou-Vlachou E, Auer D, Brundler MA, Davies NP, Jaspan T, MacPherson L, Natarajan K, Sun Y, Arvanitis TN, Grundy RG, Peet AC. Eur J Radiol. 2013 Jun;82(6):e295-301

PEER-REVIEWED PROCEEDINGS

K. Loizidou, G. Skouroumouni, G. Savvidou, A. Constantinidou, **E. Orphanidou Vlachou**, A. Yiallourou, C. Nikolaou and C. Pitris, “Enhancing Breast Mass Diagnosis: Leveraging Temporal Subtraction for Accurate Classification of Benign and Malignant Masses,” in *2024 46th Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC)*, IEEE, 2024.

K. Loizidou, **E. Orphanidou Vlachou**, A. Yiallourou, C. Nikolaou and C. Pitris, “Breast Cancer Detection and Sub-typing Using Subtraction of Temporally Sequential Mammograms and Machine Learning: Assessment of Invasiveness and Tumor Grade,” Submitted in *2025 47th Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC)*, IEEE, 2025.

K. Loizidou, **E. Orphanidou Vlachou**, A. Yiallourou, C. Nikolaou and C. Pitris, “Breast Cancer Sub-typing using Digital Mammograms and Machine Learning: Predicting Invasiveness and Tumor Grade,” in *2020 IEEE 25th International Conference on Bioinformatics and Bioengineering (BIBE)*, IEEE, 2025.

PEER-REVIEWED ABSTRACTS

G. Skouroumouni, K. Loizidou, G. Savvidou, A. Constantinidou, **E. Orphanidou Vlachou**, A. Yiallourou, C. Pitris, and C. Nikolaou, “Subtraction of temporally sequential digital mammograms: Advancing malignant mass detection and classification in breast imaging,” in *European Congress of Radiology (ECR)*, 2025.

G. Skouroumouni, K. Loizidou, G. Savvidou, A. Constantinidou, **E. Orphanidou Vlachou**, A. Yiallourou, C. Pitris, and C. Nikolaou, “Subtraction of temporally sequential digital mammograms: Advancing near-term breast cancer occurrence prediction and localization in breast imaging,” in *European Congress of Radiology (ECR)*, 2025.

K. Loizidou, **E. Orphanidou Vlachou**, A. Yiallourou, C. Nikolaou, and C. Pitris, “Assessing Breast Cancer Invasiveness and Grade using Subtraction of Temporally Sequential Mammograms and Machine Learning,” in *17th Cyprus Workshop on Signal Processing and Informatics (CWSPI)*, 2025.

K. Loizidou, G. Skouroumouni, G. Savvidou, A. Constantinidou, **E. Orphanidou Vlachou**,

A. Yiallourou, C. Nikolaou and C. Pitris, “Enhancing Breast Mass Diagnosis: Leveraging Temporal Subtraction for Accurate Classification of Benign and Malignant Masses,” in *2024 IEEE 21st International Symposium on Biomedical Imaging (ISBI)*, 2024.

K. Loizidou, G. Skouroumouni, G. Savvidou, A. Constantinidou, **E. Orphanidou Vlachou**, A. Yiallourou, C. Pitris and C. Nikolaou, “Prediction of Near-Term Breast Cancer Occurrence in Digital Mammography: The Effect of Subtracting Temporally Consecutive Mammograms,” in *16th Cyprus Workshop on Signal Processing and Informatics (CWSPI)*, 2024.

2nd Cyprus Breast Health Forum, 2019, Nicosia; Imaging of loco-regional breast cancer recurrence after mastectomy

1st Cyprus Breast Reconstruction Meeting, 2014, Limassol, Cyprus; Bi-rads Mammographic Breast Density Classification in Breast Cancer Screening in Cyprus; E Orphanidou Vlachou, Militsa Kouzali, C. Pattichis, S Petroudi, C Tziakouri Shiakalli

ISPNO 2014; Singapore; Tumor Myoinositol Levels Predict Progression Free Survival in Pediatric Low Grade Gliomas; Eleni Orphanidou-Vlachou, Lesley MacPherson, Martin W English, Dorothee Auer, Tim Jaspan, Theodoros N Arvanitis, Richard G Grundy, Andrew C Peet

