



**Dr. Sotiris P. Evgenidis**  
*Post-doctoral Fellow*  
**Multiphase Dynamics Group**  
**School of Chemistry**  
**Aristotle University of Thessaloniki**  
**Greece**

## PERSONAL

<b>Born:</b>	21 December 1981 in Thessaloniki, Greece
<b>Nationality:</b>	Greek
<b>Marital Status:</b>	Married, one child
<b>Working Address:</b>	Division of Chemical Technology, School of Chemistry Aristotle University of Thessaloniki Univ. Box 116, 54124 Thessaloniki, Greece
<b>Tel.:</b>	+30 2310 997798
<b>E-mail:</b>	<a href="mailto:sevgenid@chem.auth.gr">sevgenid@chem.auth.gr</a>
<b>Webpage:</b>	<a href="http://karapant.webpages.auth.gr/">http://karapant.webpages.auth.gr/</a>

## STUDIES

<u>10/2004 – 08/2010:</u>	PhD in Chemistry, School of Chemistry, Aristotle University of Thessaloniki, Greece General degree: 10/10
<u>01/2013 – 05/2015:</u>	MSc in Chemistry, School of Chemistry, Aristotle University of Thessaloniki, Greece
<u>10/1999 – 09/2004:</u>	Chemistry Degree, School of Chemistry, Aristotle University of Thessaloniki, Greece General degree: 7.46/10

## Theses

<u>Post-Doctoral Objective:</u>	Diagnosis of Decompression Sickness and Coronary Disease by means of electrical impedance measurements
<u>PhD Thesis:</u>	Development of an electrical technique for the detection and characterization of bubbles in liquid flow
<u>MSc Thesis:</u>	Simulation of electrical signals for the case of bubbly flow

Graduate Thesis: Electrical technique development for measuring surface tension

## WORKING EXPERIENCE

- 2015: Organizing Committee member of the Conference:  
"22<sup>nd</sup> E.L.G.R.A. Symposium and General Assembly"  
Corfu, Greece, September 29 – October 01, 2015
- 2014 – 2015: Research Project: "Biocide management for long term water storage"  
(ESA, TRP, 4000109529/13/NL/CP, 118993/2013, 2014-2015)
- 2014: Organizing Committee member of the Conference:  
"10<sup>th</sup> European Conference on Foams and Applications-EUFOAM 2014"  
Thessaloniki, Greece, July 7-10, 2014
- 2013 – 2014: Project: "Smart and green interfaces: from single bubbles/drops to industrial/environmental/biomedical applications" (ESF/COST Action CGA-MP1106-2nd year, 53351/2013, 2013-2014).
- 2005 – 2013: Research Project: "In-Vivo Embolic Detector"  
Phase I (ESA GSTP RFQ/3-10938/04/NL/PA, 2004-2005),  
Phase II (ESA GSTP CCN/3-18354/05/NL/PA, 2006-2007),  
Phase IIIa (ESA GSTP CCN/6-18354/05/NL/PA, 2009-2010),  
Phase IIIb (ESA GSTP C4000101764/10/NL/SFe, 2010-2012)  
Phase IVa (ESA GSTP CCN2 4000101764/10/NL/SFe, 41027/2013, 2013)
- 2009: Organizing Committee member of the Conference:  
4<sup>th</sup> International Workshop "Bubble and Drop Interfaces" jointly organized  
with COST P21 Action "Physics of Droplets" 8<sup>th</sup> Management Committee +  
Working Groups Meetings  
Thessaloniki, Greece, September 23 – 25, 2009
- 2008 - 2009: Participation in 2 ESA Parabolic Flight Campaigns (11/2008 & 05/2009)  
Experiment: "Mass diffusion-induced bubble growth in supersaturated  
solutions at temperatures below boiling: the role of g-jitters to heat  
conduction"
- 2006 – 2009: Research Project: "Development of an electrical technique for the  
detection and characterization of bubbles in bubbly liquid flows" (Greek  
Ministry of Education & EuroDiving Trading Inc., PENED 2003,  
03ED376/3403/19-01-2006, 2006-2009).
- 2005: Organizing Committee member of the Conference:  
"Biennial Meeting – General Assembly, E.L.G.R.A."  
Santorini, Greece, September 21 – 23, 2005

