

NIKOLAOS A. KAZAKIS

CURRICULUM VITAE

PERSONAL INFORMATION

Nationality : Greek
Date of birth : 1 April 1980
Family status : Married, one child
Work address : Department of Archaeometry and
Physicochemical Measurements,
"Athena" R.C., Tsimiski 58, 67100
Xanthi, GREECE
Phone number : Work: +30 2541078787 x 127
e-mail : nikkazak@ceti.gr
nikkazak@gmail.com



EDUCATIONAL INFORMATION

- 2004-2008** **PhD in Chemical Engineering**
Chemical Engineering Department, Aristotle University of Thessa-
loniki, Greece.
Thesis title: *“Study of bubble column equipped
with porous gas sparger”*
Grade: **Excellent**
- 1998-2003** **Diploma in Chemical Engineering**
Chemical Engineering Department, Aristotle University of Thessa-
loniki, Greece.
Diploma thesis title: *“Spray drying of tomato pulp using
dehumidified air as drying medium”*
Grade: **With Honors**

RESEARCH AND PROFESSIONAL EXPERIENCE

- 01/07/2010 -
today** Adjunct Researcher-Post Doctoral Fellow at the Department of
Archaeometry and Physicochemical Measurements, "Athena" R.C.,
Xanthi, Greece.
- 20/05/2011 -
today** Adjunct Researcher at the Environmental Engineering Department
of the Democritus University of Thrace.

- 01/07/2011 – today Member of the Quality Assurance Unit at Democritus University of Thrace, Greece.
- 15/10/2009 – 07/06/2010 Adjunct Researcher-Post Doctoral Fellow at the Division of Chemical Technology, School of Chemistry, Aristotle University of Thessaloniki, Greece.
- 01/01/2006 – 30/09/2008 Secretary position at the EPEAEK III project, Chemical Engineering Department, Aristotle University of Thessaloniki, Greece.
Responsible for the placement of the students in industry to gain technical experience.
- 01/10/2003 – 30/11/2003 Two-month technical experience in the KLT company regarding heating and air conditioning in industry (*EPEAEK II project*).
- 01/07/2002 – 31/08/2002 Two-month employment in the Institute of Analytical Chemistry, Technical University of Vienna, Austria (*IAESTE programme*):
Determination of cellulose concentration in the atmosphere using HPLC (laboratory analysis).
- 29/07/1998 – 02/10/1998 Three-month seasonal employment in the National Bank of Greece:
Foreign currency exchange division.

PARTICIPATION IN RESEARCH PROJECTS

- 01/06/2011 – 30/06/2011 **Greek Project.**
Title: *Database of North-East Aegean Pottery*
(Chemical analysis of ceramics).
- 20/05/2011 – today **Greek Project.**
Title: *Quality monitoring of rain and sewage water of the Industrial Areas in Alexandroupoli, Komotini, Xanthi, Drama, Kavala, Orestiada and Sappes*
(Chemical analysis of water samples in heavy metals).
- 01/07/2010 – today **Greek Project.**
Title: *Archaeometry Applications*
(Physicochemical measurements and chemical analysis of ceramics and geological materials).
- 15/10/2009 – 07/06/2010 **European Project funded by the European Space Agency (ESA).**
Title: *In-Vivo Embolic Detector, Phase IIIa*
(Adjunct Researcher-Post Doctoral Fellow).

- 22/05/2006 – 31/03/2008** **Joint Research and Technology Programmes with the Institute of Chemical Process Fundamentals, Czech Academy of Sciences.**
Title: *Study of rheological behaviour of nanofluids and of their effect on heat transfer in compact heat exchangers.*
(Research Assistant).
- 01/05/2005 – 30/06/2005** **Heraclitus Program.**
Title: *Influence of the liquid properties on the gas/liquid stratified co-flow*
(Research Assistant).

ACADEMIC EXPERIENCE

- 2011-2012** **Instructor**
Institute for Professional Training of the Labor Force Employment Organization (OAED), Xanthi, Greece, for student training at the “*Pharmaceutical, Cosmetics and Related Products Technician*” profession orientation.
Courses:
- Unit and Chemical Operations
 - Safety and Hygiene in Industry
 - Analytical Chemistry I
 - Chemical Technology
 - Environment
- 2003-2008** **Teaching Assistant**
Division of Analysis, Design and Control of Chemical Processes and Plants, Chemical Engineering Department, Aristotle University of Thessaloniki, Greece.
Undergraduate courses:
- Chemical Engineering Laboratory II
 - Chemical Process/Plant design
 - Technical and Economical Plant Design Project I
 - Technical and Economical Plant Design Project II
- Co-Supervisor of two diploma thesis projects**
- Taxidis K., 2006 Gas holdup prediction in a bubble column using a tomography method.
 - Papadopoulos I., 2008 Prediction of gas holdup at the homogeneous regime and regime transition in a bubble column equipped with porous gas sparger.

