

## CURRICULUM VITAE

### **PERSONAL DATA**

Name: **SPANOS, Thomas**  
 Date of Birth: 7 February 1956  
 Profession: Professor in Chemical Instrumental Analysis, PhD  
 Department of Petroleum and Mechanical Engineering  
 Sciences  
 Eastern Macedonia and Thrace Institute of Technology  
 (TEIEMT)  
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**KEY INTERESTS:** Instrumental Chemical Analysis, ICP-MS, LA-ICP-MS, GC, GC-MS, UV-Vis, Water and Wastewater analysis, Trace analysis, Land analysis, Environmental Protection

### **EDUCATION**

- **Doctorate Degree** -University of Sofia, Bulgaria “St. Kliment Okhridski”, Faculty of Chemistry, Chair of Analytical Chemistry. “Environmentric Assessment of Air, Water, and Soil Quality in the region of Kavala, Greece”.
- Post-graduate **DEA** (Masters Degree) in Applied Chemistry, Marseille, France. “Metals protection from sea corrosion”
- Undergraduate Degree in Chemistry, **Maitrise**, Marseille, France.

### **POSITIONS AT TEIEMT**

- From 1989 until present day Professor in the Department of Petroleum and Mechanical Engineering Sciences, Eastern Macedonia and Thrace Institute of Technology in the area of <Applied instrumental analysis – Applied chemistry>.

### **RESEARCH PROGRAMS**

- 1) 2016 Centre National de Recherche Scientifique sur les ArcheoMateriaux **CNRS-IRAMAT/CEB, Orleans**, France; 2 weeks training.
- 2) 1998-present Scientific Responsible for the Research Program at TEIEMT; “**Quality Control of Potable Water**” in the Kavala Area.
- 3) 2014-2015 **European Space Agency (ESA)**, Research Program in cooperation with the Aristotle University of Thessaloniki, Greece; “**Biocide management for long term water storage**“; micro-trace analysis using ICP-MS.
- 4) 2007-2009 Scientific Responsible for the Research Program at TEIEMT; “**Analysis of Heavy Metals in mud from Biological Cleaning Systems in Kavala and Drama Areas**”
- 5) 2004-2007 **National Program EPEAEK – ARCHIMIDES II**, “**Application of Instrumental Analysis Methods in the Study of Organic Residue in Hellenic Ancient Ceramic Pottery**”
- 6) 2005-2006 **National Program EPEAEK – ARCHIMIDES II** “**The Influence of Wastewater from Biological Cleaning Systems in the Quality and Quantity of Agricultural Products**”

- 7) 1999 Centre National de Recherche Scientifique **CNRS-Pole Analytique des Eaux, Brest**, France; 4 weeks training
- 8) 1996-1998 **National Program ADAREN "Quality of the Waters of Greece"**
- 9) 1992-1993 **European Research Program EC 900422. "Analysis of Essence Oils of Select Mediterranean Aromatic Plants"**

### **ADDITIONAL REGIONAL PROGRAMS**

- 1) 2000-2015 Scientific Responsible **"Quality control of potable water using chemometrical approach"**
- 2) 2010-2013 Scientific Responsible **"MISSIRIAN- Analysis for tobacco exportation"**
- 3) 2010-2012 Scientific Responsible **"Metal analysis of sludge in the biological cleaning station of Kavala and Drama"**
- 4) 1996-1998 Scientific Responsible **"Microbiological analysis of potable water in the Kavala Prefecture"**

