

# CURRICULUM VITAE

## Vagelis G. Papadakis

Chemical Engineer, PhD  
Associate Professor - University of Patras – Greece

- 2014 -

### PERSONAL

*Name* : Vagelis (Evangelos)  
*Surname* : Papadakis  
*Father Name* : George  
*Mother Name* : Garyfalia  
*Date of Birth* : January 5, 1964  
*Place of Birth* : Elika, Monemvassia, Laconia, Greece  
*Nationality* : Greek  
*Marital Status* : Married, 2 children  
*Home Address* : Arch. Makariou 14, GR-26441 Patras, Greece  
*Office Address* : Department of Environmental and Natural Resources Management,  
 University of Patras, Seferi 2, GR-30100, Agrinio, GREECE  
 Tel: +30-2610 911571, mob.: +30-6932 327323  
 e-mail: [vgpapadakis@upatras.gr](mailto:vgpapadakis@upatras.gr) & [vgp@aeiplous.org](mailto:vgp@aeiplous.org)  
<http://www.env.upatras.gr/en/people/profiles/id/177>  
<http://scholar.google.gr/citations?user=JwrvSEoAAAAJ&hl=el&oi=ao>

### EDUCATION – CAREER

*1975 - 1981* : Completion of a six year high school program in the 1st High-school of Piraeus, Greece (grade: 18.6/20)  
*1981 - 1986* : Completion of a five year program of study in the Department of Chemical Engineering, University of Patras-Greece  
*July 1986* : B.S. (Diploma) in Chemical Engineering (grade: 8.26/10)  
*November 1986* : Technical Chamber of Greece (TCG) permission for practice of Chemical Engineer's profession  
*1986 - 1990* : Graduate study towards Ph.D. degree in the Department of Chemical Engineering, University of Patras and in the Institute of Chemical Engineering and High Temperature Chemical Processes (ICE/HT), Patras, Greece  
*September 1990* : PhD degree in Chemical Engineering (grade: excellent)  
*1990 - 1992* : Fulfillment of two years military service requirement in the Hellenic Navy (Hellenic Naval Academy)

- 1992 - 1996 : Post-Doctoral Fellow - Researcher of ICE/HT
- 1994 - 1996 : Teaching Staff of the Department of Chemical Engineering,  
University of Patras
- 1997 - 1999 : Researcher of Danish Technological Institute (DTI)-  
Division of Building Technology, Concrete Centre- Denmark
- 1999 - 2000 : Head of Concrete Technology Laboratory, Division of Research & Quality,  
TITAN Cement Co. S.A., Elefsis, Greece
- 2000 - 2001 : Researcher of National Technical University of Athens,  
Department of Chemical Engineering, Athens, Greece
- 2001 - 2006 : Teaching Staff of University of Patras & University of Ioannina
- 2003 - 2007 : R&D Consultant & Research Fellow, Patras Science Park S.A.
- 2007 - present : Associate Professor, Department of Environmental and Natural Resources  
Management, University of Patras, Agrinio, Greece**

### AWARDS & DISTINCTIONS

- 1982 - 1985 : Greek State Scholarship for undergraduate studies
- 1986 : Technical Chamber of Greece' Prize for distinction in  
undergraduate studies among all Greek Universities
- 1986 - 1990 : ICE/HT Fellowship for graduate studies
- 1993 : **International Prize (Wason Medal for Materials Research)**  
of American Concrete Institute (ACI) for the work:  
Papadakis, V.G., C.G. Vayenas, and M.N. Fardis,  
"Fundamental Modeling and Experimental Investigation  
of Concrete Carbonation",  
*ACI Materials Journal*, **88**(4), 363-373 (1991).  
Ref.: *Concrete International*, **15**(4), 15, April 1993.  
*TCG Bulletin*, **1768**, 77, July 12, 1993.
- 1997 - 1999 : **Marie Curie Research Training Grant**  
Quality of applicant: 38/40 (Average selected 34/40)
- 2000 - 2001 : **Marie Curie Return Grant**

### PROFESSIONAL SOCIETIES

1. Technical Chamber of Greece - Member No. 48740 (1986)
2. Greek Association of Chemical Engineers (1086)
3. Greek Concrete Department, FIP-CEB-RILEM Member (1988)
4. American Concrete Institute (ACI) - Member No. 130682 (1993)
5. Marie Curie Fellowship Association (MCFA) – Member. Nr. 1836 (1997)
6. Industrial By-Products Research and Development Association (EVIPAR)

## LANGUAGES

1. *Greek* - Mother Language
2. *English* - Very good; advanced study and practice during the Education
3. *French* - Good; private study

## PARTICIPATION IN COMMITTEES, REVIEWS, BOARDS

1. National Representative, 7<sup>th</sup> Framework Programme, European Committee, Specific programme CAPACITIES “Research for the benefit of SMEs”, 2006-2009.
2. Expert Evaluator of Research Programmes: *CIP-EIP ECO-INNOVATION of European Commission, FWO Belgium, Greek General Secretariat of Research & Technology.*
3. Regional Innovation Pole of Western Greece, Coordinator & Member of BoD (2006-2009).
4. European Committee CEMBUREAU- Project Group 1.6: “European Concrete Standard EN 206” (TITAN Cement Co. representative, 1999-2000).
5. Greek Committee ELOT- TE 51: “Cement” (TITAN Cement Co. repress., 1999-2000).
6. Technical Committees of TCG; wording of specifications; TCG expert.
7. Organization committee of the 6th CANMET/ACI International Conference on Durability of Concrete, Thessaloniki, June 2003.
8. Reviewer of scientific papers of the international journals: *ACI Materials Journal, Applied Catalysis B: Environmental, Cement and Concrete Research, Chemical Engineering Science, Construction & Building Materials, IES Journal Part A: Civil & Structural Engineering, Journal of Materials Science, Journal of Hazardous Materials, Materials & Structures, Computers & Concrete, etc.*
9. Member of the Editorial Board of the International Scientific Journal “*Advances in Concrete Construction*”.
10. Lead Guest Editor of the “*International Journal of Corrosion*” for the *Special Issue on Initiation Mechanisms, Propagation and Consequences of Concrete Reinforcement Corrosion.*

## PROFESSIONAL-RESEARCH-TEACHING EXPERIENCE

- Summer 1984* : Practical exercise, Hellenic Refineries of Aspropyrgos
- 1984 - 1986* : Diploma Thesis work in the subject: "Theoretical and Experimental Investigation of Macroscopical Behavior of Deep Bed Filters".  
Construction of a pilot unit for experimental investigation of deep bed filtration process, applied at the water cleaning and waste water treatment. Mathematical simulation of the process and computer solution.  
Supervisor: Prof. A.C. Payatakes  
Dept. of Chemical Engineering, University of Patras
- 1986 - 1990* : Ph.D. Thesis work in the subject: "Investigation of Physicochemical Processes of Hardened Cement Paste Carbonation and of the Effects on the Reinforced Concrete Durability".

Design and construction of experimental apparatuses for investigation of concrete carbonation and gas effective diffusivity measurement.  
 Characterization of porous media. Experience in analytical laboratory apparatuses and methods. Mathematical models development of physicochemical processes of concrete carbonation and solution by computer.  
 Recommendations for engineers.

Supervisors: Professors:

C.G. Vayenas, Dept. of Chemical Engineering, Univ. of Patras

M.N. Fardis, Dept. of Civil Engineering, Univ. of Patras

- 1986 - present : Supervision of Diplomatic works of students (about 50) of Chemical Engineering Dept., Univ. of Patras
- 1986 - 1990 : Teaching Assistant for the following courses in the Dept. of Chemical Engineering, Univ. of Patras:
1. "Introduction to Chemical Engineering"
  2. "Energy Subjects"
  3. "Chemical Engineering Practical Exercises"
- 1992 - 1996 : Post-doctoral research work in the subject: "Development of Improved Automotive Catalytic Converters".  
 Design and construction of an experimental apparatus for measurements of catalytic activity and durability of catalytic systems for car exhaust emissions conversion. Experience in a laboratory of catalysis, chemical processes and environmental engineering. Construction and testing of automotive catalytic converter. Study for industrial production.  
 Supervisors: Professors:  
 C.G. Vayenas, Dept. of Chemical Engineering, Univ. of Patras  
 X.E. Verykios, Dept. of Chemical Engineering, Univ. of Patras
- 1994 - 1996 : Autonomous Teaching of the course: "Chemical Industries" of the Dept. of Chemical Engineering, Univ. of Patras.
- 1995 - 1997 : Autonomous Teaching of the course: "Plant Design & Economics for Chemical Engineers" of the Dept. of Chemical Engineering, Univ. of Patras.
- 1997 - 1999 : Research & Training in DTI - Division of Building Technology - Concrete Centre (DK) in the following subjects:
- a. Development of high durability and performance concrete by using pozzolans and optimum material synthesis.
  - b. Prediction of the concrete properties from the knowledge (quality and quantity) of its composition materials.
  - c. Material assessment during construction of the fixed link across Øresund, connecting Denmark-Sweden, and solution of problems related to the bridge durability.
- Cooperation with Technical University of Denmark (DTU), Geological Survey of Denmark (GEUS) large constructive firms (Rambøll, Cowi).