TRAINING

- 21/03/2010 – 26/03/2010** Visit at the Department of Physics and Astronomy, University of Nottingham, UK, studying the degassing of magnetic levitated liquid drop.
- 31/01/2010 – 06/02/2010** Visit at the Institut de Mécanique des Fluides de Toulouse (IMFT), Toulouse, France.
- 24/01/2010 – 31/01/2010** Visit at the Laboratory of micro-gravity, Department of Applied Physics, Technical University of Catalonia, Barcelona, Spain.
- 2007** Attending the meeting “*New technologies in Computational Fluid Dynamics codes*”, Thessaloniki, Greece.
- 2004** Attending the meeting “*ANSYS CFX: recent advances in Computational Fluid Dynamics*”, Thessaloniki, Greece.
- 2004** Attending the 2nd Scientific Meeting CPERI: “*Research Activities of CPERI in the fields of Advanced Materials, Production, Energy and Environment Systems, Development of New High-Technology Companies*”, Thessaloniki, Greece.

AWARDS-SCHOLARSHIPS

- 2005** Distinction Award for Excellent New Researchers (as PhD candidate), Research Committee of Aristotle University of Thessaloniki, Greece.
- 2003** Award for Distinction during Graduation (*highest degree score*), Hellenic Association of Chemical Engineers.
- 2000-2001** Outstanding Student Award, Greek Institute of State Scholarships (IKY).
- 2000-2001** Award for Academic Excellence, Technical Chamber of Greece (TEE).

THESES – STUDIES

- 2008** **PhD Thesis.**
Title: “*Study of bubble column equipped with porous gas sparger*”
- 2003** **Diploma Thesis.**
Title: “*Spray drying of tomato pulp using dehumidified air as drying medium*”
- 2002-2003** **Technical and Economical Plant Design Project.**
Title: “*k-butanol production using propylene*”

- 2002 Undergraduate Research Study.**
Title: "Laboratory analysis for the cellulose determination in the atmosphere using HPLC"

COURSE NOTES

- 2011-2012** Course notes during the training of the "Pharmaceutical, Cosmetics and Related Products Technician" profession orientation students, Institute for Professional Training of the Labor Force Employment Organization (OAED), Xanthi, Greece for the courses:
- Unit and Chemical Operations
 - Safety and Hygiene in Industry
 - Analytical Chemistry I
 - Chemical Technology
 - Environment

PUBLICATIONS IN SCIENTIFIC JOURNALS

- [1] Sakalis, A.J., **Kazakis, N.A.**, Merousis, N., Tsirliganis N.C., 2011 Study of Neolithic Pottery from Polyplatanos (Imathia) using micro X-Ray Fluorescence Spectroscopy, Stereoscopic Microscopy and Multivariate Statistical Analysis. **submitted**
- [2] Anastasiou, A.D., **Kazakis, N.A.**, Mouza, A.A., Paras, S.V., 2010 Effect of organic surfactant additives on gas holdup in the pseudo-homogeneous regime in bubble columns equipped with fine pore sparger. *Chemical Engineering Science* **65** (22), 5872-5880.
- [3] Evgenidis, S.P., **Kazakis, N.A.**, Karapantsios, T.D., 2010 Bubbly flow characteristics during decompression sickness: Effect of surfactant and electrolyte on bubble size distribution. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* **365** (1-3), 46-51.
- [4] **Kazakis, N.A.**, Mouza, A.A., Paras, S.V., 2008 Coalescence during bubble formation at two neighbouring pores: An experimental study in microscopic scale. *Chemical Engineering Science* **63** (21), 5160-5178.
- [5] **Kazakis, N.A.**, Mouza, A.A., Paras, S.V., 2008 Experimental study of bubble formation at metal porous spargers: Effect of liquid properties and sparger characteristics on the initial bubble size distribution. *Chemical Engineering Journal* **137** (2), 265-281.
- [6] **Kazakis, N.A.**, Papadopoulos, I.D., Mouza, A.A., 2007 Bubble columns with fine pore sparger operating in the pseudo-homogeneous regime: Gas hold up prediction and a criterion for the transition to the heterogeneous regime. *Chemical Engineering Science* **62** (12), 3092-3103.

- [7] Goula, A.M., Adamopoulos, K.G., **Kazakis, N.A.**, 2004 Influence of spray drying conditions on tomato powder properties. *Drying Technology* **22** (5), 1129-1151.

