

Gavela Stamatia
Chemical Engineer, MSc, PhD

Contact Information	
Birth date: 14/01/1979	Address: 112 Spartis Str, Kallithea, GR17675 Athens
Tel: +30 6973579307	E-mail: matina@gavela.gr
Education	
December 2003 – April 2009: PhD in Chemical Engineering, National Technical University of Athens. Thesis title: «Study of the incorporation of thermoplastic waste in concrete».	
October 2005 – October 2006: MSc in Materials Science and Technology, National Technical University of Athens	
September 1998 – April 2003: Diploma in Chemical Engineering, School of Chemical Engineering, National Technical University of Athens, Greece	
Employment	
School of Pedagogical and Technological education – Department of Civil & Structural Engineering Educators	
<ul style="list-style-type: none">Academic years 2011-2012, 2012-2013, 2014-2015, 2015-2016, 2016-2017, 2017-2018, 2018-2019, 2019-2020, 2020-2021, 2021-2022, 2022-2023 Teaching Course: Building Materials	
University of West Attica – Department of Civil Engineering	
<ul style="list-style-type: none">Academic years 2019-2020, 2020-2021, 2021-2022, 2022-2023 Teaching Course: Building Materials	
Hellenic Accreditation System S.A. (ESYD)	
<ul style="list-style-type: none">August 2013 – today ESYD Expert on concrete and aggregates certification bodies.	
K. Andreou LTD – Chemical Laboratories	
<ul style="list-style-type: none">October 2011 – today Quality manager	
Hellenic Organization for Standardization	
<ul style="list-style-type: none">June 2022 – today Terminology and translation harmonization verification within the framework of the "Translation Services of European Standards from English to Greek" project	
Athens University of Applied Sciences - Faculty of Technological Applications - Department of Civil Engineering	
<ul style="list-style-type: none">Academic years 2016-2017, 2017-2018 Teaching Course: Building Materials	
ARNOS – Studies & Publishing	
<ul style="list-style-type: none">May 2009 – June 2013 Teaching of Courses: Inorganic and Analytical Chemistry, Basic Principles of Chemical Engineering, Electrochemistry, Process Control, Chemical Reaction Engineering	

BETANET S. A.

- 1/9/2006 - 1/9/2008

Quality manager

Coordination and supporting the company on concrete technology

Research and development in concrete field

National Technical University of Athens – School of Chemical Engineering

Laboratory teaching assistance at the undergraduate course: “Analytical chemistry”. (Acad. years: 2003-2004, 2004-2005, 2005-2006, 2006-2007)

Laboratory teaching assistance at the undergraduate course: “Processes of Advanced Inorganic Materials”. (Acad. years: 2003-2004, 2004-2005, 2005-2006, 2006-2007)

Research Projects

- 1) 01/01/2003 - 30/04/2003: Characterisation of plastic mixtures from municipal and industrial waste. Researcher
- 2) 05/09/2003 - 23/12/2003: Part of a study that concerns the production of a composite material consisting of concrete and low-density polyethylene. Researcher
- 3) 19/01/2004 - 18/02/2004: Quality control of inorganic products (wholesale of chemical products). Researcher
- 4) 01/01/2004 - 01/04/2004: Quality control of cement grouts used for the restoration of Soufari Serai building for General State Archives of Ipeiros. Researcher
- 5) 01/03/2004 - 31/10/2006: Building materials containing industrial and agricultural byproducts, as well as recycled materials: Designing, production and durability. Researcher
- 6) 04/07/2006 - 31/12/2007: Investigation of the development of advanced with high added value materials, from rice husk ash. Researcher
- 7) 01/02/2007 - 31/01/2009: Synthesis, characterization and study of the structure of nitrogen doped carbon nanotubes. Researcher
- 8) 02/01/2009 - 28/02/2009: Control of organic coatings. Researcher
- 9) 01/05/2009 - 30/06/2009: Corrosion measurements on existing piping supporting metallic structures. Researcher
- 10) 6/4/2015 - 31/7/2015: Magnetic Nanoparticles for targeted MRI therapy. Researcher

Publications (178 citations, scopus h-index: 5)**Publications in Conference Proceedings**

- 1) D. Christoulis, S. Gavela, V. Kaselouri-Rigopoulou, D. Pantelis, “TiB₂/Ni and TiB₂/Al₂O₃ Composite ceramics”, 4th Panhellenic Conference of Chemical Engineering, Greece, 2003.
- 2) S. Gavela, C. Karakosta, C. Nydriotis, V. Kaselouri – Rigopoulou, S. Koliass, P.A. Tarantili, C. Magoulas, D. Tassios and A. Andreopoulos, “A study of concretes containing thermoplastic wastes as aggregates”, Conference on Use of the Recycled Materials in Building and Structures, Barcelona, Spain, 2004.
- 3) V. Kaselouri – Rigopoulou, S. Gavela, D. Bakirtzis and S.Koliass, “Synthesis of cement clinker from raw meal containing waste citrus fruits”, 7th International Conference on Concrete Technology in Developing Countries, Malaysia, 2004.