### **LIST OF PUBLICATIONS**

16. Thomas Spanos<sup>1</sup>, Antoaneta Ene<sup>2</sup>. **"Environmental assessment of toxic metals occurrent in urban sewage sludge for it potential land application"** Annals of Dunarea de Jos, University of Galati, Mathematics, Physics, Theoretical Mechanics, Fascicle II, No.2, 158-166 (2016)
15. Thomas Spanos<sup>1</sup>, Antoaneta Ene<sup>2</sup>, Chrysoula STYLIANI PATRONIDOU<sup>3</sup> and Christina XATZIXRISTOU<sup>1</sup> **"Temporal variability of sewage sludge heavy metal content from Greek waste water treatment plants"**, Ecol Chem Engs 23(2), 271-283 (2016).
14. Thomas Spanos, Antoaneta Ene<sup>2</sup>, Pavlina Simeonova<sup>3</sup> **"Chemometric expertise of the quality of groundwater sources for domestic use"**, Journal of Environmental Science and Health, Part A. Toxic/Hazardous Substance & Environmental Engineering, : 50(11), 1099-1107, (2015).
13. Thomas Spanos<sup>1</sup>, Antoaneta Ene<sup>2</sup>, Christina Xatzichristou<sup>1</sup>, Agelos Papaioannou<sup>3</sup> **"Assessment of Groundwater Quality and Hydrological Profile of Kavala Area, Northern Greece"**, Romanian Journal of Physics 60 (9-10), 01, (2015).
12. Thomas Spanos<sup>1</sup>, Antoaneta Ene<sup>2</sup>, Irina B. Karadjova<sup>3</sup> **"Assessment of toxic elements Cu, Cr, Ni, Pb, Cd, Hg, Zn and Hexavalent Chromium in Sewage Sludge from Municipal Wastewater Treatment Plants by Combined Spectroscopic Techniques"**, Romanian Journal of Physics 60 (1-2), 237-245, (2015).
11. Antoaneta Ene<sup>1</sup>, Oleg Bogdevich<sup>2</sup>, Alina Sion<sup>2</sup> and Thomas Spanos<sup>3</sup>, **"Determination of polycyclic aromatic hydrocarbons by gas chromatography-mass spectrometry in soil from southeastern Romania"**, Microchemical journal 100 36-41, (2012).
10. Efstathios Tamoutzidis<sup>1\*</sup>, Martha Lazaridou<sup>2</sup>, Ioannis Papadopoulos<sup>3</sup>, Thomas Spanos<sup>4</sup>, Fokion Papathanasiou<sup>1</sup>, Maria Tamoutzidou<sup>1</sup>, Paraskevi Mitilianga<sup>1</sup> and Geore Vasiliou<sup>3</sup> **"The Effect of Treated Urban Wastewater on Soil Properties, Plant Tissue Composition and Biomass Productivity in Berseem Clover and Corn"**, Journal of Food, Agriculture & Environment vol 7, 3&4, (2009).
9. Agelos Papaioannou<sup>1\*</sup>, Goerge Karamanis<sup>2</sup>, Ioannis Rigas<sup>3</sup>, Thomas Spanos<sup>4</sup>, Zoe Roupa<sup>5</sup> **"Determination and Modeling of Clinical Laboratory Date of Healthy Individuals and Patients with End-Stage Renal Failure"**, Central European Journal of medicine, CEJMed, : 4(1), 37-48, (2009).
8. Thomas Spanos<sup>1\*</sup>, Vasil Simeonov<sup>2</sup>, Pavlina Simeonova<sup>3</sup>, Eleni Apostolidou<sup>4</sup> and John Stratis<sup>5</sup> **"Environmetrics to Evaluate Marine Environment Quality"**. Environmental Monitoring and Assessment 143:215-225, (2008).
7. Agelos Papaioannou<sup>1\*</sup>, Vasili Simeonov<sup>2</sup>, Panagiotis Plageras<sup>1</sup>, Eleni Dovriki<sup>1</sup> and Thomas Spanos<sup>3</sup> **"Multivariate Statistical Interpretation of Laboratory Clinical Data"**, Cent. Europ. Jour. of Medic, CEJMed 2 (3), 319 – 334, (2007).
6. A. Papaioannou<sup>1\*</sup>, P. Plageras<sup>1</sup>, P.Th. Nastos<sup>2</sup>, D. Grigoriadis<sup>3</sup>, E. Dovriki<sup>1</sup>, Th. Spanos<sup>4</sup>, S. Koutseris<sup>1</sup> and A.G. Paliatsos **"Assessment of Soil and Groundwater Quality and Hydrogeological Profile of Drama's Prefecture, North Greece"** WSEAS Transactions On Environment and Development, Issue 10, vol 2, 1276-1281, (2006).
5. Pavlina SIMEONOVA<sup>1</sup>, Costel Sarbu<sup>2</sup>, Thomas Spanos<sup>3</sup>, Vasil Simeonov<sup>4\*</sup> and Stefan Tsakovski<sup>4</sup> **"An Advanced Multivariate Statistical Approach to Study Coastal Sediment Data"** Central European Journal of Chemistry, CEJC 4 (1), 68 - 80, (2006).
4. Pavlina Simeonova<sup>1</sup>, Vasil Simeonov<sup>2\*</sup>, Ladislav Lux<sup>3</sup>, Ivanka Dakova<sup>2</sup>, and Thomas Spanos<sup>4</sup> **"Chemometric Evaluation of the Air Quality in an Industrial Region. Case study Kosice, Slovakia"**, Ecological chemistry and engineering: vol 12, No7, 727 - 737, (2005).
3. Th. SPANOS<sup>1</sup>, V. Simeonov<sup>2</sup>, S. Tsakovski<sup>2</sup> and D. Thiokas<sup>3</sup> **"Chemometric Study of Soil Analysis Data"**, Central European Journal of Chemistry, CEJC 2 (2), 402 - 416, (2004).
2. Thomas SPANOS<sup>1\*</sup>, Vasil Simeonov<sup>2</sup>, John Stratis<sup>3</sup> and Xatzixristou Christina<sup>1</sup> **"Assessment of Water Quality for Human Consumption"**, Microchimica Acta 141, 35 - 40, (2003)
1. Thomas SPANOS<sup>a,\*</sup>, Vasil SIMEONOV<sup>b</sup> and Georgi ANDREEV<sup>c</sup> **"Environmetric Modeling of Emission Sources for Dry and Wet Precipitation from an Urban Area"**, Talanta 58, 367- 375, (2002).