## TEACHING EXPERIENCE

- 03/2007 – 05/2007: "Introduction in Chemical Technology", School of Chemistry, Aristotle  
University of Thessaloniki, Greece
- 10/2006 – 12/2006: "Physical processes: Laboratory exercises", School of Chemistry, Aristotle  
University of Thessaloniki, Greece
- 03/2006 – 05/2006: "Introduction in Chemical Technology", School of Chemistry, Aristotle  
University of Thessaloniki, Greece
- 10/2005 – 12/2005: "Physical processes: Laboratory exercises", School of Chemistry, Aristotle  
University of Thessaloniki, Greece

## RESEARCH CO-SUPERVISION

- MSc Thesis-2013: “Study of vertical upward co-current bubbly flow using a non-Newtonian liquid that simulates human blood”, Petros Gkotsis, School of Chemistry, Aristotle University of Thessaloniki, Greece.
- Graduate Thesis-2009: “Bubble size determination in dense dispersion employing image processing software”, Petros Gkotsis, School of Chemistry, Aristotle University of Thessaloniki, Greece.
- Graduate Thesis-2009: “Development of a novel technique for the study of gas/liquid films stability during foam drainage”, Aggelos Zamanis, School of Chemistry, Aristotle University of Thessaloniki, Greece.

## PUBLICATIONS

### Patents:

1. Thodoris D. Karapantsios, Sotiris P. Evgenidis, Konstantinos Zacharias, Thodoris Mesimeris, “Method for the detection and characterization of bubbles in liquids and device therefor, resp. system”, *European Patent Office*, Application number EP14188200.1, 2014.
2. Thodoris D. Karapantsios, Sotiris P. Evgenidis, Konstantinos Zacharias, Giorgos Karagiannis, “Innovative, non-invasive electrical impedance spectroscopy technique for prompt diagnosis of Coronary Artery Disease, *Hellenic Industrial Property Organisation*, 2015.

### Peer-Reviewed Scientific Journals:

3. Virginie Papadopoulou, Sotiris Evgenidis, Robert J. Eckersley, Thodoris Mesimeris, Costantino Balestra, Margaritis Kostoglou, Meng-Xing Tang, Thodoris Karapantsios, “Decompression induced bubble dynamics on ex-vivo fat and muscle tissue surfaces with a new experimental set-up”, *Colloids and Surfaces B: Biointerfaces*, **129**, 121-129, 2015.
4. Sotiris P. Evgenidis and Thodoris D. Karapantsios, “Effect of bubble size on void fraction fluctuations in dispersed bubble flows”, *International Journal of Multiphase Flow*, **75**, 163-173, 2015.
5. Margaritis Kostoglou, Sotiris P. Evgenidis and Thodoris D. Karapantsios, “Unexpected natural convection heat transfer for small Rayleigh numbers in external geometry”, *International Journal of Heat & Mass Transfer*, **64**, 773-782, 2013.
6. Margaritis Kostoglou, Sotiris P. Evgenidis, Konstantinos A. Zacharias and Thodoris D. Karapantsios, “Heat transfer from small objects in microgravity: experiments and analysis”, *International Journal of Heat & Mass Transfer*, **54**, 3323–3333, 2011.
7. Sotiris P. Evgenidis, Konstantinos A. Zacharias, Thodoris D. Karapantsios and Margaritis Kostoglou, “Effect of liquid properties on heat transfer from miniature heaters at different gravity conditions”, *Microgravity Science & Technology*, **23**, 123-128, 2011.
8. S. P. Evgenidis, N. A. Kazakis and T. D. Karapantsios, “Bubbly flow characteristics during decompression sickness: Effect of surfactant and electrolyte on bubble size distribution”, *Colloids and Surfaces A: Physicochem. Eng. Aspects*, **365**, 46-51, 2010.
9. T. D. Karapantsios, M. Kostoglou and S. P. Evgenidis, “From single bubbles on solid surfaces to massive bubbly flows during decompression sickness”, *J. Gravit. Phys.*, **15**, 227, 2008.
10. T.D. Karapantsios, M. Kostoglou and S. Evgenidis, “From the growth and detachment of single bubbles to massive bubbly flows”, *Newsletter of the European Low Gravity Research Association*, **6**, 4-6, 2008.
11. Sotiris P. Evgenidis, Margaritis Kostoglou and Thodoris D. Karapantsios, “Electrical conductance study of  $\theta$ -liquid bridges”, *J. Colloid Interface Sci.*, **302**(2), 597-604, 2006.