- 1999 - 2000 : Head of Concrete Technology Laboratory, Division of Research & Quality, TITAN Cement Co. S.A., Elefsis, Greece  
Consultancy of Group TITAN clients. Development of quality assurance system according to EN 45001. Industrial research programs towards new application for cement and concrete quality improvement.
- 2000 - 2001 : Researcher of National Technical University of Athens, Department of Chemical Engineering, Athens, Greece  
Use of Greek supplementary cementing materials for sustainable building-sector growth.
- 2001 - 2006 : Teaching the course: "Conceptual Design of Chemical Processes", Department of Chemical Engineering, University of Patras.  
"Construction Materials", Department of Materials Science, Un. of Patras.  
"Environmental Economics", Department of Environment and Natural Resources, University of Ioannina
- 2003 - 2007 : R&D Consultant, Patras Science Park S.A.  
Consultancy for cement and concrete industry and constructive firms.  
Applications in recycling and exploitation of industrial wastes.  
Concrete technology, design and durability. Development, promotion and exploitation of Innovation.
- 2007 - present : Associate Professor of Physical and Chemical Environmental Processes, Department of Environmental and Natural Resources Management, University of Patras, Agrinio:
- Teaching the undergraduate courses: "Construction Materials", "Unit Operations", "Plant Design and Economics", "Environmental Economics" and "Environmental Impact Issues".
  - Teaching the post-graduate courses: "Environmental Impact Issues – Specific Environmental Studies – Planning & Implementation in Protected Areas".
  - Supervisor of one (1) Post-doctoral Work.
  - Supervisor of five (6) PhD Theses (two under completion by the end of 2013). Member of the supervising committee for more six (6) PhD Theses.
  - Supervisor of ten (10) MSc Theses (nine already completed).
  - Supervisor of thirty five (35) Diploma Works.
  - Member in various Committees of the Department: Professional rights for graduates, Organization of Post-graduate syllabus, Department's rename to Environmental Engineering, Events & Communication, etc., and of the University: Supply of IT equipment, etc.

## SCIENTIFIC AREAS OF INTEREST

1. *Cement, Concrete and Building Materials Technology*: Chemistry of cement and additives, concrete technology, concrete durability, environmental effect on buildings and constructions, protection and restoration of building materials and constructions, cement production industries and concrete production plants consultancy. Extended use of industrial by-products (fly ash, slags, biomass ashes, etc.) for a sustainable development of the building sector. Environmental cost and life cycle analysis. Software development and applications.
2. *Physicochemical Processes & Environment*: Mathematical modeling and experimental investigation of physical and chemical processes: Porous media characterization, drying, diffusion, reaction engineering, design and analysis of chemical reactors. Heterogeneous catalysis and environmental management: Catalyst preparation, catalytic reaction kinetics, car catalytic converters, catalyst rejuvenation and recycling, management of gas emissions, environmental control and quality. Recycling & exploitation of by-products. Industrial ecology. Techno-economical analysis. Computer simulation.
3. *Development & Management of Innovation*: Development, promotion and exploitation of Innovation. Innovation and regional development. Creativeness and Innovation. Research on benefit of SMEs. Technology transfer. Enterprise incubators. Social enterprises and urban development. Industrial history and cultural - urban development. Techno-economical analysis and business plan. Creation and growth of clusters. Technology foresight.

## RESEARCH PROGRAMS

- |  |   |
|--|---|
| <p><i>Hellenic Secret. of Res. &amp; Tech. PROPE progr.</i><br/>Start: 1/1987<br/>End: 6/1990</p>  | <p>: "Investigation of Physicochemical Processes of Hardened Cement Paste Carbonation and of the Effects on the Reinforced Concrete Durability"<br/>Organization: University of Patras / Research Committee<br/>Project leaders: Prof. M.N. Fardis, Prof. C.G. Vayenas<br/>Position: Researcher</p>                         |
| <p><i>Hell. Ministry of Public Works GSPW/D1 progr.</i><br/>Start: 3/1991<br/>End: 8/1992</p>      | <p>: "Investigation of Physicochemical Parameters of Seawater and its Biological Pollution Potential on Underwater Construction in the Area of Rion-Antirion for the Bridge Project"<br/>Organization: Civil Engineering Dept., University of Patras<br/>Project leader: Prof. I. Antonopoulos<br/>Position: Researcher</p> |
| <p><i>Commission of Europ. Commun. STRIDE progr.</i><br/>Start: 1/1992<br/>End: 12/1993</p>        | <p>: "Development of Automotive Exhaust Catalytic Converters"<br/>Organizations: ICE/HT, CERECO S.A., University of Patras, Patras Scientific Park S.A.<br/>Project leader: Prof. X.E. Verykios<br/>Position: Researcher and <u>Project Manager</u></p>   |
| <p><i>Hellenic Secret. of Res. &amp; Tech. PENED progr.</i><br/>Start: 1/1994<br/>End: 12/1995</p> | <p>: "Durability of Reinforced Concrete: Environmental Effects and Protection"<br/>Organisation: University of Patras / Research Committee<br/>Project leader: Prof. C.G. Vayenas<br/>Position: Researcher and <u>Project Manager</u></p>   |

- Hellenic Secret. of Res. & Tech. EPET-II progr.* : "Optimization, Quality Control and Production of Automotive Exhaust Catalytic Converters"  
 Start: 1/1995  
 End: 12/1997  
 Organizations: ICE/HT, AUT, Citroen- Hellas, CERECO, ELVO, Patras Scientific Park, Ideal Standard  
 Project leader: Prof. X.E. Verykios  
 Position: Researcher and Project Manager
- EC DG XI LIFE progr.* : "Collection and Recycling of Spent Autocatalysts"  
 Start: 12/1994  
 End: 11/1997  
 Organizations: TECHNODYNAMICS, INDELEC EUROPE, University of Patras, Automobile Import. Assoc.  
 Project leader: Dr. V.G. Papadakis  
 Position: Project Leader & Manager
- EC DG XII TMR progr.* : "Development of High Durability and Performance Concrete by using Pozzolans and Optimum Material Synthesis"  
 Start: 2/1997  
 End: 1/1999  
 Organization: Danish Technological Institute  
 Project leader: C. Munch-Petersen  
 Position: Researcher and Project Manager
- EC DG XII IHP-MCIF* : "Use of Supplementary Cementing Materials for Sustainable Building-Sector Growth"  
 Start: 5/2000  
 End: 5/2001  
 Organization: National Technical University of Athens  
 Project leader: Prof. S. Tsimas  
 Position: Researcher and Project Manager
- GROWTH 2001 EC DG XII* : "European Standard Tests to Prevent Alkali Reactions in Aggregates"  
 Organizations: 25 Industries and Research Institutes across Europe  
 Project Leader: P. Nixon (British Research Establishment)  
 Start: 3/2002 End: 3/2006  
 Position: Researcher (TITAN Cement Co.)
- PRAXE 2001 GSRT 1<sup>st</sup> Phase* : "Production and Exploitation of Structural Fly Ash"  
 Organization: National Technical University of Athens  
 Project leader: Prof. S. Tsimas  
 Start: 6/2002 End: 11/2003  
 Position: Researcher and Project Manager
- CRAFT 2002 EC DG XII Coop. Resear.* : "A Cost-Effective System Development for Complete Exploitation of Olive-mill Wastewater"  
 Organ.: ICEHT, Shielco, Hydro Air Research (I), Papaeconomou SA  
 Scientific officer: Dr. C.A. Paraskeva  
 Start: 1/2003 End: 12/2004  
 Position: Researcher and Project Manager
- PRAXE 2003 GSRT 1<sup>st</sup> Phase* : "Software Development for Concrete Design and Prediction of Strength and Durability"  
 Organization: Patras Science Park S.A.  
 Scientific officer: Dr. V.G. Papadakis  
 Start: 9/2003 End: 2/2005  
 Position: Researcher and Project Manager
- KETA 2006 YPAN* : "Follow-up of the Competitiveness - Sector and individual Benchmarking of innovative enterprises and enterprises of foods and drinks in the RWG"  
 Partners: PSP, KETA  
 Scientific officer: Dr. V.G. Papadakis  
 Start: 5/2005 End: 12/2006  
 Position: Project Manager
- EKT 2006 IRC* : "Implement actions of the Hellenic Relay Centre for the Research and Innovations via the Patras Science Park"  
 Organization: PSP