## PARTICIPATION IN INTERNATIONAL CONFERENCES- JOURNAL ARTICLES

27. Thomas SPANOS, Antoaneta Ene **"Multivariate analysis in water samples using Inductively Coupled Plasma - Mass Spectrometry (ICP-MS)"** International Conference of Zoologists, Academy of Science of Moldova, 12-13 October, 2016, Chisinau, Republic of Moldova.
26. Antoaneta Ene, Ana Pantelica, Elena Zubcov<sup>e</sup>, Oleg Bogdevich, Yuriy Denga, Marina V. Frontasyeva, Thomas Spanos **"Nuclear And Atomic Analytical Techniques For Elemental Analysis In Various Environmental Matrices"** Internat. Confer. of Zoologists, Academy of Science of Moldova, 12-13 October, 2016, Chisinau, Republic of Moldova.
25. Thomas Spanos, Antoaneta ENE **"Management of biological sludge from different wastewater treatment plants in Greece"** Scientific Conference of Doctoral Schools, June, 2016, University of Galati, Romania.
24. Antoaneta ENE, Thomas Spanos **"Evaluation of soil pollutants analysis data using multivariate statistical methods"** Environmental Challenges in Lower Danube Euroregion 25-25 June, 2015, Galati, Romania.
23. Thomas Spanos, Antoaneta ENE **"Analysis of heavy metal content of sewage sludge from waste water treatment plant"** Environmental Challenges in Lower Danube Euroregion 25-25 June, 2015, Galati, Romania.
22. Aikaterini N. Zarkada, Valasia Iakovoglou, Christina Chatzichristou, George N. Zaimes, Thomas Spanos **"The performance of a pilot constructed wetland in nutrients removal from domestic wastewater"** WASTEnet 19-21 June, 2015, Kavala, Greece.
21. Thomas Spanos<sup>1</sup> **"Inductively Coupled Plasma – Mass Spectrometry"** WASTEnet 19-21 June, 2015, Kavala, Greece.
20. Thomas SPANOS, Antoaneta ENE & Irina KARADJOVA, **"Monitoring of heavy metals in sewage sludge produced in kavala and drama wastewater treatment plants, northern greece"** WASTEnet 19-21 June, 2015, Kavala, Greece.
19. Δ. Μαρμάνης, Κ. Δερμεντζής, Α. Χριστοφορίδης, Θ. Σπανός, Κ. Ουζούνης, **"Ηλεκτροχημικές διεργασίες αποχρωματισμού της χρωστικής NYLANTHRENE RED"**  
10<sup>ο</sup> Πανελλήνιο Συνέδριο Χημικής Μηχανικής, 4-6 Ιουνίου 2015, Πανεπιστήμιο Πατρών, Τμήμα Χημικών Μηχανικών
18. M. Petala, V. Tsiridis, I. Mintsiouli, Th. Spanos, S. Evgenidis, M. Kostoglou, S. Sotiropoulos, E. Darakas, Th. Karapantsios, **"Combining bulk and surface chemistry to understand silver fluctuation in the International Space Station water storage and supply system"** Greece -Cyprus, 8-10 Mai 2015, Thessaloniki, Greece.
17. M. Petala, V. Tsiridis, I. Mintsiouli, Th. Spanos, M. Kostoglou, S. Sotiropoulos, E. Darakas, Th. Karapantsios **"Biocidal silver performance in the potable water tanks of the International Space Station"** March 29-31, 2015 Belgrade, SR.
16. Thomas Spanos, Antoaneta Ene, Sofia Mitkidou, Pavlina Simeonova **"Application of chemometric methods for assessment of groundwater quality in Kavala Prefecture, Northern Greece"** Frontiers in Environmental and Water Management, March 19-21, 2015. Imaret Hotel, Kavala, GR.
15. N. Manikas, T. Spanos, V. Christopoulos, G. N. Zaimes & D. Avtzis **"Odonata as indicators of stream water quality: a case study in the basin of Sperhios river"** Frontiers in Environmental and Water Management, March 19-21, 2015. Imaret Hotel, Kavala, GR.