## **Presentations/Posters in Scientific Conferences:**

12. W. Tzevelecoc, S. Evgenidis, K. Zacharias, T. Karapantsios, S. Van Vaerenbergh, Development of a Solutal Distribution Measurement Technique for Self-Rewetting Fluids Investigation: SELENE space project, 22<sup>nd</sup> ELGRA Symposium and General Assembly, Corfu, Greece, September 29-October 1, 2015.
13. S. Evgenidis, K. Zacharias, V. Papadopoulou, S. Theunissen, C. Balestra, T. Karapantsios, In-Vivo Embolic Detector (I-VED): Recent Advancements on the Diagnosis of Decompression Sickness through Electrical Measurements of Exceptional High Temporal and Spatial Resolution, 22<sup>nd</sup> ELGRA Symposium and General Assembly, Corfu, Greece, September 29-October 1, 2015.
14. O. Oikonomidou, S. Evgenidis, M. Kostoglou, T. Karapantsios, Bubble Size Evolution During Decompression Flow Degassing Under Terrestrial and Hypergravity Conditions, 22<sup>nd</sup> ELGRA Symposium and General Assembly, Corfu, Greece, September 29-October 1, 2015.
15. S. P. Evgenidis, M. Vlachou, P. K. Gkotsis, T. D. Karapantsios, Study of bubble clumps in vertical co-current upward gas/non-newtonian liquid flow, 6<sup>th</sup> International Workshop on Bubble and Drop Interfaces, Potsdam/Golm, Germany, July 06-10, 2015
16. S. P. Evgenidis, K. Zacharias, A. Mesimeris, T. D. Karapantsios, T. Mesimeris, G. Karagiannis, S. Stefanidou, M. Kotsiou, In-Vivo Embolic Detector (I-VED): Research advancements on bubbles detection in living subjects, *Smart and Green Interfaces 2015*, Belgrade, Serbia, March 30-April 01, 2015.
17. O. Oikonomidou, S. Evgenidis, M. Kostoglou, T. D. Karapantsios, Assessment of parameters affecting "flow" decompression degassing performance, *Smart and Green Interfaces 2015*, Belgrade, Serbia, March 30-April 01, 2015.
18. A. Mesimeris, S. P. Evgenidis, K. Zacharias, T. D. Karapantsios, T. Mesimeris, G. Karagiannis, S. Stefanidou, M. Kotsiou, "In-Vivo Embolic Detector (I-VED): Exploitation of electrical impedance spectroscopy measurements for bubbles detection in human body", 40<sup>th</sup> Annual Scientific Meeting of the European Underwater and Baromedical Society (EUBS 2014), Wiesbaden, Germany, September 24-27, 2014.
19. V. Papadopoulou, S. Evgenidis, R. J. Eckersley, T. Mesimeris, C. Balestra, M.-X. Tang, T. Karapantsios, "A study of decompression induced bubble dynamics on different tissue surfaces with a novel experimental set-up", 40<sup>th</sup> Annual Scientific Meeting of the European Underwater and Baromedical Society (EUBS 2014), Wiesbaden, Germany, September 24-27, 2014.
20. M. Petala, S. Evgenidis, V. Tsiridis, J. Georgieva, M. Kostoglou, S. Sotiropoulos, E. Darakas, T. Karapantsios, "International Space Station drinking water: Biocide management for long term water storage", *Smart and Green Interfaces 2014*, Marseilles, France, April 22-24, 2014.
21. S. P. Evgenidis, K. Zacharias, T. Mesimeris, T. D. Karapantsios, "In-Vivo Embolic Detector (I-VED): Electrical impedance response of different human body sites", *Smart and Green Interfaces 2014*, Marseilles, France, April 22-24, 2014.
22. S. P. Evgenidis, M. Kostoglou, T. D. Karapantsios, "A novel centrifugal technique for studying droplet's contact line motion dynamics on solid substrates under the influence of varying body forces", *Smart and Green Interfaces 2014*, Marseilles, France, April 22-24, 2014.
23. V. Papadopoulou, S. Evgenidis, R. J. Eckersley, T. Mesimeris, C. Balestra, M.-X. Tang, T. Karapantsios, "Decompression induced bubble growth on tissue surfaces", *Smart and Green Interfaces 2014*, Marseilles, France, April 22-24, 2014.
24. Petros K. Gkotsis, Sotiris P. Evgenidis, Thodoris D. Karapantsios, "Study of isolated bubbles and bubble clusters in co-current upward two-phase flow", *Workshop-COST Action MP1106: Multiphase flows with/without phase change*, Zaragoza, Spain, September 3-4, 2013.
25. V. Papadopoulou, S. Evgenidis, R. Eckersley, C. Balestra, M. Tang, T. Karapantsios, "Decompression Induced Bubble Growth on Tissue Surfaces from Gas Saturated Solutions",