- Hellenic* Scientific officer: Dr. V.G. Papadakis  
Start: 3/2006 End: 3/2007  
Position: Researcher and Project Manager
- International Cooperation 2006 GSRT* «Investigation for development of high-added value materials form rice husk ash (PYRICE)»  
Partners: AGRINO SA, NTUA, Univ. of Porto, Univ. of Dundee  
Scientific officer: Athanasia Kyritsi  
Start: 7/2006 End: 12/2007  
Position: Project Manager
- ARCHIMED 2006 Interreg III B EU* «Human Resources and Development Planning on both sides of Ionian Sea - Partners: PSP SA, RWG, Region Ionian Islands, Agricultural Univ. Athens, University of Lecce, Town of Tricase, Munic. of Sanarica, S&T Park of Sicily  
Scientific officer: Prof. P. Groumpos  
Start: 6/2006 End: 12/2007  
Position: Coordinator of Operational Committee for SMEs
- Regional Innovation Pole Western Greece 2006 GSRT* «Regional Innovation Pole of Western Greece»  
47 Partners (SMEs, Universities, Research Centres, etc.)  
Coordinating Organization: PSP SA  
Scientific officer: Prof. P. Groumpos  
Start: 11/2006 End: 11/2008  
Position: Project Manager
- “Urban Nose – Network of Social Enterprises”, URBACT II ERDF EU, Coordinator: Municipality of Gela, 12 partners- EU Municipalities, Duration: 6/2008 – 6/2011, Position: Coordinator of Municipality of Agrinio.
- “Techno-Economical Design and Pilot Production of Advanced and High-Added Value Materials from Rice Husk Ash”, CIP-EIP-Eco-Innovation-2008 EU, Coordinator: AGRINO EVGE Pistiolas SA, Duration: 7/2009 - 7/2012, Position: Manager & Scientific Responsible.
- “Sustainable Innovation and Treatment in Industrial Waste Water Clusters (STinno)”, FP7-Regions-2009-1 EU, Partners: Lahti Science and Business Park, Päijät-Häme, (Finland) (Coordinator), Regional Council of Päijät-Häme (FI), Lahti University Consortium/ Lappeenranta University of Technology, Lahti University Consortium/ Helsinki University of Technology, Regional Council of Kalmar (Sweden), University of Kalmar or Linköping (Sweden), Sustainable Sweden South East (Sweden), Patras Science Park (Greece), Regional Council of Western Greece, Foundation of Research and Technology of Hellas / ICE-HT, Italy: International Association of Mediterranean Agro-Industrial Waste, United Kingdom: N8 Water Group/Envirolink, Duration: 11/2009 - 11/2012, Position: Coordinator of the Greek side.
- “Increasing the Regional Competitiveness and Economic Growth through the R&TD&I on Sustainable Water Management (SWAM)”, FP7-Regions-2009-1 EU, Partners: Directorate-General for Universities and Science Policy- Region of Murcia, Spain (Coordinator), University of Murcia (Spain), Technological Centre for Energy and Environment (Spain), Machinery Manufacturers Association - Region of Murcia (Spain), Eastern-Galilee Municipalities Association (Israel), Galilee Technology Centre (Israel), Galilee Metal Companies Association (Israel), Patras Science Park (Greece), Regional Council of Western Greece, FORTH / ICE-HT (Greece), ENBIO Ltd (Greece), Duration: 3/2010 - 6/2012, Position: Coordinator of the Greek side.
- “Architecture of Totalitarian Regimes of the XX° Century in Urban Management (ATRIUM)”, South-East Europe SEE Transnational Cooperation Programme EU, Φορείς: Municipality of Forlì/Italy (Coordinator), Province of Forlì-Cesena/Italy, University of Ljubljana, Faculty of Architecture, Ljubljana/Slovenia, Municipality of Velenje/Slovenia, The National Institute of Immoveable Cultural Heritage, Sofia/Bulgaria, Municipality of Dimitrovgrad/Bulgaria, Szechenyi Istvan University, Gyor/Hungary, Local Government of Gyor with County Rank/Hungary, Institute of Construction and Architecture of the Slovak Academy of Sciences, Bratislava/Slovakia, Metropolitanate of Moldavia and



Bukovina – Archdiocese of Iasi/Romania, Institute for Innovation & Sustainable Development AEIPLUS, Patras/Greece, Cultural & Educational Technology Institute ATHENA - Research & Innovation Centre in Information, Communication and Knowledge Technologies, Xhanti/Greece, Town of Labin/Croatia, Fund of microregional tourism cluster Subotica-Palic/Serbia, Municipality of Tirana/Albania, Rotor – organization for development of tourism of region Dobojs/Bosnia-Herzegovina, Ministry of Culture, Sofia/Bulgaria, Municipality of Rasa/Croatia. Duration: 1/2011 - 9/2013, Position: Coordinator of the Greek side.

“Development and Implementation of Decentralised Solar-Energy-Related Innovative Technologies for Public Buildings, in the Mediterranean Basin Countries (DIDSOLIT-PB)”, ENPI CBCMED, EU Programme, Partners: Autonomous University of Barcelona, Spain (Coordinator), Institute for Innovation & Sustainable Development- AEIPLUS (Greece), Egyptian Association for Energy and Environment (Egypt), Al-Balqa' Applied University (Jordan), Alexandria University (Egypt), Mediterranean Agronomic Institute of Chania (Greece), Eco-System Europa SL (Spain). Duration: 12/2013 - 12/2015, Position: Coordinator of the Greek side.

## RESEARCH PUBLICATIONS AND PRESENTATIONS

### A. Publications in International Journals

1. Papadakis, V.G., C.G. Vayenas, and M.N. Fardis, "A reaction engineering approach to the problem of concrete carbonation", *American Institute of Chemical Engineers Journal (AIChE J.)*, **35**(10), 1639-1650 (1989).
2. Papadakis, V.G., C.G. Vayenas, and M.N. Fardis, "Physical and chemical characteristics affecting the durability of concrete", *American Concrete Institute Materials Journal (ACI Mat. J.)*, **88**(2), 186-196 (1991).
3. Papadakis, V.G., C.G. Vayenas, and M.N. Fardis, "Experimental investigation and mathematical modeling of the concrete carbonation problem", *Chemical Engineering Science (Chem. Eng. Sci.)*, **46**(5/6), 1333-1338 (1991).
4. Papadakis, V.G., C.G. Vayenas, and M.N. Fardis, "Fundamental modeling and experimental investigation of concrete carbonation", *ACI Mat. J.*, **88**(4), 363-373 (1991).
5. Papadakis, V.G., M.N. Fardis, and C.G. Vayenas, "Hydration and carbonation of pozzolanic cements", *ACI Mat. J.*, **89**(2), 119-130 (1992).  
➤ See also: Discussion: *ACI Mat. J.*, **90**(1), 102-103 (1993).
6. Papadakis, V.G., M.N. Fardis, and C.G. Vayenas, "Effect of composition, environmental factors and cement-lime mortar coating on concrete carbonation", *Materials and Structures*, **25**, 293-304 (1992).
7. Angelidis, T.N., V.G. Papadakis, and E. Pavlidou, "Causes of deactivation and regeneration of an industrial Pt-NiO/Al<sub>2</sub>O<sub>3</sub> nitrogen oxides reduction catalyst", *Applied Catalysis B: Environmental*, **4**(4), 301-313 (1994).
8. Yentekakis, I.V., C.A. Pliangos, V.G. Papadakis, X.E. Verykios, and C.G. Vayenas, "Support and NEMCA induced promotional effects on the activity of automotive exhaust catalysts", *Studies in Surface Science and Catalysis*, **96**, 375-385, (1995).
9. Papadakis, V.G., M.N. Fardis, and C.G. Vayenas, "Physicochemical processes and mathematical modeling of concrete chlorination", *Chem. Eng. Sci.*, **51**(4), 505-513 (1996).
10. Papadakis, V.G., C.A. Pliangos, I.V. Yentekakis, X.E. Verykios, and C.G. Vayenas, "Development of high performance, Pd-based, three-way catalysts", *Catalysis Today*, **29**(1-4), 71-75 (1996).
11. Angelidis, T.N. and V.G. Papadakis, "Partial regeneration of an aged commercial automotive catalyst", *Applied Catalysis B: Environmental*, **12**(2/3), 193-206 (1997).
12. Pliangos, C.A., I.V. Yentekakis, V.G. Papadakis, C.G. Vayenas and X.E. Verykios, "Support-induced promotional effects on the activity of automotive exhaust catalysts: I. The case of oxidation of light hydrocarbons (C<sub>2</sub>H<sub>4</sub>)", *Applied Catalysis B: Environmental*, **14**(3/4), 161-173 (1997).
13. Angelidis, T.N., M.M. Koutlemani, S.A. Sklavounos, Ch.B. Lioutas, A. Voulgaropoulos, V.G. Papadakis, and H. Emons, "Causes of deactivation and an effort to regenerate a commercial spent three-way catalyst", *Studies in Surface Science and Catalysis*, **116**, 155-164 (1998).
14. Papadakis, V.G., "Experimental investigation and theoretical modeling of silica fume activity in concrete", *Cement and Concrete Research*, **29**(1), 79-86 (1999).
15. Papadakis, V.G., E.J. Pedersen, and H. Lindgreen, "An AFM-SEM investigation of the effect of silica fume and fly ash on cement paste microstructure", *Journal of Materials Science*, **34**(4), 683-690 (1999).
16. Papadakis, V.G., "Effect of fly ash on Portland cement systems. Part I: Low-calcium fly ash", *Cement and Concrete Research*, **29**(11), 1727-1736 (1999).
17. Papadakis, V.G., "Effect of supplementary cementing materials on concrete resistance against carbonation and chloride ingress", *Cement and Concrete Research*, **30**(2), 291-299 (2000).

