

CURRICULUM VITAE

Vagelis G. Papadakis

Chemical Engineer, PhD
Professor - University of Patras, Greece

- 2016 -

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
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<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.
- 4/2007 – 3/2016 : Associate Professor, Department of Environmental and Natural Resources Management, School of Engineering, University of Patras, Agrinio, Greece
- 3/2016 – today** : **Professor** in “*Physical and Chemical Environmental Processes, Durability and Sustainability of Constructions*”, **Department of Environmental and Natural Resources Management, School of Engineering, 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, 7th 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, (QNRF) Qatar National Research Fund, 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 Composites, 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, Waste and Biomass Valorization, 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 60) 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 : Professor (2016-today) in *Physical and Chemical Environmental Processes, Durability and Sustainability of Constructions*, (Associate Professor, 2007-2015) Department of Environmental and Natural Resources Management, School of Engineering, University of Patras, Agrinio:
- Teaching the undergraduate courses: “Construction Materials”, “Transport Phenomena”, “Unit Operations”, “Plant Design and Economics”, “Environmental Economics”, “Materials & Environment” and “Environmental Impact Issues”.
 - Teaching the post-graduate courses: “Environmental Impact Issues – Specific Environmental Studies – Planning & Implementation in Protected Areas” in MSc Programme “Sustainable Management of Protected Areas”.
 - Teaching the post-graduate courses: “Green Environmental Technologies” and “Management & Communication in Environmental Projects” in MSc Programme “Applications of Environmental Protection & Management”.
 - Supervisor of 2 Post-doctoral Works.
 - Supervisor of 6 PhD Theses (one was completed in 2014). Member of the supervising committee for more 11 PhD Theses.
 - Supervisor of 13 MSc Theses.
 - Supervisor of 20 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

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|---|---|
| <p><i>Hellenic Secret. of Res. & Tech. PROPE progr.</i>
Start: 1/1987
End: 6/1990</p> | <p>: "Investigation of Physicochemical Processes of Hardened Cement Paste Carbonation and of the Effects on the Reinforced Concrete Durability"
Organization: University of Patras / Research Committee
Project leaders: Prof. M.N. Fardis, Prof. C.G. Vayenas
Position: Researcher</p> |
| <p><i>Hell. Ministry of Public Works GSPW/D1 prog.</i>
Start: 3/1991
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"
Organization: Civil Engineering Dept., University of Patras
Project leader: Prof. I. Antonopoulos
Position: Researcher</p> |
| <p><i>Commission of Europ. Commun. STRIDE progr.</i>
Start: 1/1992</p> | <p>: "Development of Automotive Exhaust Catalytic Converters"
Organizations: ICE/HT, CERECO S.A., University of Patras, Patras Scientific Park S.A.
Project leader: Prof. X.E. Verykios</p> |

- End: 12/1993 Position: Researcher and Project Manager
- Hellenic Secret. of Res. & Tech. PENED progr.* : "Durability of Reinforced Concrete: Environmental Effects and Protection"
 Start: 1/1994 Organisation: University of Patras / Research Committee
 End: 12/1995 Project leader: Prof. C.G. Vayenas
 Position: Researcher and Project Manager
- Hellenic Secret. of Res. & Tech. EPET-II progr.* : "Optimization, Quality Control and Production of Automotive Exhaust Catalytic Converters"
 Start: 1/1995 Organizations: ICE/HT, AUT, Citroen- Hellas, CERECO, ELVO, Patras Scientific Park, Ideal Standard
 End: 12/1997 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 Organizations: TECHNODYNAMICS, INDELEC EUROPE, University of Patras, Automobile Import. Assoc.
 End: 11/1997 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 Organization: Danish Technological Institute
 End: 1/1999 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 Organization: National Technical University of Athens
 End: 5/2001 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 1st 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 1st 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* : "Follow-up of the Competitiveness - Sector and individual Benchmarking of innovative enterprises and enterprises of foods and drinks in the RWG"

- YPAN* Partners: PSP, KETA
Scientific officer: Dr. V.G. Papadakis
Start: 5/2005 End: 12/2006
Position: Project Manager
- EKT
2006
IRC
Hellenic* “Implement actions of the Hellenic Relay Centre for the Research and Innovations via the Patras Science Park”
Organization: PSP
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, Pääjät-Häme, (Finland) (Coordinator), Regional Council of Pääjät-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 Immovable 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 Doboj/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.