*Tricontinental Scientific Meeting on Diving and Hyperbaric Medicine-EUBS 2013*, St. Gilles, Reunion Island, Indian Ocean, September 22-29, 2013.

26. Sotiris P. Evgenidis, Konstantinos Zacharias, Thodoris D. Karapantsios, Ioannis Savvas, Kiriaki Pavlidou, Lysimachos Papazoglou, Michail Patsikas, "An electrical technique for detection of micro-bubbles in living subjects with in-vitro validation", *Smart and Green Interfaces 2013*, Prague, Czech Republic, March 21-22, 2013.
27. Petros K. Gkotsis, Sotiris P. Evgenidis, Thodoris D. Karapantsios, "Influence of pseudoplasticity and surface tension on gas volumetric concentration and bubble characteristics in two-phase co-current upward flow", *Smart and Green Interfaces 2013*, Prague, Czech Republic, March 21-22, 2013.
28. Virginie Papadopoulou, Sotiris Evgenidis, Robert J. Eckersley, Costantino Balestra, Meng-Xing Tang, Thodoris Karapantsios, "Effect of different tissue surfaces on decompression induced bubble growth from gas saturated solutions", *Smart and Green Interfaces 2013*, Prague, Czech Republic, March 21-22, 2013.
29. K. Slenzka, S. Podhajsky, J. Hochstein, S. Evgenidis, T. Karapantsios, "Modular design of 4 ISS relevant multi-phase flow experiments using an in-vivo embolic detector (I-VED)", *Seventh International Symposium on TWO-PHASE SYSTEMS FOR GROUND AND SPACE APPLICATIONS*, Beijing, China, September 17-22, 2012.
30. Evgenidis Sotiris, Zacharias Konstantinos, Samaras Konstantinos, Papazoglou Lysimachos, Karapantsios Thodoris, "A new electrical technique for the detection of bubbles in living subjects", *5<sup>th</sup> International Workshop on Bubble and Drop Interfaces (B&D 2012)*, Krakow, Poland, May 20 – 24, 2012.
31. Sotiris P. Evgenidis, Konstantinos Zacharias, Lysimachos Papazoglou & Thodoris D. Karapantsios, "IN VIVO EMBOLIC DETECTOR: A NON-INVASIVE ELECTRICAL TECHNIQUE FOR THE DETERMINATION OF BUBBLES CHARACTERISTICS DURING DECOMPRESSION SICKNESS", *E.L.G.R.A. Biennial Symposium and General Assembly "Gravity: from  $\mu$  to x!"*, Antwerp, Belgium, September 6 – 9, 2011.
32. Evgenidis S., Karapantsios T., "Non-invasive techniques for the determination of bubbles characteristics during liquids handling and processing", *European Advanced Life Support Workshop - ESA*, Universitat Autònoma de Barcelona, Spain, June 2 – 4, 2009.
33. Sotiris P. Evgenidis, Kostantinos Zacharias, Margaritis Kostoglou & Thodoris D. Karapantsios\*, "Effect of gravity level on heat transfer from small spheroids", *ELGRA Biennial Symposium and General Assembly "In the Footsteps of Columbus"*, Bonn, Germany, September 1 - 4, 2009.
34. Hatzidafni A., Evgenidis S., Lioumbas I. and Karapantsios T., "Electrical Resistance Tomography in upward co-current bubbly flow", *4th International Workshop "Bubble and Drop Interfaces" jointly organized with COST P21 Action "Physics of Droplets" 8th Management Committee + Working Groups Meetings*, Thessaloniki, Greece, September 23 – 25, 2009.
35. T.D. Karapantsios, M. Kostoglou, S.P. Evgenidis, "From single bubbles on solid surfaces to massive bubbly flows during decompression sickness", *Proceedings of the Symposium "Life in Space for Life on Earth"*, 22 - 27 June, Angers, France, 2008 (ESA, SP-663, December 2008).
36. M. Kostoglou, T.D. Karapantsios, A. Zamanis, S.P. Evgenidis "A new device for measuring thin film drainage around single foam bubbles", *EUFOAM 2008, 9th European Conference on Foams, Emulsions and Applications*, ESA/ESTEC, Noordwijk, The Netherlands, July 8 - 10, 2008.
37. Konstantinos A. Zacharias, Sotiris P. Evgenidis, Thodoris D. Karapantsios, "An advanced Acoustical Technique for measuring bubbles in stagnant and flowing liquids", *Workshop: COST P21: The Physics of droplets*, Capri, Italy, May 15, 2008
38. Sotiris P. Evgenidis, Xenophon Zabulis, Thodoris D. Karapantsios, "Effect of surfactant and electrolyte on bubble size distribution in low gas fraction bubbly flows", *Workshop: COST P21: The Physics of droplets*, Capri, Italy, May 15, 2008