- 4) V. Kaselouri – Rigopoulou, S. Koliass, S. Gavela, “Study of the Thermal Behavior of Concrete Containing Thermoplastic Wastes as Aggregates”, Global Construction: Ultimate Concrete Opportunities - 6th International Congress, Dundee, Scotland, 2005.
- 5) S. Gavela, F. Babou, P.A. Tarantili, C. Magoulas, V. Kaselouri-Rigopoulou, “Study of utilization of thermoplastic waste as aggregates in concrete”, 2nd Panhellenic Conference of Plastics, Greece, Athens, 2005.
- 6) V. Kaselouri-Rigopoulou, S. Gavela, “Utilisation of waste citrus fruits in cement production”, 5th Panhellenic Conference of Chemical Engineering, Thessaloniki, Greece, 2005.
- 7) V. Kasselouri – Rigopoulou, S. Gavela, S. Koliass, “Use of polymeric wastes in the concrete production”, 7th World Congress on Recovery, Recycling and Re – integration, Beijing, China, 2005.
- 8) S. Gavela, C. Hatzifoti, N. Hatzifotis, S. Koliass, V. Kasselouri-Rigopoulou, “Physiko - mechanical properties of concrete containing thermoplastic wastes as aggregates”, 1st Panhellenic Conference for the use of industrial by-products in buildings, Thessaloniki, Greece, 2005.
- 9) S. Gavela, V. Kaselouri-Rigopoulou, “Cement production using waste citrus fruits – Mechanical properties of mortars”, 15th Conference on Concrete, Alexandroupoli, Greece, 2006.
- 10) S. Gavela, S. Koliass, M. Avramopoulou, V. Kasselouri - Rigopoulou, “Investigation on the possibility of using concrete containing plastic waste as aggregates for pavement construction”, 10th International Symposium on Concrete Roads, Brussels, Belgium, 2006.
- 11) S. Gavela, S. Koliass, K. Kordatos and V. Kasselouri – Rigopoulou, “A new approach of utilization of thermoplastic waste”, 1st Conference on Environmental Management, Planning and Economics (CEMEPE), Skiathos, Greece, 2007.
- 12) K. Kordatos, A. Ntziouni, S. Gavela and V. Kasselouri-Rigopoulou, “Synthesis of ZSM-5 zeolite using silica source from a waste of agricultural industry. The case of Greek rice husk ash”, 1st Conference on Environmental Management, Planning and Economics (CEMEPE), Skiathos, Greece, 2007.
- 13) S. Gavela, L. Iliadis, K. Kordatos, V. Kasselouri-Rigopoulou, “Study of rice husk ash structure for the synthesis of ZSM-5 zeolites”, 6th Panhellenic Conference of Chemical Engineering, Athens, Greece, 2007.
- 14) K. Kordatos, St. Gavela, A. Ntziouni, V. Kasselouri – Rigopoulou, “Synthesis of highly siliceous ZSM-5 zeolite using silica from rice husk ash”, 4th International Zeolite Membrane Meeting, Zaragoza, Spain, 2007.
- 15) A. Ntzioui, S. Gavela, A. Rossos, K. Kordatos, V. Kasselouri-Rigopoulou, “Techniques of ZSM-5 zeolite production, from rice husk ash”, 6th Panhellenic Conference of Chemical Engineering, Athens, Greece, 2007.
- 16) S. Tsimas, V. Kasselouri-Rigopoulou, A. Moutsatsou, I. Papagianni-Papadopoulou, S. Antiohos, C.T. Galbenis, G. Tzouvalas, S. Gavela, O. Karakasi, E. Anastasiou, “Building materials containing industrial and agricultural by-products, as well as recycled materials: Design, production and durability”, PYTHAGORAS – Conference for the Scientific Research in National Technical University of Athens, Lesvos, Greece, 2007.
- 17) S. Gavela, A. Ntziouni, E. Rakanta, N. Kouloumbi, V. Kasselouri-Rigopoulou, “Concrete Containing Thermoplastic Waste as Aggregates. The Effect on the Rebars’ Corrosion”, Waste Management 2008, Granada, Spain, 2008.
- 18) S. Gavela, S. Koliass, K. Kordatos, V. Kasselouri-Rigopoulou, “Mechanical properties of concrete containing high density polyethylene as aggregates”, 1st Panhellenic Conference on Building Materials, Athens, Greece, 2008.
- 19) S. Gavela, S. Koliass, K. Kordatos and V. Kasselouri – Rigopoulou, “Mechanical properties of concrete containing polypropylene and high density polyethylene as aggregates”, Concrete:

Construction's Sustainable Option - 7th International Congress, Dundee, Scotland, 2008.