“Collaborative Digitization of Natural and Cultural Heritage (CD-ETA)”, Interreg Europe, EU Programme, Φορείς: Euroregion PlevenOlt, Bulgaria (Coordinator), Harghita County Council (Romania), University of Patras (Greece), ASSOCIATION OF MUNICIPALITIES OF THE RIBERA ALTA REGION (Spain), FOUNDATION FOR RESEARCH AND INNOVATION (Italy), Regional Development Agency of Gorenjska (Slovenia), Foundation Saint Mary the Royal of Historic Heritage (Spain), Estonian War Museum General Laidoner Museum (Estonia). Duration: 4/2016 - 12/2020, Position: Coordinator of the Greek side.

RESEARCH PUBLICATIONS AND PRESENTATIONS

A. Publications in International Journals

- A1. 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).
- A2. 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).
- A3. 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).
- A4. 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).
- A5. 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).
- A6. 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).
- A7. Angelidis, T.N., V.G. Papadakis, and E. Pavlidou, "Causes of deactivation and regeneration of an industrial Pt-NiO/Al₂O₃ nitrogen oxides reduction catalyst", *Applied Catalysis B: Environmental*, **4**(4), 301-313 (1994).
- A8. 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).
- A9. 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).
- A10. 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).
- A11. 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).
- A12. 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 (C₂H₄)", *Applied Catalysis B: Environmental*, **14**(3/4), 161-173 (1997).
- A13. 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).
- A14. Papadakis, V.G., "Experimental investigation and theoretical modeling of silica fume activity in concrete", *Cement and Concrete Research*, **29**(1), 79-86 (1999).
- A15. 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).
- A16. 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).

- A17. 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).
- A18. 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).
- A19. 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).
- A20. 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).
- A21. 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).
- A22. 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).
- A23. 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).
- A24. Papadakis, V.G. and S. Tsimas, "Greek supplementary cementing materials and their incorporation in concrete", *Cement and Concrete Composites*, **27**(2), 223-230 (2005).
- A25. 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).
- A26. 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).
- A27. 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).
- A28. 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).
- A29. Apostolopoulos, C.A. and V.G. Papadakis, "Mechanical behavior of reinforcement stirrups BSt 500_s at corrosive environment", *Journal of Materials Engineering and Performance (JMPEP)*, **16**(2), 236-241 (2007).
- A30. 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).
- A31. 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).
- A32. Antonopoulos, C.N., V.G. Papadakis, C.D. Stylios, M.P. Efstathiou, and P.P. Groumpos, "Mainstreaming innovation policy in less favoured regions: the case of Patras Science Park, Greece", *Science and Public Policy*, **36**(7), 511-521 (2009).
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B. Patents

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C. Books – Chapter in books – Software

- C1. Papadakis, V.G., *Supplementary Cementing Materials in Concrete- Activity, Durability, and Planning*, Danish Technological Institute, Taastrup, 1999.
- C2. Papadakis, V.G., *Estimation of Concrete Service Life – The Theoretical Background*, Patras Science Park S.A., Patras, 2005.
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D. Presentations in International Conferences with Reviewers

- D1. 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.
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- D5. 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.
- D6. 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.
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- D14. 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.
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- D17. 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.
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- D24. Papadakis, V.G. and M.P. Efstathiou, "Computer-Based Estimation of Concrete Service Life", 7th CANMET/ACI Intern. Conf. on Durability of Concrete, Montreal, Canada, May 28-June 3, 2006.
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- D26. 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.
- D27. 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.
- D28. Konstantakou, P.P. and V.G. Papadakis, "An Integrated Management and Exploitation of Agricultural Residues – Application to Olive Tree Lop", 18th European Biomass Conference and Exhibition – From Research to Industry and Markets, Lyon, 3-7 May 2010.
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- D30. 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.
- D31. Sousa-Coutinho, J. and V.G. Papadakis, "Rice Husk Ash - Importance of Fineness for its Use as a Pozzolan and Chloride-Resistant Material", 12th Inter. Conf. on Durability of Building Materials and Components, Porto, Portugal, 12-15 April 2011.
- D32. Papadakis, V.G. and S. Demis, "Estimation and Validation of Concrete Strength and Service Life Using Software Packages based on Predictive Models", 12th Inter. Conf. on Durability of Building Materials and Components, Porto, Portugal, 12-15 April 2011.
- D33. Demis, S. and V.G. Papadakis, "Durability of Glass Fibre Reinforced Polymer (FRP) Materials in Concrete – Effect of Carbonation on Bond Strength", 12th Inter. Conf. on Durability of Building Materials and Components, Porto, Portugal, 12-15 April 2011.
- D34. 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.
- D35. 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.
- D36. Demis, S. and V.G. Papadakis, "A Comparative Assessment of the Effect of Cement Type on Concrete Durability", 13th International Congress on the Chemistry of Cement, Madrid, Spain, 3-8 July 2011.
- D37. 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.
- D38. Demis, S. and V.G. Papadakis, "A Balanced Approach between Sustainable and Durable Design of Reinforced Concrete Structures", 6th *SDEWES - Conference on Sustainable Development of Energy, Water and Environment Systems*, Dubrovnik, Croatia, 25-29 September 2011.
- D39. Papadakis, V.G., "The WaterTech Cluster of Western Greece and its recent achievements through SWAM & STInno FP7-RoK projects", 9th International Hydrogeological Congress, Kalavryta, 5-8 October 2011.