14. Thomas Spanos, Antoaneta Ene, **"Study of seasonal variations of toxic elements content in sewage sludge from wastewater treatment plants"** Annals Dunarea de Jos, Univ. Galati, 18-21/9/2013 Fasc, V. 9/2013.  
- Mathematics, Physics, Theoretical Mechanics, year V (XXXV).
13. Antoaneta Ene, Thomas Spanos, **"Environmetrics as a tool to evaluate soil organic pollutants analysis data"** (18-21/Sept 2013) International conference Danube-Black Sea. On Energy, Environment & Efficiency, Galati, Romania
12. Thyriadou Anna, Spanos Thomas, Thyriadou Evanthia, Giannakoudakis Panagiotis, **"Teaching the Concept of Water Using the Project Method"**, Italy (Florence, 14-14 March 2013), 2<sup>nd</sup> edition of International Conference, New Perspectives in Science Education
11. Antoaneta Ene, Thomas Spanos, **"Study of distribution and sources of polycyclic aromatic hydrocarbons (PAHs) in topsoils from SE Romania using multivariate statistical analysis"** p. 15-22, (2012), ISSN 2067-2071. Annals Dunarea de Jos, Univ. Galati, Fasc, IV. 11/2012. Mathematics, Physics, Theoretical Mechanics, year IV (XXXIV).
10. Apostolos Papadopoulos, Antoaneta Ene, Thomas Spanos, **"Predicting the microbial degradability of simple mixtures of PAHs in soils using the HPCD extraction method"**, p. 142-154, (2009), ISSN 2067-2071. Annals Dunarea de Jos, Univ. Galati, Fasc, II. 28-29/Nov 2009, Mathematics, Physics, Theoretical Mechanics, year I (XXXII).
9. Apostolos Papadopoulos and Thomas Spanos, **"Developing the HPCD extraction method in different soils using 14C-PAH contaminants to predict indigenous bioavailability of soil microorganisms"**. p. 11-15, (2009) ISSN 2066-7124, Annals Dunarea de Jos, Univ. Galati, Fasc, II. 28-29/Nov 2009. Mathematics, Physics, Chemistry, Informatics (CD-ROM), year II (XXXII).
8. Apostolos Papadopoulos, Thomas Spanos and Christina Xatzixristou, **"Assessing the microbial availability of phenanthrene, pyrene and B[a]P in contaminated soils using the HPCD extraction technique"**. p. 7-10 (2009) ISSN 2066-7124, Annals Dunarea de Jos, Univ. Galati, Fasc, II. 28-29/Nov 2009. Mathematics, Physics, Chemistry, Informatics (CD-ROM), year III (XXXII).
7. Thomas Spanos, Apostolos Papadopoulos, Christina Chatzixristou, Kokkoni Karakosta, **"Water Quality Evaluation By Chemometrical Approaches"**. p. 16-21, (2009) ISSN 2066-7124., Annals Dunarea de Jos, Univ. Galati, Fasc, II. 28-29/Nov 2009. Mathematics, Physics, Chemistry, Informatics (CD-ROM), year III (XXXII).
6. Vasil Simeonov, Thomas Spanos, P. Simeonova, and V. LOVCHINOV **"CMB modeling of hot spots air pollution urban sites"** p 19, (19-23/Sept 2007), 4<sup>th</sup> Black Sea Basin Conf. On Analytical Chemistry, Bulgaria.
5. Vasil Simeonov, Th. Spanos, Vasil Lovchinov, Dimitar Dimitrov, and Pavlina Simeonova, **"Receptor models in atmospheric chemistry"** p 18, (poster presentation). (19-23/Sept 2007) 4<sup>th</sup> Black Sea Basin Conference On Analytical Chemistry, Bulgaria.
4. Tamoutsidis E, Lazaridou M, Melfou A, Vassiliou G and Th. Spanos, **"Wastewater impact on nutrient accumulation in soil and corn plants"**. p 423-424, (4-7/Sept 2006), IX European Society for Agronomy Congress, Warszawa, Poland.