39. Konstantinos Zacharias, Sotiris P. Evgenidis, Thodoris D. Karapantsios, "Detection of bubbles in liquids with acoustical and electrical measurements", *Workshop: COST P21: The Physics of droplets*, Twente, Netherlands, October 08, 2007
40. Sotiris P. Evgenidis, Konstantinos Zacharias, Thodoris D. Karapantsios, "Detection of bubbles in two-phase flows with optical and electrical measurements", *Workshop: COST P21: The Physics of droplets*, Twente, Netherlands, October 08, 2007
41. Sotiris P. Evgenidis, Thodoris D. Karapantsios, "Bubble size distribution by optical, electrical and acoustical measurements", *Workshop: COST P21: The Physics of droplets*, Liege, Belgium, June 12, 2007
42. Evgenidis S., Karapantsios T.D. and Kostoglou M. "Characterization of electrically conducting liquid bridge", *EUFOAM 2006, 6th European Conference on Foams, Emulsions and Applications*, Potsdam, Germany, July 2 - 6, 2006.
43. Kalogianni E. P., Altiparmakis C., Evgenidis S., Mesimeris T., Sideridis G., Karapantsios T. D., "In Vivo Embolic Detector (IVED): Phase I", *Biennial Meeting – General Assembly, E.L.G.R.A.*, Santorini, Greece, September 21 – 23, 2005.

## SEMINARS

1. Joint Cluster Meeting: "*Medical Diagnostics and Advanced Therapies / Sustainable Food Science and Technology*", COST Action MP1106: Smart and green interfaces – from single bubbles and drops to industrial, environmental and biomedical applications (SGI), Naples, Italy, November 6-7, 2014.
2. 1<sup>st</sup> Training School "*Physico-chemical and flow behavior of droplet-based systems*", COST P21: The Physics of droplets, Villa Orlandi, Anacapri, Italy, May 12-14, 2008.
3. 100 hours Seminar, Project P.E.N.E.D. 2003: "*Research methodology, management of research and innovation, evaluation of technology, incorporation of research and technological knowledge in the procedure of the financial and social evolution*", Aristotle University of Thessaloniki, Greece, May 15-30, 2007

## DISTINCTIONS

1. Winner of the "*Down to Earth Competition 2014, Greece*" organized by the European Space Agency (ESA) and KINNO Consultants Ltd., with the support of the Greek Delegation to ESA / General Secretariat for Research & Technology (GSRT), 27 November, 2014
2. Prize "*Thomas Aggelidis*" of Lab of General and Inorganic Chemical Technology, School of Chemistry, Aristotle University of Thessaloniki, 2010.

## MEMBERSHIP

- Greek Chemists Association