ISPNO 2014; Singapore; Metabolite levels in paediatric brain tumours correlate with histological features; Eleni Orphanidou-Vlachou, Marie-Anne Brundler, Yu Sun, Nigel Davies, Martin Wilson, Xiaoyan Pan, Theodoros Arvanitis, Richard Grundy, Andrew Peet

ISPNO 2014; Singapore; Texture Analysis of T1- and T2-weighted Magnetic Resonance Images and Use of Probabilistic Neural Network to Discriminate Posterior Fossa Tumours in Children; Eleni Orphanidou-Vlachou*, Nikolaos Vlachos*, Nigel P. Davies, Theodoros N. Arvanitis, Richard G. Grundy, Andrew C. Peet

*equal contribution

British Chapter ISMRM 2010; Nottingham; Characterisation and Classification of Paediatric Low Grade Brain Tumours Using ¹H Magnetic Resonance Spectroscopy and Logistic Regression; E. Orphanidou-Vlachou, N.P.Davies, T.Jaspan, Y.Sun, M.Wilson, T.N.Arvanitis, R.G.Grundy, A.C.Peet

British Chapter ISMRM 2010; Nottingham; Texture Analysis of T1- and T2-weighted Magnetic Resonance Images and Probabilistic Neural Network Discriminates Medulloblastomas, Pilocytic Astrocytomas and Ependymomas of the Posterior Fossa in Children; N. Vlachos, E. Orphanidou-Vlachou, N.P. Davies, T.N. Arvanitis, R.G. Grundy, A.C. Peet

NCRI 2010. Patterns of relapse in paediatric high grade gliomas treated with radical radiotherapy. Pek Keng Koh, Kal Natarajan, Po Fung, Eleni Orphanidou-Vlachou, David Spooner, Andrew Peet, Daniel Ford

ISPNO 2010 Glycine as a potential non-invasive prognostic biomarker in childhood brain tumours. N. P. Davies, M. Wilson, K. Natarajan, E. Orphanidou-Vlachou, Y. Sun, L. MacPherson, M. A. Brundler, T. N. Arvanitis, R. Grundy, A. C. Peet

ISPNO 2010 Multicentre prospective classification of childhood brain tumours based on ¹H MRS metabolite profiles. N. P. Davies, T. N. Arvanitis, D. Auer, A. French, R. Grazier, R. Grundy, F. A. Howe, D. Hargrave, T. Jaspan, S. Lateef, M. O. Leach, L. MacPherson, K. Natarajan, G. Payne, E. Orphanidou-Vlachou, D. Saunders, Y. Sun, M. Wilson, A. C. Peet **(Published in Neuro-oncol 2010;12(6):ii32)**

ISPNO 2010 The Children's Cancer and Leukaemia Group (CCLG) Functional Imaging e-repository for clinical trials of childhood brain tumours. T.N. Arvanitis, K. Natarajan, J. Rossiter, J.I.H.Ting, Y. Sun, M. Wilson, N.P.Davies, E. Orphanidou-Vlachou, R. Grazier, J.Crouch, D.P. Auer, C.A. Clark, R. Grundy, D. Hargrave, F. Howe, T. Jaspan, M.O. Leach, L. MacPherson, G.S.Payne, D.E. Saunders, A.C.Peet

BSNR 2009 A prospective multi-centre evaluation of paediatric brain tumour classifiers based on metabolite profiles from ¹H magnetic resonance spectroscopy at 1.5 Tesla. Davies NP, Orphanidou E, Natarajan K, Sun Y, MacPherson L, Coupland J, Auer D, Jaspan T, Saunders D, Payne G, Arvanitis TN, Grundy R, Peet AC

BSNR 2009 Investigation of glycine levels in paediatric brain tumours measured by MRS at 1.5 Tesla: a potential prognostic biomarker. Davies NP, Wilson M, Natarajan K, Orphanidou E, Sun Y, MacPherson L, Brundler MA, Arvanitis TN, Grundy RG, Peet AC

April 2009- International Society of Magnetic Resonance in Medicine 17th Scientific Meeting & Exhibition. Honolulu. A Multicentre study of ¹H MRS for the Characterisation of Low Grade Brain Tumours of Childhood. E. Orphanidou-Vlachou, D. Auer, J. Coupland, N. P. Davies, T. Jaspan, L. McPherson, K. Natarajan, D. Saunders, Y. Sun, T. N. Arvanitis, R. G. Grundy and A. C. Peet..