3. Lazaridou M, Spanos Th, Tsiridis A and Kadoglou I, "Wastewater and phosphorus effects on the growth of berseem clover" Vol 11, 104-106, Spain (April 2006), Glassland Science in Europe.
2. Th. Spanos, "Συμβολή στατιστικών μεθόδων στη διερεύνηση της ποιότητας πόσιμων υδάτων του νομού Καβάλας", (3-5/Οκτωβρίου 2003).International Conference Ελληνική Εταιρία Ανάλυσης Δεδομένων
1. Th. Spanos, V. Simeonov and J. Stratis. "Assessment of Water Quality for Human Consumption". Thessaloniki, Greece, (23-27/September 2003). International Chemistry Conference IMA '03,

**LANGUAGES** Fluent in Greek, French and English

### **PARTICIPATION IN SCIENTIFIC COMMITTEES**

1. Association of Greek Chemists
2. National Science Fund, Ministry of Education, Youth and Sciences, Bulgaria
3. Society of Petroleum Engineers

### **ACTIVITIES IN EUROPEAN ERASMUS+ PROGRAMS**

#### **A. Teaching in Master Programs**

1. MSc in Water Resource of the Mediterranean Climate Change and Water Scarcity Implications on Management and Policy. TEI EMT (2013-14-15-16)
2. CDA - MASTER of Science in Environmental Technology and Management. Aalborg Universitet-Esbjerg, Denmark (2005)
3. CDA - MASTER of Science in Environmental Technology and Management. Aalborg Universitet-Esbjerg, Denmark, (2001)
4. CDA - MASTER of Science in Environmental Technology and Management. Fachhochschule Ostfriesland-Emden, Germany, (2000)

#### **B. Teaching in Intensive Programs**

1. One week Intensive Program: Environmental Analysis, chemical aspects, KaHo St Lieven, Belgium, (1999)
2. One week Intensive Program: Selected topics of industrial chemical processes and potable water analysis-quality, TEI Kavala, Greece (1996)

#### **C. Teaching Staff Mobility**

1. University Dunarea De Jos, Galati - Romania, "Trace analysis using ICP-MS", (2016)
2. University of the Academy of Sciences of Moldova, Institute of Chemistry, Laboratory of Environmental Quality Monitoring "Trace analysis using ICP-MS", (2016)
3. University Dunarea De Jos, Galati - Romania, "Water quality control and European legislation", (2015)
4. University of the Academy of Sciences of Moldova, Institute of Chemistry, Laboratory of Environmental Quality Monitoring "Water quality control and European legislation", (2015)
5. F.H Joanneum Karpfenberg – Austria. Quality Control of potable water, analysis and regulations, (2011)
6. University Dunarea De Jos, Galati - Romania, "Environmental protection", (2009)
7. University St. Kliment Okhridski - Bulgaria, "Control of potable water", (2007)
8. I.U.T Lille - France, "Control of potable water", (2007)
9. University St. Kliment Okhridski - Bulgaria "Metal corrosion", (2006)
10. University St. Kliment Okhridski - Bulgaria "Gas chromatography", (2005)

### **INSTRUMENTAL ANALYSIS LABORATORY - COMMUNITY SERVICES**

- The Instrumental Analysis Laboratory at TEIEMT-Kavala is certified by **ISO 9001/2008** in the field of Physicochemical and Microbiological Analysis of Potable Water and Waste
- Interviews and newspaper articles concerning current activities of the Instrumental Analysis Laboratory for the quality control of potable water and wastewater
- Control of heavy metals in the biological cleaning system in the Prefecture of Kavala
- Providing technological knowledge and consulting to local companies for export products