

# **Europass** curriculum vitae Personal information

# **Academic Profile**

Surname(s) / First name(s)

**Vryonides Photos** 

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Website

Nationality(-ies)

Cypriot

Education

Dates Sep 1999- Sep 2002

Title of qualification awarded

PhD in Electrical engineering and Electronics

Name of awarding institution

University of Manchester Institute of Science and Technology (UMIST)

Key features

Work focused in the research and development of novel, planar low phase noise dielectric resonator oscillators for millimetre wave short range radar sensors for automotive and industrial applications.

Dates

Sep 1998- Sep 1999

Title of qualification awarded

Mphil in Electrical Engineering and Electronics

Name of awarding institution

Design of MMIC (Monolithic Microwave Integrated Circuits)

Key features

Dates Sep 1995-Jun 1998

Title of qualification awarded

Beng (2.1 Class Hons) in Electrical and Electronic Engineering University of Manchester Institute of Science and Technology (UMIST)

Name of awarding institution

University of Manchester Institute of Science and Technology (UMIST)

Programme comprehensively covered the foundations of Electrical and Electronic Engineering and Key features included subjects in the area of electronics, power systems, communications and control.

Work experience

Dates

Feb 2003- Present

**Employer Name** 

Frederick University

Occupation or position(s) held Main activities and responsibilities Feb 2003- Present: Lecturer Electrical Engineering Department

Responsible for:

- Communications Lab
- Departmental Co-ordinator for Final Year Project allocation-manual-guidelines
- Departmental Registration assistance

My teaching focused in:

- Communication Systems
- Electronics
- Transmission Lines and Waves
- Microwave Engineering

**Professional Organisations** 

- Member of ETEK (since 1998)
- Member of IEEE

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#### Awards **SCHOLARSHIPS**

- Scholarship for PhD tuition fees "Overseas Research Scholarship Scheme, (United Kingdom Scholarships for Overseas Research Students)".
- Faculty of Engineering Scholarship, UMIST, UK.

## **Professional Contribution**

Cyprus' Delegate in Management Committee of COST IC0803 RF/Microwave Communication Subsystems for Emerging Wireless Tecnologies Action

### Service to the Institute

- -Academic Committee
- -Assistant in departmental registration-
- -Responsible for Departmental Final Year projects co-ordination

## **Research Projects**

Duration, Funding Ag. and Funding

Title

Role and Contribution

Dec 2012-Dec 2014: Research Promotion Foundation. Total Funding: EUR 25,000

Disturbed lonospheric and geomagnetic conditions under the influence of solar activity

Project partner of the project to establish a collaboration between Cyprus and Romania to conduct mutual solar-terrestrial studies exploiting the expertise of the corresponding ionospheric research groups in the two countries. The collaboration will be very beneficial for both countries taking into account the complementary experience of the two research groups. lonospheric monitoring and modeling in Cyprus and solar-magnetospheric-geomagnetic interactions in Romania.

Duration, Funding Ag. and Funding

Title

Aug 2012-Aug 2014: Research Promotion Foundation. Total Funding: EUR 150,000

Cyprus Ionospheric Forecasting service

Role and Contribution

Project partner of the project to establish a High Frequency (HF) operational service for real-time specification (now-casting) and short-term forecasting of the state of the ionosphere over the eastern Mediterranean region. This real-time service will be based on ionosonde measurements from Cyprus and will involve the application of existing modelling techniques and the development of mathematical methods and visualisation tools for the forecasting and regional mapping of ionospheric characteristics and provision of associated warning information to enhance HF communication systems operating in the region.

Duration, Funding Ag. and Funding

Title

Monitoring, modelling and prediction of HF Spectral Occupancy over Cyprus

Role and Contribution

Project partner of the project to establish a dedicated measurement system to provide effective measurement and analysis of HF spectral occupancy over Cyprus.

Duration, Funding Ag. and Funding

Title

Jan 2009 - Jan 2011: Research Promotion Foundation. Total Funding: EUR 168,050

Jan 2009 – Jan 2010: Research Promotion Foundation. Total Funding: EUR 47,750

Apr 2011 – Oct 2013: Research Promotion Foundation. Total Funding: EUR 130,000

Role and Contribution

Project partner of the project to examine TEC (Total Electrón Content) variation over Cyprus and to establish a service for allowing nowcasting and short-term forecasting of its effects on GNSS

Service for monitoring and evaluation of ionospheric effects on GNSS signals in the Cyprus region.

signals.(In collaboration with Haldera trading).