18. Papadakis, V.G., "Effect of fly ash on Portland cement systems. Part II: High-calcium fly ash", *Cement and Concrete Research*, **30**(10), 1647-1654 (2000).
19. Mira, P., V.G. Papadakis, and S. Tsimas, "Effect of lime putty addition on structural and durability properties of concrete", *Cement and Concrete Research*, **32**(5), 683-9 (2002).
20. Papadakis, V.G. and S. Tsimas, "Supplementary cementing materials in concrete - Part I: Efficiency and design", *Cement and Concrete Research*, **32**(10), 1525-1532 (2002).
21. Papadakis, V.G., S. Antiohos, and S. Tsimas, "Supplementary cementing materials in concrete - Part II: A fundamental estimation of the efficiency factor", *Cement and Concrete Research*, **32**(10), 1533-8 (2002).
22. Papadakis, V.G. and S. Tsimas, "Supplementary cementing materials in construction for economic and environmental benefits", *International Association of Concrete Technology Journal*, **1** (1), 51-59 (2003).
23. Badogiannis, E., V.G. Papadakis, E. Chaniotakis, and S. Tsvilis, "Exploitation of poor Greek kaolins: Strength development of metakaolin concrete and evaluation by means of k-value", *Cement and Concrete Research*, **34**(6), 1035-1041 (2004).
24. Papadakis, V.G. and S. Tsimas, "Greek supplementary cementing materials and their incorporation in concrete", *Cement and Concrete Composites*, **27**(2), 223-230 (2005).
25. Paraskeva, C.A., V.G. Papadakis, D.G. Kanellopoulou, P.G. Koutsoukos, and K.C. Angelopoulos, "Membrane filtration of olive mill wastewater and exploitation of its fractions", *Water Environment Research*, **79**, 421-429 (2007).
26. Paraskeva, C.A., V.G. Papadakis, E. Tsarouchi, D.G. Kanellopoulou, and P.G. Koutsoukos, "Membrane processing for olive mill wastewater fractionation", *Desalination*, **213**, 218-229 (2007).
27. Papadakis, V.G., M.P. Efstathiou, and C.A. Apostolopoulos, "Computer-aided approach of parameters influencing concrete service life and field validation", *Computers & Concrete*, **4**(1), 1-18 (2007).
28. Antiohos, S.K., V.G. Papadakis, E. Chaniotakis, and S. Tsimas, "Improving the performance of ternary blended cements by mixing different types of fly ashes", *Cement and Concrete Research*, **37**(6), 877-885 (2007).
29. Apostolopoulos, C.A. and V.G. Papadakis, "Mechanical behavior of reinforcement stirrups BSt 500<sub>s</sub> at corrosive environment", *Journal of Materials Engineering and Performance (JMEP)*, **16**(2), 236-241 (2007).
30. Antiohos, S.K., A. Papageorgiou, V.G. Papadakis, and S. Tsimas, "Influence of quicklime addition on the mechanical properties and hydration degree of blended cements containing different fly ashes", *Construction and Building Materials*, **22**(6), 1191-1200 (2008).
31. Apostolopoulos, C.A. and V.G. Papadakis, "Consequences of steel corrosion on the ductility properties of reinforcement bar", *Construction and Building Materials*, **22**(12), 2316-2324 (2008).
32. Antonopoulos, C.N., V.G. Papadakis, C.D. Stylios, M.P. Efstathiou, and P.P. Groumos, "Mainstreaming innovation policy in less favoured regions: the case of Patras Science Park, Greece", *Science and Public Policy*, **36**(7), 511-521 (2009).
33. Antonopoulos, C.N. and V.G. Papadakis, "Learning from past investment incidents in peripheral regions: Semiconductors in Patras, Greece", *International Journal of Innovation and Regional Development*, **3**(3/4), 417-440 (2011).
34. Arvaniti, E.C., D.P. Zagklis, V.G. Papadakis, and C.A. Paraskeva, "High-added value materials production from OMW – A technical and economical optimization", *International Journal of Chemical Engineering*, vol. 2012, Article ID 607219, 7 pages, doi:10.1155/2012/607219, (2012).
35. Demis, S. and V.G. Papadakis, "A software-assisted comparative assessment of the effect of cement type on concrete carbonation and chloride ingress", *Computers & Concrete*, **10**(4), 373-389 (2012).
36. Apostolopoulos, C.A., S. Demis, and V.G. Papadakis, "Chloride-induced corrosion of steel reinforcement – Mechanical performance and pit depth analysis", *Construction and Building Materials*, **38**, 139-146 (2013).

37. Zagklis, D.P., E.C. Arvaniti, V.G. Papadakis, and C.A. Paraskeva, "Sustainability analysis and benchmarking of olive mill wastewater treatment methods", *Journal of Chemical Technology & Biotechnology*, **88**, 742-750 (2013).
38. Papadakis, V.G. and S. Demis, "Predictive modeling of concrete compressive strength based on cement strength class", *Computers & Concrete*, **11**(6), 587-602 (2013).
39. Antiohos, S.K., J.G. Tapali, M. Zervaki, J. Sousa-Coutinho, S. Tsimas, and V.G. Papadakis, "Low-embodied energy cement containing untreated RHA: A strength development and durability study", *Construction and Building Materials*, **49**, 455-463 (2013).
40. Papadakis, V.G., "Service life prediction of a reinforced concrete bridge exposed to chloride induced deterioration", *Advances in Concrete Construction*, **1**(3), 201-213 (2013).
41. Tapali, J.G., S. Demis, and V.G. Papadakis, "Sustainable concrete mix design for a target strength and service life", *Computers & Concrete*, **12**(6), 755-774 (2013).
42. Bhatnagar, A., F. Kaczala, W. Hogland, M. Marques, C.A. Paraskeva, V.G. Papadakis, M. Sillanpää, "Valorization of solid waste products from olive oil industry as potential adsorbents for water pollution control - A review", *Environmental Science and Pollution Research*, **21**(1), 268-298 (2014).
43. Demis, S., M.P. Efstathiou, and V.G. Papadakis, "Computer-aided modelling of concrete service life", *Cement and Concrete Composites*, **47**, 9-18 (2014).
44. Charisiou, N.D., P.P. Konstantakou, and V.G. Papadakis, "Exploitation of olive tree prunings as raw material for the production of high quality compost", *Environmental Engineering and Management Journal*, accepted (2013).
45. Antiohos, S.K., V.G. Papadakis, and S. Tsimas, "Rice husk ash effectiveness in cement and concrete as a function of reactive silica and fineness", *Cement and Concrete Research*, submitted (2012).
46. Badogiannis, E., E. Aggeli, V.G. Papadakis, and S. Tsvilis, "Evaluation of chloride-penetration resistance of metakaolin concrete by means of a diffusion – binding model and of the k-value concept", *Cement and Concrete Composites*, submitted (2012).
47. Demis, S., J.G. Tapali, and V.G. Papadakis, "An Investigation of the Effectiveness of the Utilization of Biomass Ashes as Pozzolanic Materials", *Construction and Building Materials*, submitted (2013).
48. Tapali, J.G., and V.G. Papadakis, "Plant design & economics for rice husk ash exploitation as pozzolanic material", *Waste Management*, submitted (2013).
49. Charisiou, N.D., M.A. Goula, and V.G. Papadakis, "Composting process of olive tree prunings and assessment of nitrogen and carbon losses", *Journal of Chemical Technology & Biotechnology*, submitted (2013).
50. Charisiou, N.D., M.A. Goula, and V.G. Papadakis, "Sustainability assessment of agricultural waste biomass exploitation", *Waste Management*, submitted (2013).
51. Tapali, J.G., and V.G. Papadakis, "Environmental cost of concrete structures: Estimation and reduction practices", *Building and Environment*, submitted (2013).

## B. Patents

1. Vayenas, C.G., X.E. Verykios, I.V. Yentekakis, V.G. Papadakis, and C.A. Pliangos, "New Three-Way Catalysts with Pt, Rh and Pd, each Supported on a Separate Support", *European Patent No 94600002.3/28.01.94*.
2. Papadakis, V.G. and M.P. Efstathiou, "A procedure for a simultaneous reliable prediction of the mechanical strength, the durability against environmental actions, and the service lifetime of structures from concrete, with technical and financial optimization capability", *OBI No 20050200111/04.02.2005*.

