

CURRICULUM VITAE

Vagelis G. Papadakis

Chemical Engineer, PhD
Professor - University of Patras, Greece

- 2019 -

PERSONAL

Name : Vagelis (Evangelos)
Surname : Papadakis
Father Name : George
Mother Name : Garyfalia
Date of Birth : January 5, 1964
Place of Birth : Elikia, 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 (1986)
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)
7. International Union of Laboratories and Experts in Construction Materials, Systems and Structures (RILEM) – Member. Nr. 7730 (2017)

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, Qatar National Research Fund (QNRF, and panel member for the programmatic evaluation), FWO Belgium, Greek General Secretariat of Research & Technology*. Coach of European Commission for SME Instrument – H2020.
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. International Scientific Committee member of the iconBM - International Conference on Bio Mass, Florence, Italy, 4-7 May, 2014. International Advisory Committee Member of the 2014 Int’l Conference on Advances in Concrete Construction (ICAC14), 24-29 August 2014, Busan, Korea. Member of the *Scientific Committee*: 18th Greek Conference for Concrete, TEE, Athens, 29-31/3/2018. Member of the *Scientific Committee* for the segment *Durability, Monitoring and Repair of Structures/ RILEM Spring Convention and International Conference on Sustainable Materials, Systems and Structures, SMSS2019*. Member of the *Scientific Committee* of the Workshop “CO₂ storage in concrete” - CO2STO-2019, June 2019, Marne la Vallée, France.
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*.
11. Member of RILEM TC 281-CCC - Carbonation of concrete with supplementary cementitious materials.

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:
- Development of high durability and performance concrete by using pozzolans and optimum material synthesis.
 - Prediction of the concrete properties from the knowledge (quality and quantity) of its composition materials.
 - 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, in cooperation with Prof. Stamatis Tsimas
- 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 8 PhD Theses (one completed in 2014, one in 2016). Member of the supervising committee for more than 15 PhD Theses.
- Supervisor of 15 MSc Theses.
- Supervisor of more than 70 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

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

- GSRT
1st Phase
- 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
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
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 (PYRICE II)”, 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^o 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, Győr/Hungary, Local Government of Győr 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 AEIPLOUS, Patras/Greece, Cultural & Educational Technology Institute ATHENA - Research & Innovation Centre in Information, Communication and Knowledge Technologies, Xanthi/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- AEIPLOUS (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 - 4/2021, 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 500s at corrosive environment", *Journal of Materials Engineering and Performance (JMEP)*, **16**(2), 236-241 (2007).
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B. Patents

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- 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.
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- 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.
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- 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. Arvaniti, E.N., C.D. Stylios and V.G. Papadakis, "Open social innovation – Challenges and opportunities for Greece", International Conference for Entrepreneurship, Innovation and Regional Development, Thessaloniki, Greece, 31/8-1/9 2017.
- D66. Arvaniti, E.N., C.D. Stylios and V.G. Papadakis, "The challenge of introducing Open Social Innovation for urban sustainable growth", International Geographical Union, Commission on Geography of Governance, International Annual Conference, "Local Governance in the New Urban Agenda", Lecce, Italy, 19-21 October 2017.
- D67. Siakavelas, G.I, N.D. Charisiou, V.G. Papadakis, K. Polychronopoulou and M.A. Goula, "Innovative valorization of biogas for the production of renewable ethylene via oxidative coupling of CH₄ and CO₂ hydrogenation", International Conference on Advanced Energy Materials, Surrey, England, 10-12 September 2018.
- D68. Demis, S. and V.G. Papadakis, "Design for durability of reinforced concrete structures under the hot desert climate of the Arabian Peninsula", RILEM Spring Convention and Sustainable Materials, Systems and Structures Conference, Rovinj, Croatia, 18-22 March 2019.

- D69. Stratoura, M., E. Badogiannis, K.K. Sideris and V.G. Papadakis, "Development of durable and structural lightweight concrete", RILEM Spring Convention and Sustainable Materials, Systems and Structures Conference, Rovinj, Croatia, 18-22 March 2019.
- D70. Konstantopoulos, G., C.A. Apostolopoulos and V.G. Papadakis, "Correlation of Surface Cracking Characteristics with Chloride Penetration and Reinforcement Corrosion of RC Elements", RILEM Spring Convention and Sustainable Materials, Systems and Structures Conference, Rovinj, Croatia, 18-22 March 2019.

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

55 presentations

F. Invited speaker (selections among 77)

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 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.
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.
18. «International overview of cluster policies», 3rd STInno project meeting, Lahti, Finland 16-7-2011.
19. «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.
20. «Policies for the support of regional research-driven clusters – Impacts & Conclusions», 4th STInno project meeting, Terni, Italy 13-12-2011.
21. «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.
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.
23. «PYRICE II project: Overall review, results and achievements», PYRICE II – Final Review, Agrino Plant, 6-6-2012, Sindos, Thessaloniki.
24. 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.
25. 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.
26. «Balanced approach between sustainable and durable design of buildings», INNOVA NET - winter school, University of Patras, 31 March 2014, Patras.
27. «A cost-effective system development for complete exploitation of olive mill wastewater» & «Techno-Economical Design and Pilot Production of Advanced and High-Added Value Materials from Rice Husk Ash», The Belt & Road Visiting Scholar Program, Beijing University of Chemical Technology, 5 June 2018, Beijing, China.

G. Selected Reports, Theses, and Books (among 71)

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 PANEEA QLK5-CT-2002-71666*, July 2003.
 18. Papadakis, V.G., T. Benetatos, G. Karelak, 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.
30. Papadakis, V.G. «Doha Metro- Gold Line: Concrete Service Life Estimation», *Report to Joint Venture ALYSJ*, Doha, Qatar, April 2015.

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h-index: Google Scholar: **30**, Scopus: **26**