Duration, Funding Ag. and Funding

lonospheric modeling and prediction

Role and Contribution

Project partner of the project to establish a collaboration between a distinguished scientist (Dr Liljiana Cander, RAL) and the recently established ionospheric research group in Cyprus with the ultimate aim to develop models appropriate to describe ionospheric variability in the Cyprus region. In particular to develop models and algorithms for ionospheric specification, real-time construction, short-term forecasting and long-term prediction of ground based ionospheric parameters.

Duration, Funding Ag. and Funding

Nov 2009 - Oct 2012: European Cooperation in the Field of Scientific and Technical Research.

RF/Microwave Communication Subsystems for Emerging Wireless Tecnologies COST IC0803

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Role and Contribution National representative of Cyprus in the scientific community aiming in enhancing knowledge in Ultra-wideband nonlinear circuits design. (oscillators, mixers, dividers).

Duration, Funding Ag. and Funding

Title

Role and Contribution

Jan 2008 – Jan 2010: Research Promotion Foundation. Total Funding: EUR 12,000 Monitoring of latitudinal variation of ionospheric disturbances over Africa and Europe

Project partner of the project to examine latitudinal variation of ionospheric disturbances over Africa and Europe in collaboration with Dr. Ayman M. Mahrous of Helwan University, Cairo, Egypt.

Duration, Funding Ag. and Funding

Title

Role and Contribution

Dec 2006 – Dec 2010: Research Promotion Foundation. Total Funding: EUR 230,000

Installation and operation of an ionospheric monitoring station

Project partner of the project for supporting the acquisition, elaboration, evaluation, dissemination and archiving of ionospheric observations above Cyprus.

### **Publications**

Doctoral Thesis Comparative Study of Low Phase Noise Microwave Oscillators, PhD Thesis UMIST 2002

#### Journal

J3.

**P. Vryonides**, S. Nikolaou, S. Kim, M. Tentzeris "Dual- mode reconfigurable bandpass filter using PIN diodes",International Journal of Microwave and Wireless Technologies), DOI: <a href="http://dx.doi.org/10.1017/S1759078714000932">http://dx.doi.org/10.1017/S1759078714000932</a>, June 2014.

J2.

**P. Vryonides**, H. Haralambous, Comparison of COSMIC measurements with the IRI-2007 model over the eastern Mediterranean region. Journal of Advanced Research, Volume 4, Issue 3, May 2013, Pages 297-301.

J1.

Hadjimitsis D.G Toulios L., **Vryonides P**, Papadopoulos P, Lazakidou A and Clayton C.R.I, "Satellite Remote Sensing for water quality assessment and monitoring-an overview on current concepts, deficits and future tasks", WSEAS Transactions of Signal Processing Issue 1, Vol. 3 pp 67-71 Jan 2007

#### Conference

C39

M. Ali Babar Abbasi, **P. Vryonides**, S. Nikolaou, "Humidity Sensor Devices using EDOT:PSS", Accepted for IEEE APS Symposium, Vancouver, Canada, 2015

C38

S. Arain, M. Ali Babar Abassi, S. Nikolaou, and **P. Vryonides**, "A Reconfigurable Bandpass to Bandstop Filter Using PIN Diodes Based on the Square Ring Resonator", Accepted for PIERS Conference, Prague, Czech Republic, July 2015

C37

M. Ali Babar Abbasi, S. Arain, **P. Vryonides**, and S. Nikolaou, "Design and optimization of miniaturized dual-band implantable antenna for MICS and ISM bands" Accepted for PIERS Conference, Prague, Czech Republic, July 2015

C36

H Haralambous, **P Vryonides** "HF interference temporal and spectral characteristics over the eastern Mediterranean", 10th Communications International Conference, in Bucharest, Romania May 2014 C35

H Haralambous, **P Vryonides**, T.Leontiou Comparison of reconstructed F2 layer peak parameters over Cyprus by slant TEC ingestion into the NeQuick model and manually scaled data, European Geosciences Union General Assembly (EGU2014) Vienna April 2014

C34

Haris Haralambous, **Photos Vryonides**, V. Dobrica, C. Demetrescu, G. Maris, D. Ionescu IRI STORM VALIDATION OVER EUROPE, European Geosciences Union General Assembly (EGU2014) Vienna April 2014.

C33

C32

H Haralambous, **P Vryonides** A comparison between automatically and manually scaled ionospheric characteristics over Cyprus from 2009 to 2012 *International Association of Geomagnetism and Aeronomy IAGA 12th Scientific Assembly* August 2013 Yucatan, Mexico.