20) K. Kordatos, A. Ntziouni, L. Iliadis, S. Gavela, K. Pistiolas, A. Kyritsi, V. Kasselouri-Rigopoulou, "Controlled production conditions and characterization of rice husk ash for the synthesis of ZSM-5 zeolite", Global Symposium on Recycling, Waste Treatment and Clean Technology (REWAS), Mexico, 2008.

21) I. Xifaras, K. Kordatos, A. Ntziouni, S. Gavela, V. Kasselouri-Rigopoulou, "Study of ZSM-5 zeolites synthesis from cullet", 7th Panhellenic Conference of Chemical Engineering, Patra, Greece, 2007.

22) S Gavela, E Babou, P A Tarantili, V Kasselouri – Rigopoulou, "Plastic waste as aggregates in light weight concrete: the effect of simulated hydration process on their properties", UKIERI Concrete Congress: Innovations in Concrete Construction, India 2013.

23) N. Nikoloutsopoulos, D. Passa, S. Gavela, C. Antonopoulos, A. Sotiropoulou, "Experimental study of shear behaviour of reinforced concrete beams, 18th Concrete Greek Conference, Athens, 2018.

24) S. Gavela, G. Papadakos, N. Nikoloutsopoulos, D. Passa, A. Sotiropoulou, "Determination of type-A uncertainty of concrete compressive strength test", 18th Concrete Greek Conference, Athens, 2018.

25) N. Nikoloutsopoulos, D. Passa, S. Gavela and A. Sotiropoulou, Comparison of shear strengthening techniques of reinforced concrete beams with carbon fiber reinforced polymers (CFRPs), 1st International Conference of the Greek Society of Experimental Mechanics of Materials, Athens, 2018.

26) S. Gavela, N. Nikoloutsopoulos, G. Papadakos, D. Passa, A. Sotiropoulou, Multifactorial experimental analysis of concrete compressive strength as a function of time and water to cement ratio, 1st International Conference of the Greek Society of Experimental Mechanics of Materials, Athens, 2018. (The presentation was awarded with Young Scientist Award)

27) R. Pirovolaki, S. Gavela, G. Papadakos, Risk and opportunities assessment in a public institution of vocational training, 6th International Conference for the Promotion of Educational Innovation, Larissa, 2020.

28) R. Pirovolaki, S. Gavela, G. Papadakos, Χρήση της ισορροπημένης κάρτας επιδόσεων για την αξιολόγηση κινδύνων και ευκαιριών στο ΔΙΕΚ Αχαρνών, 7th International Conference for the Promotion of Educational Innovation, Larissa, 2021.

29) S. Gavela, G. Papadakos, P. Marmaras, D. Passa, A. Sotiropoulou, Robust analysis of concrete compressive strength test with confidence ellipses, 8th Metrology Conference, Thessaloniki, 2022.

30) S. Gavela, G. Karydis, G. Papadakos, G. Zois, A. Sotiropoulou, Uncertainty of concrete compressive strength determination by a combination of rebound number, UPV and uniaxial compressive tests on cubic concrete samples, 38th Danubia-Adria Symposium on Advances in Experimental Mechanics, Poros, 2022.

Publications in Scientific Journals

1) K. Kordatos, S. Gavela, A. Ntziouni, K.N. Pistiolas, A. Kyritsi and V. Kasselouri-Rigopoulou, "Synthesis of highly siliceous ZSM-5 zeolite using silica from rice husk ash", Microporous and Mesoporous Materials 115 (1-2), 2008, p. 189-196.

2) K. Kordatos, A.D. Vlasopoulos, S. Strikos, A. Ntziouni, S. Gavela, S. Trasobares and V. Kasselouri-Rigopoulou, "Synthesis of carbon nanotubes with pyrolysis of solid Ni(dmg)₂", Electrochimica Acta, 54 (9), 2009, p. 2466-2472.