### C. Books – Chapter in books – Software

1. Papadakis, V.G., *Supplementary Cementing Materials in Concrete- Activity, Durability, and Planning*, Danish Technological Institute, Taastrup, 1999.
2. Papadakis, V.G., *Estimation of Concrete Service Life – The Theoretical Background*, Patras Science Park S.A., Patras, 2005.
3. Papadakis, V.G. and M.P. Efstathiou, *EUCON: A Software Package for Estimation of Concrete Service Life*, Patras Science Park S.A., Patras, 2005.
4. Papadakis, V.G., "Estimation of Service Lifetime of Concrete Construction", in *Concrete Guide 2004-2005*, SELKA – 4M – Tekdotiki Publishing, Athens, 2005.
5. Papadakis, V.G., "Design of Processes & Plants", University of Ioannina Press, Ioannina, 2006.
6. Kyriazis, K.C., and V.G. Papadakis, "Techno-economical Study", Tziolas Publishing, Thessaloniki, 2009.

### D. Presentations in International Conferences with Reviewers

1. Papadakis, V.G., M.N. Fardis, and C.G. Vayenas, "Fundamental Concrete Carbonation Model and Application to Durability of Reinforced Concrete", 5th Inter. Conf. on Durability of Building Materials and Components, Brighton, U. K., November 1990; Edited by J.M. Baker, P.J. Nixon, A.J. Majumdar, and H. Davies, pp. 27-38, E. & F.N. SPON, London 1991.
2. Papadakis, V.G., M.N. Fardis, and C.G. Vayenas, "Physical and Chemical Properties Affecting the Durability of OPC and Pozzolanic Cement Concrete", Symposium on Materials Science and Mathematical Modeling in Concrete, ACI Convention, Boston 1991.
3. Yentekakis, I.V., C.A. Pliangos, V.G. Papadakis, X.E. Verykios, and C.G. Vayenas, "Support and NEMCA Induced Promotional Effects on the Activity of Automotive Exhaust Catalysts", 3rd Inter. Congress on Catalysis and Automotive Pollution Control (CAPoC3), Brussels, April 1994.
4. Papadakis, V.G., C.A. Pliangos, I.V. Yentekakis, X.E. Verykios, and C.G. Vayenas, "Development of High Performance, Pd-mainly, Three-Way Catalysts", 2nd JAPAN-EC Joint Workshop on the Frontiers of Catalytic Science and Technology, JECAT'95, Lyon-Villeurbanne, 26-28 April 1995.
5. Angelidis, T.N., V.G. Papadakis, and K.A. Kydros, "Causes of Deactivation and an Effort to Regenerate a Spent Automotive Catalytic Converter", 2nd European Congress on Catalysis, EUROPACAT-II, Maastricht, 3-8 September 1995.
6. Papadakis, V.G., M.N. Fardis, and C.G. Vayenas, "Effect of Fly Ash and Natural Pozzolans on the Pore Structure Characteristics and on Durability of Concrete", 2nd Inter. Conf. for Chemicals and Additives used in Constructions, ConChem '95, Les Pyramides, Brussels, 28-30 November 1995. Edited by Verlag für Chemische Industrie, H. Ziolkowsky GmbH, pp. 273-282, Augsburg-D, 1995.
7. Papadakis, V.G., A.P. Roumeliotis, M.N. Fardis, and C.G. Vayenas, "Mathematical Modeling of Chloride Effect on Concrete Durability and Protection Measures", International Congress: Concrete in the Service of Mankind, Dundee, Scotland, 24-28 June 1996. In *Concrete Repair, Rehabilitation and Protection*, Edited by R.K. Dhir and M.R. Jones, pp. 165-174, E. & F.N. SPON, London 1996.
8. Papadakis, V.G., C.A. Pliangos, I.V. Yentekakis, X.E. Verykios, and C.G. Vayenas, "Improvement of Automotive Exhaust Catalysts by Support and Electrochemical Modification Induced Promotional Effects", 2nd World Congress of Nonlinear Analysts, Athens, July 1996.
9. Alexandrou, F.A., V.G. Papadakis, X.E. Verykios, and C.G. Vayenas, "The Promotional Effect of Na for the NO Reduction by CO on Supported Pt, Pd, and Rh Catalyst", 4th Inter. Congress on Catalysis and Automotive Pollution Control (CAPoC4), Brussels, April 1997.
10. Angelidis, T.N., M.M. Koutlemani, S.A. Sklavounos, Ch.B. Lioutas, A. Voulgaropoulos, V.G. Papadakis, and H. Emons, "Causes of Deactivation and an Effort to Regenerate a Commercial



- Spent Three-Way Catalyst", 4th Inter. Congress on Catalysis and Automotive Pollution Control (CAPoC4), Brussels, April 1997.
11. Verykios, X.E., C.G. Vayenas, V.G. Papadakis, F. Alexandrou, C. Stournaras, A. Tsetsekou, A. Economacou, and C. Agrafiotis, "Greek Development and Production of a Novel, Integrated, Low-Cost Automotive Catalytic Converter", 1st European Conference on Clean Cars, Athens, April 1997.
  12. Alexandrou, F.A., V.G. Papadakis, C.G. Vayenas, and X.E. Verykios, "The Promotional Effect of Na on Supported Pt, Pd, and Rh Three-Way Catalysts", 3<sup>rd</sup> European Congress on Catalysis, EUROPACAT-III, Krakow, September 1997.
  13. Papadakis, V.G. and E.J. Pedersen, "Effects of High-Calcium Fly Ash, Low-Calcium Fly Ash and Silica Fume on Mortar Properties", 6th CANMET/ACI Intern. Conf. on Fly Ash, Silica Fume, Slag and Natural Pozzolans in Concrete, Bangkok, 31 May – 5 June 1998.
  14. Papadakis, V.G., "Fundamental Estimation of Concrete Service Life Regarding Carbonation- or Chloride-Induced Depassivation of Reinforcing Bars", 6th Intern. Expert-Centrum Conference on Life Prediction and Aging Management of Concrete Structures, Bratislava, Slovakia, July 1999.
  15. Papadakis, V.G., "Development of High-Durability Concrete by Using Portland Cement-Based Binders", International Congress: Creating with Concrete, Dundee, Scotland, September 1999. In *Concrete Durability and Repair Technology*, Edited by R.K. Dhir and M.J. McCarthy, pp. 103-113, Thomas Telford Publ., London 1999.
  16. Papadakis, V.G., "Efficiency Factors (k-values) of Supplementary Cementing Materials Regarding Carbonation and Chloride Penetration", 5th CANMET/ACI Intern. Conf. on Durability of Concrete, Barcelona, June 2000.
  17. Tsimas, S., V.G. Papadakis, and S. Antiochos, "Study and Upgrade of Supplementary Materials for Cement and Concrete", International Symposium: Cement and Concrete Technology in the 2000s, Istanbul, 6-10 September 2000.
  19. Kasselouri- Rigopoulou V., N. Kouloumbi, V.G. Papadakis, and S. Sioutis, "Permeability Study of Various Aggressive Media in Repaired Concretes", International Symposium: Cement and Concrete Technology in the 2000s, Istanbul, 6-10 September 2000.
  20. Badogiannis, E., S. Tsvivilis, V. Papadakis, and E. Chaniotakis, "The Effect of Metakaolin on Concrete Properties", International Congress: Challenges of Concrete Construction, Dundee, Scotland, September 2002. In *Innovations and Developments in Concrete Materials and Construction*, Edited by R.K. Dhir, P.C. Hewlett, and L.J. Cetenyi, pp. 81-89, Dundee, 2002.
  21. Papadakis, V.G. and S. Tsimas, "Extended Use of Supplementary Cementing Materials in Construction for Economic and Environmental Benefits", 6<sup>th</sup> International Conference on Concrete Technology for Developing Countries, Amman, Jordan, 21-24 October 2002.
  22. Antiochos, S., V.G. Papadakis, K. Maganari, and S. Tsimas, "The Development of a Blended Supplementary Cementing Material Containing High and Low Calcium Fly Ashes", 11th International Congress on the Chemistry of Cement, Cape Town, South Africa, June 2003.
  23. Tsvivilis, S., E. Badogiannis, G. Kakali, E. Chaniotakis, and V.G. Papadakis, "Investigation on the Production and Use of Metakaolin, Originated from Poor Greek Kaolins, as Cement Extender", 11th International Congress on the Chemistry of Cement, Cape Town, South Africa, June 2003.
  24. Papadakis, V.G. and M.P. Efstathiou, "Computer Modelling of Concrete Service Life", 6<sup>th</sup> International Congress: Global Construction – Ultimate Concrete Opportunities, Dundee, Scotland, 5-7 July 2005. In *Cement Combinations for Durable Concrete*, Edited by R.K. Dhir, T.A. Harrison, and M.D. Newlands, pp. 777-786, Thomas Telford Publ., London 2005.
  25. Papadakis, V.G. and M.P. Efstathiou, "Computer-Based Estimation of Concrete Service Life", 7<sup>th</sup> CANMET/ACI Intern. Conf. on Durability of Concrete, Montreal, Canada, May 28-June 3, 2006.
  26. Papadakis, V.G. and M.P. Efstathiou, "Field Validation of a Computer-Based Prediction for Concrete Service Life", 2<sup>nd</sup> International *fib* Congress, Naples, Italy, June 5-8, 2006.
  27. Antonopoulos, C.N., V.G. Papadakis Ch.D. Stylios, M.P. Efstathiou, and P.P. Groumpos, "Benchmarking Analysis for Creativity Understanding and Fostering in Conventional and New Technology Firms", XXIV IASP Conference on Science and Technology Parks, "Creative Jobs and