H Haralambous, **P Vryonides**, T.Leontiou A five year validation study of the IRI-STORM model *International Association of Geomagnetism and Aeronomy IAGA 12th Scientific Assembly* August 2013 Yucatan, Mexico.

C31

H. Haralambous, L. Economou, **Vryonides P** Diurnal and seasonal variability of HF Spectral Occupancy over the eastern Mediterranean, *APS/URSI Symposium* Orlando USA 2013.

H. Haralambous, L. Economou, H Papadopoulos, **Vryonides P** Modelling HF Spectral Occupancy over the eastern Mediterranean, *APS/URSI Symposium* Orlando USA 2013. C29

H. Haralambous, L. Economou, **Vryonides P** Monitoring of HF Spectral Occupancy over the Eastern Mediterranean, *APS/URSI Symposium* Chicago 2012 C28

**P. Vryonides**, H. Haralambous, C Tomouzos, G Pelopidas Investigation of Ionospheric Slab Thickness and Plasmaspheric TEC Using Satellite Measurements *Progress in Electromagnetic Research Symposium (PIERS 2012)*, August 2012 Moscow.

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**P. Vryonides**, lonospheric Behaviour over Europe driven by moderate geomagnetic Storms in 2012, 9<sup>th</sup> European Space Weather Week (ESWW9) November 2012 Brussels.

C26

Haralambous H, S. Anaksagora, L. Economou , **P. Vryonides**, **Comparison of GPS-derived vTEC over Cyprus with IRI-2007** XXX URSI General Assembly and Scientific Symposium of International Union of Radio Science August 2011 Istanbul.

**P. Vryonides**, H. Haralambous, M. Fragoudi **Spread F Observations during Low Solar activity over Cyprus** XXX URSI General Assembly and Scientific Symposium of International Union of Radio Science August 2011 Istanbul.

C24

S. Nikolaou, M. Davidovic, and **P. Vryonides**, "Triple notch UWB antenna controlled by three types of resonators", Proc. of IEEE AP-S Conference, Spokane, WA, USA, July 2011 C23

Symeon Nikolaou, Miloš Davidović, Marija Nikolić, **Photos Vryonides**, "Resonator Type and Positioning Study for the Creation of a Potentially Reconfigurable Frequency Notch in a UWB Antenna Return Loss", EuCAP 2011, Rome.

C22

**P. Vryonides**, L. Economou , Haralambous H, A study of sporadic E layer characteristics over Cyprus. *Progress in Electromagnetic Research Symposium (PIERS 2011)*, March 2011 Marrakesh, Morocco C21

Haris Haralambous, **Photos Vryonides**, Lefteris Economou, Luigi Ciraolo, Ljiljana Cander Ionospheric response to the major geomagnetic storm during maximum solar activity, *European Geosciences Union General Assembly (EGU2010)* Vienna 2010.

Haralambous H, L. Economou , **P. Vryonides**, Comparison of foF2 values extracted from DIAS maps and ionosonde measurements at Nicosia during low solar activity 7<sup>th</sup> European Space Weather Week (ESWW7) November 2010 Brugges.

C19

- H Haralambous , A. Mahrous , **P Vryonides** , A Shemis Multi-instrument ionospheric disturbance detection over the Eastern Mediterranean region, *IEEE Geoscience and Remote Sensing Symposium* (*IGARSS2010*) pp 3541-3544 Hawaii August 2010. C18
- M. D. Davidovic, S. Nikolaou, **P. Vryonides**, M. Nikolic, "UWB antenna with a WiMAX frequency notch caused by a novel stepped U shaped slot that suppresses the parasitic notches" <u>Antennas and Propagation Society International Symposium (APSURSI)</u>, <u>2010 IEEE</u>,pp. 1-4, July 2010, Toronto C17
- **P. Vryonides**, S. Nikolaou, H. Haralambous *"24 GHz Low Phase Noise HBT Dielectric Resonator Oscillator"*, Proc. of the IEEE WAMICON conference, Melbourne Beach, FL, USA, pp 1-4 April 2010.
- M. D. Davidovic, S. Nikolaou, **P. Vryonides**, M. Nikolic, and B. Kolundzija, "*Reconfigurable UWB Antenna Operating in Two Different Sub-bands*", Proc. of EuCAP 2010, pp 1-5,Barcelona, Spain, April 2010. C15
- Haralambous H, **P. Vryonides**, L. Economou , Papadopoulos H, A local Total Electron Content Neural Network model over Cyprus 4th International Symposium on Communications, Control and Signal Processing (ISCCSP 2010) March 2010 Limassol pp 1-5. d.o.i:10.1109/ISCCSP.2010.5463306
- S. Nikolaou, **P. Vryonides**, D. E. Anagnostou, M. Al-Tarifi, "Development of an Ultra Compact Dual Band Antenna on a One Cubic Centimeter (1 cm3) Surface", Proc. of IEEE AP-S conference, Charleston, SC, USA, June 2009