3) S. Gavela, S. Koliass, C. Kordatos, V. Kasselouri – Rigopoulou, "A new approach of utilization of

thermoplastic waste”, *Fresenius Environmental Bulletin* 18 (2), 2009, p. 224-228.

4) S. Gavela, A. Ntziouni, E. Rakanta, N. Kouloumbi, V. Kasselouri-Rigopoulou. “Corrosion behaviour of steel rebars in reinforced concrete containing thermoplastic wastes as aggregates”, *Construction and Building Materials* 41, 2013, p. 419–426.

5) A. Sotiropoulou, S. Gavela, N. Nikoloutsopoulos, D. Passa, G. Papadakos, “Experimental study of wood shaving addition in mortar and statistical modelling on selected effects”, *Journal of the Mechanical Behavior of materials* 26, 2017, p. 55-63.

6) S. Gavela, N. Nikoloutsopoulos, G. Papadakos, D. Passa, A. Sotiropoulou, “Multifactorial experimental analysis of concrete compressive strength as a function of time and water-to-cement ratio, *Structural Integrity Proceedia* 10, 2018, p. 135-140.

7) N. Nikoloutsopoulos, D. Passa, S. Gavela and A. Sotiropoulou, Comparison of shear strengthening techniques of reinforced concrete beams with carbon fibre reinforced polymers (CFRPs), *Structural Integrity Proceedia* 10, 2018, p. 141-147.

8) S. Gavela, N. Nikoloutsopoulos, G. Papadakos, D. Passa, A. Sotiropoulou, Experimental uncertainty budget for concrete compressive strength test based on a multifactorial analysis, *Frattura ed Integrità Strutturale*, 2019, Vol 50, p. 383-394.

9) S. Gavela, N. Nikoloutsopoulos, G. Papadakos, Anastasia Sotiropoulou, Combination of compressive strength test and ultrasonic pulse velocity test with acceptable uncertainty, *Material Design and Processing Communications*, 2020, Vol 3, e171.

10) S. Gavela, E. Rakanta, A. Ntziouni, V. Kasselouri-Rigopoulou, Eleven-year follow-up on the effect of thermoplastic aggregates' addition to reinforced concrete, *Buildings*, 2022, 12(11), 1779.

Chapters in Books

1) S. Gavela, G. Papadakos, V. Kasselouri-Rigopoulou (2017) A Suggestion for Standardizing a Traceable Process for the Determination of the Mechanical Properties of Concrete Containing Thermoplastic Polymers as Aggregates. In: Ritter E (ed) *Thermoplastic Composites: Emerging Technology, Uses and Prospects*, 1st edn. Nova Publications, New York, pp 143-164.

2) S. Gavela, A. Sotiropoulou (2019) Cultural Heritage and Education/Training/Occupational Activity of Engineers in Greece. In: A. Moropoulou, M. Korres, A. Georgopoulos, C. Spyarakos, C. Mouzakis (Eds.) *Transdisciplinary Multispectral Modeling and Cooperation for the Preservation of Cultural Heritage*, *Communications in Computer and Information Science* 961, Springer, pp 309-318.

3) D. Passa, S. Gavela, G. Papadakos, G. Karydis (2022) Root-Cause Analysis on the Risk of Process Failure When Testing the Resilience of a Stone Masonry Building. In: A. Osman, A. Moropoulou (Eds) *Advanced Nondestructive and Structural Techniques for Diagnosis, Redesign and Health Monitoring for the Preservation of Cultural Heritage*. Springer Proceedings in Materials, vol 16. Springer, pp 156-164.

Member of:

Technical Chamber of Greece

Greek Society of Experimental Mechanics of Materials

Board of Directors of Greek Women's Engineering Association.

Editorial board of “Technical Annals” scientific journal of Technical Chamber of Greece

Editorial board of *Journal of Civil, Construction and Environmental Engineering* (Science Publishing Group)

Standing Committee of Technical Chamber of Greece for Quality Infrastructures

Member of Scientific Committees of Conferences

- 18th Concrete Greek Conference, Athens, 29-31 March 2018.
- Transdisciplinary Multispectral Modelling and Cooperation for the Preservation of Cultural Heritage», Athens, 10-13 October 2018.
- Transdisciplinary Multispectral Modelling and Cooperation for the Preservation of Cultural Heritage: Rebranding the World in Crisis through Culture (TMM_CH), Athens, 12-15 December 2021.
- Transdisciplinary Multispectral Modelling and Cooperation for the Preservation of Cultural Heritage: Recapturing the World in Conflict through Culture promoting mutual understanding and Peace (TMM_CH), Athens, 20-23 March 2023.