PUBLICATIONS IN SCIENTIFIC CONFERENCES

- [1] D. Tsiafakis, **N. Kazakis**, A. Sakalis, N. Tsirliganis, 2011 Andriotic Pottery in Argilos (in Greek). *International Scientific Meeting "Archaic Pottery at the North Aegean and its periphery (700-480 B.C.)"*, Thessaloniki, Greece, May 19-22.
- [2] P. Ilieva, D. Tsiafakis, N. Tsirliganis, A. Sakalis, **N. Kazakis**, 2011 G 2-3 Ware from Northgreek area: results of the archaeometric research 2008-2011 (in Greek). *Archaeological Work in Macedonia and Thrace, 24th Scientific Meeting*, Thessaloniki, Greece, 10-12 March.
- [3] A. Sakalis, N. Merousis, **N. Kazakis**, N. Tsirliganis, 2010 Study of Neolithic Pottery from Polyplatanos using physicochemical techniques and Multivariate Statistical Analysis. *1st Scientific Conference "Imathia, History - Archaeology - Art - Folklore"*, Veroia, Greece, September 29-October 3.
- [4] Karapantsios, T., Evgenidis, S.P., Zacharias, K., **Kazakis, N.A.**, 2010 A non-invasive electrical technique for determining bubbles characteristics in low gas concentration bubbly flows. *61st International Astronautical Congress 2010*, Prague, Czech Republic, September 27-October 1.
- [5] **Kazakis, N.A.**, Anastasiou, A., Mouza, A.A., Paras, S.V., 2008 Effect of surfactant additives on holdup in bubble columns equipped with fine pore spargers. *CHISA 2008, 18th International Congress of Chemical and Process Engineering*, Prague, Czech Republic, August 24-28.
- [6] Pantzali, M.N., **Kazakis, N.A.**, Tsolakidis, N., Mouza, A.A., 2007 Measuring transport properties of nanofluids. *6th Hellenic Scientific Conference in Chemical Engineering*, Athens, Greece, May 31-June 2.
- [7] **Kazakis, N.A.**, Mouza, A.A., Paras, S.V., 2007 Experimental study of bubble formation at porous spargers. *ICMF 2007, 6th International Conference on Multi-phase Flow*, Leipzig, Germany, July 9-13.
- [8] **Kazakis, N.A.**, Papadopoulos, J., Mouza, A.A., 2006 Prediction of gas holdup for the homogeneous regime in bubble columns equipped with porous sparger. *CHISA 2006, 17th International Congress of Chemical and Process Engineering*, Prague, Czech Republic, August 27-31.
- [9] **Kazakis, N.A.**, Mouza, A.A., Paras, S.V., 2006 Bubble size distribution at the entrance of bubble columns with pore sparger. *CHISA 2006, 17th International*

Congress of Chemical and Process Engineering, Prague, Czech Republic, August 27-31.

- [10] **Kazakis, N.A.**, Mouza, A.A., Paras, S.V., 2005 Study of coalescence and breakage in bubble columns with fine pore spargers. *43rd European Two-Phase Flow Group Meeting, Prague, Czech Republic, 11-13 May.*
- [11] Mouza, A.A., **Kazakis, N.A.**, Paras, S.V., 2004 Bubble column reactor design using a CFD code. *1st International Conference "From Scientific Computing to Computational Engineering", Athens, Greece, 8-10 September.*
- [12] Goula, A.M., Adamopoulos, K.G., **Kazakis, N.A.**, 2003 Influence of spray drying conditions on tomato powder properties. *53rd Canadian Chemical Engineering Conference in Hamilton, Ontario, Canada, October 26-29.*

REVIEWER IN INTERNATIONAL JOURNALS

- Colloids and Surfaces A: Physicochemical and Engineering Aspects.
- Industrial & Engineering Chemistry Research.

FOREIGN LANGUAGES

English **Excellent knowledge**
Certificate of Proficiency in English, University of Michigan (2005).

COMPUTING SKILLS

- Excellent knowledge and use of Windows 98 & XP operating systems, internet and Microsoft Office.
- Good use of video and image processing software.
- Very good knowledge and use of the commercial Computational Fluid Dynamics ANSYS CFX[®] 10.0 software.
- Good knowledge and use of the commercial Process Simulator ASPEN[®].

EXPERIENCE IN MEASURING INSTRUMENTS - TECHNIQUES

- Atomic Absorption Spectroscopy (AAS)
- X-Ray Fluorescence Spectroscopy (XRF)
- Photographic techniques
- Laser Doppler Anemometry (LDA)
- Optical tensiometer (KSV CAM 200)
- Stereoscope equipped with the necessary hardware and software for digital imaging, image analysis and surface analysis

RESEARCH INTERESTS

- Archaeometry.
- Physicochemical measurements.
- Analysis and design of process equipment.
- Computational Fluid Dynamics (CFD).
- Study of bubble column performance.
- Flow field study using non-intrusive methods (high speed photography, LDA).
- Effect of liquid phase physical properties on bubble coalescence.
- Effect of surfactant addition on bubble size and regime transition in bubbly flows.

SCIENTIFIC MEMBERSHIPS - OTHER ACTIVITIES

- Member of the Hellenic Association of Chemical Engineers.
- Member of the Technical Chamber of Greece.
- Mandatory military service (12/08/2008 – 12/08/2009): Fulfilled