March 2009- 18th British Chapter International Society of Magnetic Resonance in Medicine Annual Symposium for PhD Students and Post-Docs. London. 1H Magnetic Resonance Spectroscopy in Paediatric Low Grade Brain Tumours: Comparing Classification between Linear Discriminant Analysis and Artificial Neural Networks. Eleni Orphanidou-Vlachou, N.P.Davies, N.Vlachos, M.P. Wilson, L. McPherson, K.Natarajan, Y.Sun, T.N. Arvanitis, R. G. Grundy, A.C. Peet.

March 2009- 18th British Chapter International Society of Magnetic Resonance in Medicine Annual Symposium for PhD Students and Post-Docs. London. Discriminating 5 Types of Paediatric Low Grade Brain Tumours using Texture Analysis of T1 and T2 Axial MR Images and Artificial Neural Networks. Nikolaos Vlachos, E. Orphanidou-Vlachou, N.P.Davies, T.N. Arvanitis, R. G. Grundy, A.C. Peet.

September 2008- International Society for Magnetic Resonance in Medicine British Chapter 2008. Newcastle. A Multicentre study of ¹H MRS for the Characterisation of Low Grade Gliomas of Childhood (accepted but not presented). Orphanidou-Vlachou E, Auer D, Jaspan T, Coupland J, Payne G, Riches S, Germuska M, Leach M, Vaidya S, Arvanitis TN, Grundy RG and Peet AC.

June 2007- Joint Congress of the European Society of Ophthalmology and the American Academy of Ophthalmology 2007. Vienna. Subtenon's Triamcinolone in Treatment Resistant Diabetic Maculopathy. Mollan S, Kyprianou I, Orphanidou E, Palmer H, Tsaloumas M.

May 2007- Annual Ophthalmology Congress. Birmingham. Payment By Results: Does it Work in a Tertiary Referral Eye Centre? Orphanidou E, Murray P.I., Rauz S.

British Association for Cardiac Rehabilitation 2005. Glasgow. Cardiac Rehabilitation Targets Still Not Being Met: An Audit in South Birmingham to NSF Standards. Eleni Orphanidou, Tzakas P, Do P, Sagoo R, Adab P

PRIZES & SCHOLARSHIPS

- **2010** Student stipend to attend and present at British Chapter ISMRM, Nottingham
- **2009** Graduate Travel Fund, Student Development Scholarships, University of Birmingham. To attend ISMRM 2009 conference
- **2007** Samantha Dickson Brain Tumour Trust PhD Studentship
- **2005** Sir Arthur Thompson Travel Scholarship. Elective in Cyprus. Study of Diabetes Care in Cyprus and Evaluation of Possible Modalities for Ophthalmic Screening.
- **2005** British Medical and Dental Students’ Trust. Elective in Cyprus. Study of Diabetes Care in Cyprus and Evaluation of Possible Modalities for Ophthalmic Screening.
- **2001** Secondary School Graduation Prizes- Biology, Chemistry, Modern Greek, Music, Drama, German, Prize for excellent conduct, behaviour and service to the school, Parent-teacher association prize
- **1999-2000** Prize and scholarship for student ranking high in academic attainment, character, school activities and cooperation- amongst students of years 4-7 (secondary school starts at year 1)
- **1998-1999** Prize and scholarship for student with the highest academic average amongst students of years 4-7

COURSES

- European Resuscitation Council; ALS Provider Course; 2014
- HWB NMR Facility, University of Birmingham; Nuclear Magnetic Resonance Spectroscopy (background theory, practical work) 2009-2010
- University of Birmingham; Good Clinical Practice 2009
- Institute of Cancer Research and Royal Marsden NHS Trust; “A Training Course in Magnetic Resonance Imaging and Spectroscopy” October 2008
- University of Birmingham, DTI, FSL, FDT Workshop 2008
- Sandwell & West Birmingham Hospitals NHS Trust; ALERT 2007
- Resuscitation Council UK; Advanced Life Support (Provider) Course 2006
- Resuscitation Council UK; Immediate Life Support 2006
- The Royal College of Surgeons of Edinburgh/The West Midlands Central Accident Resuscitation Emergency Team; Undergraduate Pre-Hospital Trauma Course 2004
- European Resuscitation Council; BLS/AED Instructor Course 2003
- Basic Life Support 2002

PROFESSIONAL MEMBERSHIPS

Cyprus Medical Council
General Medical Council U.K.