- D40. 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.
- D41. 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", 1st International Congress on Durability of Concrete, Trondheim, Norway, 17-21 June 2012.
- D42. Papadakis, V.G., "Service Life Prediction of a Reinforced Concrete Bridge under Chloride Induced Deterioration – Failure Scenarios and Protective Measures", 1st International Congress on Durability of Concrete, Trondheim, Norway, 17-21 June 2012.
- D43. 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.
- D44. 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.
- D45. 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.
- D46. Tapali, J. and V.G. Papadakis, "An optimum design of reinforced concrete structures for prolongation of service life time at the lowest environmental cost", *3rd International Symposium on Life-Cycle Civil Engineering (IALCCE 2012)*, Vienna, Austria, 3-6 October, 2012.
- D47. 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.
- D48. Charisiou, N.D., V.G. Papadakis and, M.A. Goula, "Life cycle assessment of biogas catalytic and electro-catalytic processes utilization", 3rd International Workshop of COST Action CM0903 "UBIOCHEM-III: Sustainable production of fuels/energy, materials & chemicals from biomass" Thessaloniki, Greece, 1-3 November 2012.
- D49. 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.
- D50. 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.
- D51. 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.
- D52. 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.
- D53. Charisiou, N.D., M.A. Goula and V.G. Papadakis, "Composting process of olive tree prunings: Assessment of nitrogen and carbon losses", 2nd International Conference on Sustainable Solid Waste Management, Athens, Greece, 12-14 June, 2014.
- D54. Tapali, J., S. Demis and V.G. Papadakis, "Plant design & economics for rice husk ash exploitation as pozzolanic material", *SYMBIOSIS Conference*, Athens, Greece, 19-21 June, 2014.
- D55. 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.