- Creative Companies – Key Factors for Growth and Competitiveness”, Barcelona – Spain, 2-4 July 2007.
28. Antonopoulos, C.N., V.G. Papadakis, and P.P. Groumpos, "STPs as location for FDI; learning from past investment incidents: semiconductors in Western Greece", XXV IASP Conference on Science and Technology Parks, Johannesburg, 14-17 September 2008.
  29. Konstantakou, P.P. and V.G. Papadakis, "An Integrated Management and Exploitation of Agricultural Residues – Application to Olive Tree Lop", 18<sup>th</sup> European Biomass Conference and Exhibition – From Research to Industry and Markets, Lyon, 3-7 May 2010.
  30. Konstantakou, P.P., S.A. Haroutounian, and V.G. Papadakis, "Multilateral Exploitation of Olive Tree Lop – Techno-economical Analysis for Leave Extracts, Compost and Energy Pellet Production", Linnaeus Eco-Tech'10, Kalmar, Sweden, 22-24 November 2010.
  31. Paraskeva, C.A., E.C. Arvaniti, and V.G. Papadakis, "Fundamentals and Techno-economical Analysis of Exploitation of Olive Mill WasteWater to High-Added Value By-products", Linnaeus Eco-Tech'10, Kalmar, Sweden, 22-24 November 2010.
  32. Sousa-Coutinho, J. and V.G. Papadakis, "Rice Husk Ash - Importance of Fineness for its Use as a Pozzolan and Chloride-Resistant Material", 12<sup>th</sup> Inter. Conf. on Durability of Building Materials and Components, Porto, Portugal, 12-15 April 2011.
  33. Papadakis, V.G. and S. Demis, "Estimation and Validation of Concrete Strength and Service Life Using Software Packages based on Predictive Models", 12<sup>th</sup> Inter. Conf. on Durability of Building Materials and Components, Porto, Portugal, 12-15 April 2011.
  34. Demis, S. and V.G. Papadakis, "Durability of Glass Fibre Reinforced Polymer (FRP) Materials in Concrete – Effect of Carbonation on Bond Strength", 12<sup>th</sup> Inter. Conf. on Durability of Building Materials and Components, Porto, Portugal, 12-15 April 2011.
  35. Demis, S. and V.G. Papadakis, "A Balanced Approach between Sustainable and Durable Design of Reinforced-Concrete Structures - The Way towards Green Durability", *fib* Symposium on Concrete Engineering for Excellence and Efficiency, Prague, Czech Republic, 8-10 June 2011.
  36. Antonopoulos, C.N. and V.G. Papadakis, "Science Park Operations on the Verge between Renewal and Stagnation. Is there a Green Way out?", XXVIII IASP Conference on Science and Technology Parks, Copenhagen, 19-22 June 2011.
  37. Demis, S. and V.G. Papadakis, "A Comparative Assessment of the Effect of Cement Type on Concrete Durability", 13<sup>th</sup> International Congress on the Chemistry of Cement, Madrid, Spain, 3-8 July 2011.
  38. Arvaniti, E.C., D.P. Zagklis, V.G. Papadakis, and C.A. Paraskeva, "New Techniques in Olive Mill WasteWater (OMW) Treatment", *IFOAM AgriBioMediterraneo Conference "Organic Agriculture and Agro-Eco tourism in the Mediterranean"*, Zakynthos, Greece, 16-18 September 2011.
  39. Demis, S. and V.G. Papadakis, "A Balanced Approach between Sustainable and Durable Design of Reinforced Concrete Structures", 6<sup>th</sup> SDEWES - Conference on Sustainable Development of Energy, Water and Environment Systems, Dubrovnik, Croatia, 25-29 September 2011.
  40. Papadakis, V.G., "The WaterTech Cluster of Western Greece and its recent achievements through SWAM & STinno FP7-RoK projects", 9<sup>th</sup> International Hydrogeological Congress, Kalavryta, 5-8 October 2011.
  41. Zagklis, D.P., E.C. Arvaniti, V.G. Papadakis, and C.A. Paraskeva, "Implementation of membrane filtration in the treatment of Olive Mill Wastewaters and a techno economical study", *BioNexGen Workshop "Development of the Next Generation membrane Bioreactor system - Membrane based Wastewater Treatment and Reuse"*, Sfax Tunisia, 8-9 March 2012.
  42. Demis, S., M.P. Efstathiou, and V.G. Papadakis, "Development of a Software Package based on Proven Predictive Models for the Estimation of Concrete Service Life", 1<sup>st</sup> International Congress on Durability of Concrete, Trondheim, Norway, 17-21 June 2012.
  43. Papadakis, V.G., "Service Life Prediction of a Reinforced Concrete Bridge under Chloride Induced Deterioration – Failure Scenarios and Protective Measures", 1<sup>st</sup> International Congress on Durability of Concrete, Trondheim, Norway, 17-21 June 2012.



44. Charisiou, N.D., P.P. Konstantakou, M.A. Goula, and V.G. Papadakis, "Estimation of Nitrogen and Carbon Loss during Composting Process of Olive Tree Lops and Contribution to Greenhouse Effect", *20th European Biomass Conference & Exhibition - Setting the course for a biobased economy*, Milan, Italy, 18-22 June 2012.
45. Charisiou, N.D., O. Bereketidou, V.G. Papadakis, and M.A. Goula, "Environmental Impacts of Biogas Utilization Pathways", *20th European Biomass Conference & Exhibition - Setting the course for a biobased economy*, Milan, Italy, 18-22 June 2012.
46. Tapali, J.G., S. Demis and V.G. Papadakis, "Use of new industrial by-products and mixtures for reducing the environmental cost of constructions", *EUROCOALASH 2012 Conference*, Thessaloniki, Greece, September 25-27, 2012.
47. Tapali, J. and V.G. Papadakis, "An optimum design of reinforced concrete structures for prolongation of service life time at the lowest environmental cost", *3<sup>rd</sup> International Symposium on Life-Cycle Civil Engineering (IALCCE 2012)*, Vienna, Austria, 3-6 October, 2012.
48. Paraskeva, C.A., D.P. Zagklis, E.C. Arvaniti, and V.G. Papadakis, "Olive Mill Wastewater treatment methods: Sustainability and benchmarking", *Prosodol Symposium on "Olive Mills Wastes and Environmental Protection"*, Chania, Greece, 16-18 October 2012.
49. Charisiou, N.D., V.G. Papadakis and, M.A. Goula, "Life cycle assessment of biogas catalytic and electro-catalytic processes utilization", *3<sup>rd</sup> International Workshop of COST Action CM0903 "UBIOCHEM-III: Sustainable production of fuels/energy, materials & chemicals from biomass"* Thessaloniki, Greece, 1-3 November 2012.
50. M.A. Goula, and V.G. Papadakis, "Sustainability assessment of agricultural waste biomass exploitation", *4th International Symposium on Energy from Biomass and Waste*, Venice, Italy, 12-15 November 2012.
51. Charisiou, N.D., V.G. Papadakis, and M.A. Goula, "Biodegradable agricultural waste biomass utilization", *Bio4SuD International Conference "Biofuels for Sustainable Development of Southern Europe"*, Thessaloniki, Greece, 19-20 November 2012.
52. Soutzoukis, D. and V.G. Papadakis, "Experimental investigation of production of high quality compost from agricultural residues", *21st European Biomass Conference & Exhibition - Setting the course for a biobased economy*, Copenhagen, Denmark, 3-6 June 2013.
53. Charisiou, N.D., C.A. Paraskeva, M.A. Goula and V.G. Papadakis, "Techno-economical & Sustainability Analyses for Multilateral Exploitation of Olive Tree Cultivation Residues", *iconBM - International Conference on Bio Mass*, Florence, Italy, 4-7 May, 2014.
54. Binas, V., V.G. Papadakis, and G. Kiriakidis, "Eco-innovative photocatalytic materials activated under visible light illumination for applications in concrete", *Concrete Innovation Conference CIC 2014*, Oslo, Norway, 11-13 June 2014.
55. Soutzoukis, D. and V.G. Papadakis, "Experimental investigation of production of high quality compost from agricultural residues", *5th International Conference on Engineering for Waste and Biomass Valorisation*, Rio de Janeiro, Brazil, 25-28 August 2014.
56. Demis, S., M. Ferreira, and V.G. Papadakis, "Computer-Aided Service Life Estimation of Reinforced Concrete Structures – Principles, Comparative Evaluation & Limitations", *13<sup>th</sup> Inter. Conf. on Durability of Building Materials and Components*, Sao Paulo, Brazil, 2-5 September 2014.
57. Ferreira, M. and V.G. Papadakis, "Considerations on the modelling of chloride transport – The influence of carbonation and frost attack", *13<sup>th</sup> Inter. Conf. on Durability of Building Materials and Components*, Sao Paulo, Brazil, 2-5 September 2014.
58. Rodrigues, C.S., S. Demis, L.A. Santos, and V.G. Papadakis, "An Investigation of the Effectiveness and Durability Characteristics of Biomass Ashes as Pozzolan Materials", *13<sup>th</sup> Inter. Conf. on Durability of Building Materials and Components*, Sao Paulo, Brazil, 2-5 September 2014.
59. Tapali, J. and V.G. Papadakis, "Exploitation of rice husk ash as a pozzolanic material for the construction industry", *4<sup>th</sup> International Conference on Industrial and Hazardous Waste Management (Crete 2014)*, Chania, Greece, 2-5 September 2014.