Haralambous H, **P. Vryonides**,L. Economou **First Results from the Cyprus Digisonde**, IET *11th International Conference on Ionospheric Radio Systems and Techniques (IRST)* pp 9-13 May 2009 Edinburgh.

S. Nikolaou, B. Kim, **P. Vryonides**, *'Reconfiguring Antenna Characteristics using PIN diodes'* Proc. of EuCAP 2009, pp.3748 – 3752, Berlin, Germany, March 2009 C11

C12

H Haralambous , A. Mahrous , **P Vryonides** , A Shemis , A Cyprus-Egypt initiative for monitoring of lonospheric Weather Over the eastern Mediterranean region *IAGA International Symposium on Solar Wind-Space Environment Interaction* pp 193-196 Cairo, Egypt December 2009.

C10

Haralambous H, **P. Vryonides**,L. Economou , Enhancements in the critical frequency foF2 over Cyprus during a low solar activity period in the absence of pronounced geomagnetic activity 6<sup>th</sup> European Space Weather Week (ESWW6) November 2009 Brugges.

C9

C.Damianou, K. Ioannides, V. HadjiSavas, N. Milonas, A. Couppis, D. Iosif, M. Komodromos, **P. Vryonides**, 'Thermal ablation system using high intensity focused ultrasound (HIFU) and guided by MRI', 12<sup>th</sup> World Congress of the World Federation for Ultrasound in Medicine and Biology, Sydney, Australia, 30 August – 3 September 2009

C8

- H Haralambous , A. Mahrous , **P Vryonides** , A Shemis , Monitoring of Ionospheric Weather Over Cyprus and Egypt first results *International Association of Geomagnetism and Aeronomy IAGA 11th Scientific Assembly* August 2009 Sopron.
- **P. Vryonides**, S. Nikolaou, C. Themistos, M. Komodromos "Low Phase Noise HBT DRO", IEEE Mediterranean Microwave Symposium, Damascus, Syria, pp. 247-250, October 14-16, 2008
- C. Damianou, K. Ioannides, V. HadjiSavas, N. Milonas, A. Couppis, D. Iosif, M. Komodromos, **P. Vryonides**, 'Thermal ablation system using high intensity focused ultrasound (HIFU) guided by MRI', 8<sup>th</sup> International Symposium on Therapeutic Ultrasound, Mineapolis, USA, September 10-13, 2008
- S. Nikolaou, **P. Vryonides**, D.E. Anagnostou, "Dual-Band Microstrip-Fed Monopole on RO4003 Substrate", Proc. of 2008 IEEE-APS Symposium, pp.1-4, Digital Object Identifier 10.1109/APS.2008.4619886, San Diego, CA, July 2008.

C4

Haralambous H, G. Dekoulis, **P. Vryonides**, Operation of a new fully automated digisonde (DPS-4D) in Cyprus 12th International Symposium on Equatorial Aeronomy (ISEA12) May 2008 Crete.

H Haralambous , A. Mahrous , **P Vryonides** , A Shemis Monitoring of Ionospheric Weather Over Cyprus and Egypt 12th International Symposium on Equatorial Aeronomy (ISEA12) May2008 Crete.

Hadjimitsis D.G, **Vryonides P**, Themistokleous, K., Toulios L., and Clayton C.R.I, "Satellite-derived determination of aerosol optical thickness for air pollution monitoring: A simplified Algorithm", Fifteenth International Conference on Modelling, 6th International Conference on Air Quality Cyprus, 27-29 March 2007

C1

Hadjimitsis D.G, **Vryonides P**, Themistokleous, K., Toulios L., and Clayton C.R.I, "Applications of Satellite Remote Sensing & GIS Urban Air-Quality Monitoring in Cyprus: Potential Solutions and Suggestions", Fifteenth International Conference on Modelling, 6th International Conference on Air Quality Cyprus, 27-29 March 2007