- D56. Ferreira, M. and V.G. Papadakis, "Considerations on the modelling of chloride transport – The influence of carbonation and frost attack", 13th Inter. Conf. on Durability of Building Materials and Components, Sao Paulo, Brazil, 2-5 September 2014.
- D57. Demis, S., C.S. Rodrigues, L.A. Santos, and V.G. Papadakis, "An Investigation of the Effectiveness and Durability Characteristics of Biomass Ashes as Pozzolanic Materials", 13th Inter. Conf. on Durability of Building Materials and Components, Sao Paulo, Brazil, 2-5 September 2014.
- D58. Tapali, J. and V.G. Papadakis, "Exploitation of rice husk ash as a pozzolanic material for the construction industry", 4th International Conference on Industrial and Hazardous Waste Management (Crete 2014), Chania, Greece, 2-5 September 2014.
- D59. Kontos, S.S, P.G. Koutsoukos, V.G. Papadakis, K.C. Angelopoulos and C.A Paraskeva, "Application of physicochemical techniques for the efficient treatment of olive mill wastewaters", 7th International Conference on Water Resources in the Mediterranean Basin: WATMED 7, Marrakesh, Morocco, 10-12 October 2014.
- D60. Charisiou, N.D., V.G. Papadakis and M.A. Goula, "Syngas production from biogas reforming over La-promoted Ni/Al₂O₃ catalyst", 3rd International Conference on Sustainable Solid Waste Management, Tinos, Greece, 2-4 July 2015.
- D61. Charisiou, N.D., C.A. Paraskeva, M.A. Goula and V.G. Papadakis, "Sustainability Analyses for the Exploitation of Olive Tree Cultivation Residues", International Conference on Industrial Waste & Wastewater Treatment & Valorisation, Athens, Greece, 21-23 May 2015.
- D62. Charisiou, N.D., A. Baklavaridis, V.G. Papadakis and M.A. Goula, "Synthesis gas production via the biogas reforming reaction over Ni/MgO-Al₂O₃ and Ni/CaO-Al₂O₃ catalysts", International Conference on Industrial Waste & Wastewater Treatment & Valorisation, Athens, Greece, 21-23 May 2015.
- D63. Charisiou, N.D., V.G. Papadakis and M.A. Goula, "Syngas production from biogas reforming over La-promoted Ni/Al₂O₃ catalyst", 3rd International Conference on Sustainable Solid Waste Management, Tinos, Greece, 2-4 July 2015.
- D64. Demis, S. and V.G. Papadakis, "Durability design of reinforced concrete structures – Service life estimation", 6th International Conference on Concrete Repair: Concrete Solutions 2016, Thessaloniki, Greece, 20-22 June 2016.
- D65. Antiohos, S.K. and V.G. Papadakis, "An optimum use of industrial by-products and mixtures for reducing the total environmental cost of constructions", 9th International Congress: Environment, Efficiency and Economic Challenges for Concrete, Dundee, Scotland, 4-6 July 2016.

E. Presentations in Panhellenic Conferences with Reviewers (in Greek)

45 presentations

F. Invited speaker (selections)

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. "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.
3. "Experimental Investigation and Theoretical Modeling of Pozzolanic Activity in Concrete", DTI, Division of Building Technology, Taastrup, Denmark, 26-5-1998.

4. "Utilization of Lignite Fly Ash in Construction", RWE Energie Aktiengesellschaft, Essen, Germany, 16-12-1998.
5. "Supplementary Cementing Materials in Concrete", Danish Technological Institute, Division of Building Technology, Taastrup, Denmark, 10-2-1999.
6. "The PANEEA 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.
7. «Technology Transfer & Innovation Management», FP6 CODESNET meeting, Shannon Development, University of Limerick, Ireland 8-3-2007.
8. «Μικρομεσαίες Επιχειρήσεις – Ανάπτυξη μέσω Έρευνας & Καινοτομίας», Ημερίδα «Έρευνα προς Όφελος των Μικρομεσαίων Επιχειρήσεων στο 7^ο Πρόγραμμα Πλαίσιο Έρευνας και Τεχνολογικής Ανάπτυξης στην ΕΕ», EOMMEX, Αθήνα 21-6-2007.
9. «SMEs sector in Western Greece, Epirus, Puglia and Sicily», HUREDEPIS project meeting, Science & Technology Park of Sicily, Catania, Italy 16-11-2007.
10. «WaterTech Cluster of Western Greece – Regional Innovation Pole of Western Greece», 1st STinno project meeting, Marrakesh, Morocco, 12-1-2010.
11. «WaterTech Cluster of Western Greece – Regional Innovation Pole of Western Greece», 1st SWAM project meeting, Murcia, Spain, 11-3-2010.
12. «Tools and methods system for the provision of social economy services», 3rd Transnational Meeting of the project *URBAN N.O.S.E. - Network of Social Enterprises*, URBACT II, Koropi, Athens, 15-4-2010.
13. «The research-driven WaterTech cluster of Western Greece», 2nd SWAM project meeting, Patras, 7-7-2010.
14. «Animating and sensitising the territory upon Social Economy», 4th Transnational Meeting of the project *URBAN N.O.S.E. - Network of Social Enterprises*, URBACT II, Grenoble, France, 10-9-2010.
15. «Encouraging entrepreneurs & education on water technology – Western Greece», 3rd SWAM project meeting, Kiryat-Shmona, Galilee, Israel, 18-1-2011.
16. «Water technologies & water clusters challenges - Case-studies in Western Greece», 3rd SWAM project meeting, Kiryat-Shmona, Galilee, Israel, 18-1-2011.
17. «Competitiveness and research analysis of WaterTech research-driven clusters», 4th SWAM project meeting, Patras, 30-5-2011.
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22. «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.
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