## E. Selected Presentations in Panhellenic Conferences with Reviewers

1. Papadakis, V.G., C.G. Vayenas, and M.N. Fardis, "Physicochemical Processes of Concrete Carbonation", *Proceedings*, 8th Hellenic Concrete Conference (TCG), I, 96-104, Xanthi-Kavala 1987.
2. Papadakis, V.G., C.G. Vayenas, and M.N. Fardis, "Effect of Pozzolans on the Durability of Reinforced Concrete", *Proceedings*, 2nd Hellenic Conference for the Utilization of Greek Fly Ash (TCG), Athens 1988.
3. Papadakis, V.G., C.G. Vayenas, and M.N. Fardis, "Calculation of Carbonation Depth in terms of Concrete Characteristics and of the Environmental Conditions", *Proceedings*, 9th Hellenic Concrete Conference (TCG), I, 75-82, Kalamata 1990.
4. Papadakis, V.G., C.G. Vayenas, and M.N. Fardis, "Physical Characteristics of Concrete Affecting its Durability", *Proceedings*, 9th Hellenic Concrete Conference (TCG), I, 83-87, Kalamata 1990.
5. Pliangos, C.A., I.V. Yentekakis, V.G. Papadakis, V.G., X.E. Verykios, and C.G. Vayenas, "Promotional Phenomena of the Activity of Three-Way Catalysts based on the Support", *Proceedings*, 3rd Panhellenic Catalysis Conference, Patras 1993.
6. Papadakis, V.G., A.P. Roumeliotis, M.N. Fardis, and C.G. Vayenas, "Chloride Effect on Reinforced Concrete Durability", *Proceedings*, 11th Hellenic Concrete Conference (TCG), I, 137-151, Corfu 1994.
7. Papadakis, V.G., C.A. Pliangos, I.V. Yentekakis, X.E. Verykios, and C.G. Vayenas, "Development of Improved Automotive Exhaust Catalyst based on Support Induced Promotional Effects", *Proceedings*, 15th Panhellenic Conference on Chemistry, A, 26-29, Thessaloniki 1994.
8. Papadakis, V.G., C.A. Pliangos, I.V. Yentekakis, X.E. Verykios, and C.G. Vayenas, "Improved Exhaust Catalysts for Cars and Industries", *Proceedings*, 4th Panhellenic Conference on Environmental Science & Technology, B, 335-364, Molivos, Lesvos 1995.
9. Papadakis, V.G., E. Katsafados, Z.N. Christou, T. Triantafyllou, M.N. Fardis, and C.G. Vayenas, "Development of High Durability Concrete Using Greek Artificial Pozzolans", *Proceedings*, 12th Hellenic Concrete Conference (TCG), I, 340-351, Limassol, Cyprus 1996.
10. Sfakianakis, M.G., M.N. Fardis, and V.G. Papadakis, "Environmental Effects on Cooling Towers: Causes, Influence on Safety and Rehabilitation", *Proceedings*, 12th Hellenic Concrete Conference (TCG), III, 559-570, Limassol, Cyprus 1996.
11. Papadakis, V.G., E. Katsafados, Z.N. Christou, T. Triantafyllou, M.N. Fardis, and C.G. Vayenas, "Development of High Durability Concrete Using Greek Fly Ashes", *Proceedings*, Hellenic Conference for the Utilization of Greek Fly Ash, Centre for Solid Fuels Technology & Applications (GSRT), Kozani 1997.
12. Papadakis, V.G. and E.J. Pedersen, "Production, Valuation and Use of Fly Ash in the Constructions in Denmark", *Proceedings*, Hellenic Conference for the Utilization of Greek Fly Ash, Centre for Solid Fuels Technology & Applications (GSRT), Kozani 1997.
13. Papadakis, "Pozzolanic Materials in Concrete: Activity, Durability and Planning", *Proceedings*, 1<sup>st</sup> Hellenic Conference on Composite Concrete Materials, I, 86-95, Xanthi 2000.

## F. Selected Reports and Books

1. Papadakis, V.G. and C.A. Paraskeva, "Theoretical and Experimental Investigation of Macroscopical Behavior of Deep Bed Filters", *Diploma Thesis*, Chemical Engineering Dept., University of Patras, p. 156, Patras 1986.
2. Papadakis, V.G., "Investigation of Physicochemical Processes of Hardened Cement Paste Carbonation and of the Effects on the Reinforced Concrete Durability", *Ph.D. Thesis*, Chemical Engineering Dept., University of Patras, p. 240, Patras 1990.
3. Papadakis, V.G., "Aspects of Fly Ashes and their Utilization in the Constructions", *Report* to Public Power Corporation and to Association of Civil Engineers of Greece, p. 38, Patras 1992.
4. Antonopoulos, I., C. Papageorgiou, V.G. Papadakis, P. Nikolaidis, V. Speliadis, and S. Psara, "Investigation of Physicochemical Parameters of Seawater and its Biological Pollution Potential on Underwater Constuction in the Area of Rion-Antirrion for the Bridge Project", *Final Report* to Ministry of Public Works/ GSPW/D1, University of Patras, p. 240, Patras 1992.
5. Papadakis, V.G., "Environmental Effects on the Buildings", in the *Handbook* of ACEG: "Restoration of Monuments and Buildings of Special Significance", p. 40, Athens 1993.
6. Verykios, X.E., C.G. Vayenas, I.V. Yentekakis, V.G. Papadakis and C.A. Pliangos, "Development of Improved Automotive Catalytic Converters", *Final Report* to GSRT, ICE/HT, Patras 1994.
7. Papadakis, V.G. and D.N. Spartinos, "Special Chapters of Chemical Technology", *Instructive book*, Chemical Engineering Dept., University of Patras, p. 180, Patras 1994.
8. Papadakis, V.G., F. Alexandrou, C.G. Vayenas, and X.E. Verykios, "Optimization, Quality Control and Production of Automotive Exhaust Catalytic Converters", *Report* to GSRT, ICE/HT, Patras 1996.
9. Papadakis, V.G., "Development of New Techniques/ Apparatuses for the Assessment of Performance and Durability of Building Materials", *Report on Research Feasibility Work*, SMT4-CT97-5024, European Commission DG XII, December 1997.
10. Papadakis, V.G., "Prediction of the Øresund Link Service Life Regarding Chloride-Induced Depassivation of Reinforcing Bars"; *Technical Note* to Øresund-konsortiet, Danish Technological Institute, Taastrup, November 1998.
11. Papadakis, V.G., "Estimation of Concrete Service Lifetime- A Practical Guide"; *Technical Note*, Danish Technological Institute, Taastrup, December 1998.
12. Papadakis, V.G., M.E. Glavind, and M.T. Jepsen, "Use of Petcoke Fly Ash in Concrete"; *Report* to SK Power Company, Danish Technological Institute, Taastrup, December 1998 (in Danish).
13. Papadakis, V.G., "Supplementary Cementing Materials in Concrete- Activity, Durability, and Planning"; *Final Report* to European Commission, Project No. ERBFMBICT961387, Danish Technological Institute, Taastrup, January 1999.
14. Papadakis, V.G. and E.J. Pedersen, "Service Lifetime Prediction of Concrete used for Foundation. Case Study: Construction Christiansbro- Erhverv 2"; *Technical Note* to NCC Rasmussen & Schiøtz, Danish Technological Institute, Taastrup, February 1999.
15. Papadakis, V.G. and B. Matthiesen, "Computer Program for Chloride Intrusion in Concrete"; *Technical Note*, Danish Technological Institute, Taastrup, February 1999.
16. Papadakis, V.G., "Use of Supplementary Cementing Materials for Sustainable Building-Sector Growth"; *Final Report* to European Commission, Project No. HPMF-CT-1999-00370, National Technical University of Athens, Athens, June 2001.
17. Papadakis, V.G., C.A. Paraskeva, D. Kanellopoulou, E. Tsarouchi, P. Koutsoukos, M. Villa, S. Pajardi, C., Nakos, G. Bafiti, "Olive Mill Wastewater: Characterization and Treatment", *Report to EC for the project PANEELEA QLK5-CT-2002-71666*, July 2003.
18. Papadakis, V.G., T. Benetatos, G. Karelas, C. Paraskeva, S. Patti, D. Stefano, and A. Villa, "Study for the Evaluation of Existing and Planning Regional Capabilities and Practices on the Designing of SME Policies", HUREDEPIS project, Archimed, Interreg Programme, October 2007.

19. Arvaniti, E.N., M.P. Efstathiou, and V.G. Papadakis, «Regional cluster analysis – interim report», SWAM Project, FP7 EU Programme, Patras, August 2010.
20. Arvaniti, E.N., M.P. Efstathiou, and V.G. Papadakis, «Regional cluster mapping – interim report», SWAM Project, FP7 EU Programme, Patras, September 2010.
21. Efstathiou, M.P., E.N. Arvaniti, and V.G. Papadakis, «Identification & evaluation of regional research-driven clusters», STInno Project, FP7 EU Programme, Patras, November 2010.
22. Arvaniti, E.N., M.P. Efstathiou, and V.G. Papadakis, «Mapping regional research agendas», STInno Project, FP7 EU Programme, Patras, November 2010.
23. Arvaniti, E.N., M.P. Efstathiou, and V.G. Papadakis, «EU policies for regional research-driven clusters», STInno Project, FP7 EU Programme, Patras, November 2010.
24. Efstathiou, M.P., E.N. Arvaniti, and V.G. Papadakis, «Report on market research, analysis and approach for the production of advanced and high-added value materials from rice husk ash», PYRICE II Project, CIP ECO-INNOVATION Programme, Patras, December 2010.
25. Arvaniti, E.N., M.P. Efstathiou, and V.G. Papadakis, «International overview for cluster policies», STInno Project, FP7 EU Programme, Patras, June 2011.
26. Arvaniti, E.N., M.P. Efstathiou, and V.G. Papadakis, «Regional competitiveness analysis – final report», SWAM Project, FP7 EU Programme, Patras, September 2011.
27. Efstathiou, M.P. and V.G. Papadakis, «Technoeconomical study of production of advanced and high-added value materials from rice husk ash», PYRICE II Project, CIP ECO-INNOVATION Programme, Patras, September 2011.
28. Papadakis, V.G., M.P. Efstathiou, and L. Litos «Technoeconomical design and pilot production of advanced and high-added value materials from rice husk ash», *Final Report to EACI - EU*, PYRICE II Project, CIP ECO-INNOVATION Programme, Patras, September 2012.
29. Efstathiou, M.P., E.N. Arvaniti, and V.G. Papadakis, «Architecture of Totalitarian Regimes of the XX Century in Urban Management – Cases of the Region of Western Greece: Identification, Digitalization, Durability Problems», ATRIUM Project, SEE Programme, Patras, December 2012.

## G. Invited speaker

1. "Mathematical Modeling and Experimental Investigation of Concrete Carbonation", XXth Scientific Conference of the Youth Researchers, Higher Institute of Chemical Technology, Sofia, Bulgaria, 9-5-1989.
2. "New Catalytic Converters for Car and Plant Emission Control", New European Engineers – BEST, Summer School 1994: "Total Ecology Technological Studies", Patras 6-7-1994.
3. "Development of High Durability and Performance Concrete by using Pozzolans and Optimum Material Synthesis" and "The State of the Cement and Concrete in Greece: Production & Research", Danish Technological Institute (DTI), Division of Building Technology, Taastrup, Denmark, 28-2-1997.
4. "Experimental Investigation and Theoretical Modeling of Pozzolanic Activity in Concrete", DTI, Division of Building Technology, Taastrup, Denmark, 26-5-1998.
5. "Utilization of Lignite Fly Ash in Construction", RWE Energie Aktiengesellschaft, Essen, Germany, 16-12-1998.
6. "Supplementary Cementing Materials in Concrete", Danish Technological Institute, Division of Building Technology, Taastrup, Denmark, 10-2-1999.
7. "The PANLEA project: A cost-effective system development for complete exploitation of olive mill wastewater", Institute of Water Research, University of Granada, Granada, Spain, 10-12-2004.
8. «Technology Transfer & Innovation Management», FP6 CODESNET meeting, Shannon Development, University of Limerick, Ireland 8-3-2007.

9. «Μικρομεσαίες Επιχειρήσεις – Ανάπτυξη μέσω Έρευνας & Καινοτομίας», Ημερίδα «Έρευνα προς Όφελος των Μικρομεσαίων Επιχειρήσεων στο 7<sup>ο</sup> Πρόγραμμα Πλαίσιο Έρευνας και Τεχνολογικής Ανάπτυξης στην ΕΕ», EOMMEX, Αθήνα 21-6-2007.
10. «SMEs sector in Western Greece, Epirus, Puglia and Sicily», HUREDEPIS project meeting, Science & Technology Park of Sicily, Catania, Italy 16-11-2007.
11. «SMEs sector in Western Greece, Epirus, Puglia and Sicily», Final Informative HUREDEPIS project meeting, Patras 25-2-2008.
12. «Introduction to Financing Innovation - Regional Innovation Pole of Western Greece», RAPIDE Working Summit 2 – Financing Innovation, Interreg IVC, Patras 12-2-2009.
13. «Planning Social Enterprises Incubator for Municipality of Agrinio», Kick-off Transnational Meeting of the project *URBAN N.O.S.E. - Network of Social Enterprises*, URBACT II, Gela Sicily Italy 6-3-2009.
14. «Governance system supporting social economy», 1<sup>st</sup> Transnational Meeting of the project *URBAN N.O.S.E. - Network of Social Enterprises*, URBACT II, Alcobaça, Portugal, 9-7-2009.
15. «WaterTech Cluster of Western Greece – Regional Innovation Pole of Western Greece», 1<sup>st</sup> STinno project meeting, Marrakesh, Morocco, 12-1-2010.
16. «WaterTech Cluster of Western Greece – Regional Innovation Pole of Western Greece», 1<sup>st</sup> SWAM project meeting, Murcia, Spain, 11-3-2010.
17. «Tools and methods system for the provision of social economy services», 3<sup>rd</sup> Transnational Meeting of the project *URBAN N.O.S.E. - Network of Social Enterprises*, URBACT II, Koropi, Athens, 15-4-2010.
18. «The research-driven WaterTech cluster of Western Greece», 2<sup>nd</sup> SWAM project meeting, Patras, 7-7-2010.
19. «Animating and sensitising the territory upon Social Economy», 4<sup>th</sup> Transnational Meeting of the project *URBAN N.O.S.E. - Network of Social Enterprises*, URBACT II, Grenoble, France, 10-9-2010.
20. «Encouraging entrepreneurs & education on water technology – Western Greece», 3<sup>rd</sup> SWAM project meeting, Kiryat-Shmona, Galilee, Israel, 18-1-2011.
21. «Water technologies & water clusters challenges - Case-studies in Western Greece», 3<sup>rd</sup> SWAM project meeting, Kiryat-Shmona, Galilee, Israel, 18-1-2011.
22. «Competitiveness and research analysis of WaterTech research-driven clusters», 4<sup>th</sup> SWAM project meeting, Patras, 30-5-2011.
23. «International overview of cluster policies», 3<sup>rd</sup> STinno project meeting, Lahti, Finland 16-7-2011.
24. «Architecture of Totalitarian Regimes of the XX Century in Urban Management – Cases of the Region of Western Greece», ATRIUM Transnational Meeting, Iasi, Romania, 15-11-2011.
25. «Policies for the support of regional research-driven clusters – Impacts & Conclusions», 4<sup>th</sup> STinno project meeting, Terni, Italy 13-12-2011.
26. «High-added value materials production from Olive Mill Wastewater – A technical and economical optimization», Horizon 2020 Capacity Building/Mediterranean Environment Programme, “*Best environmental practices in olive mill waste management and new technologies*”, Regional training: 19-21 March 2012, Athens.
27. «Presentation of project PYRICE II - Techno-Economical Design and Pilot Production of Advanced and High-Added Value Materials from Rice Husk Ash», Eco-Innovation Sustainable Concrete Workshop, European Commission, 3 May 2012, Brussels.
28. «PYRICE II project: Overall review, results and achievements», PYRICE II – Final Review, Agrino Plant, 6-6-2012, Sindos, Thessaloniki.
29. Special Guest Speaker in Scientific Coffee, «Ideas and perspectives for research cooperation in the future», Technical Research Center of Finland - VTT, 9 November 2012, Otaniemi/ Espoo, Finland.

30. Special Guest Speaker in Lecture, «A balanced approach between sustainable and durable design of reinforced-concrete structures - The way towards green durability», Aalto University, 9 November 2012, Otaniemi/ Espoo, Finland.