

Katerina Stamatelatou

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Education

- 7/12/ 1999: PhD in Chemical Engineering, University of Patras, Greece. Title of thesis: “Optimisation of anaerobic digestion systems”
- July 1994: Diploma of Chemical Engineering, University of Patras, Greece (grade 7.98)
- 1989: Graduated from the “Protipon” Lyceum of Patras, Greece

Academic career

- 2021-today **Associate Professor on “Environmental technologies for the valorisation of biomass and wastes”** in the Department of Environmental Engineering, Democritus University of Thrace, Research Unit for the development of environmental technologies for the valorisation of biomass and wastes
- 2010-2021 **Assistant Professor on “Environmental Technologies”** in the Department of Environmental Engineering, Democritus University of Thrace, Laboratory of Wastewater Management and Treatment Technologies (Director: prof. A. Aivasidis)
- 2012-today (excluding 2021-2022) **Associate Educational Personnel** in the Postgraduate Program of Studies “Environmental Design of Infrastructure Works”, Hellenic Open University
- 2001 – 2010 **Specialized Technical Laboratory Personnel** Department of Chemical Engineering, University of Patras, Greece
- 1999 – 2010 **Postdoc researcher** Laboratory of Biochemical Engineering and Environmental Technology, Department of Chemical Engineering, University of Patras, Greece
- 1997 **Authorization to pursue the occupation** of Chemical Engineer from Hellenic Technical Chamber

Teaching experience

In the department of Environmental Engineering, Democritus University of Thrace, Greece

- Undergraduate courses “Anaerobic processes for the valorization of wastes and biomass” (2018-2021, 2022-today), “Simulation of bioprocesses in environmental engineering” (2020-2021, 2022-today), “Process control” (co-teaching) (2017 –2021), “Physical Unit Operations” (2009 – 2021, 2022-today), “Chemical and Biochemical Unit Operations” (2009 –2021, 2022-today)
- Postgraduate courses “Chemical and Biochemical Unit Operations” (2010-2013), “Simulation and Control of Wastewater Treatment Units” (2011-2021, 2022-today) “Advanced processes for the treatment of wastewater and water reclamation.” (2011-2021, 2022-today)

In the postgraduate program of studies “Environmental Design of Infrastructure Works”, Hellenic Open University

- “Technology for Managing Environmental Impacts” (2012-today)

In the department of Chemical Engineering, University of Patras, Greece

- Lab courses for the postgraduate courses “Computers and algorithms”, “Introduction to programming”, “Numerical analysis” (2001-2010)

- Assistance in the undergraduate courses “Laboratory of Organic Chemistry” (1994-1995), “Process Simulation and Control” (1994-1996), “Laboratory of Physical Unit Operations” (1995-1996), “Introduction to personal computers and laboratory” (1996-1997) “Principles of Biochemical” Engineering (1997-1998)

Thesis supervision (on going and completed)

- Undergraduate: 18
- Postgraduate: 31
- PhD: 5

Research interests and experience

My scientific research has been focused on the development of bioprocess and their application for valorizing organic wastes/wastewaters and biomass for the production of energy and materials. Moreover, the bioprocesses are studied as the core technologies in a biorefinery concept which also involves physico-chemical and thermo-chemical processes for the integrated management of biomass and wastes within the circular economy. The study includes the design - operation of bioreactors and the simulation of the processes.

- I am an *editor* in Water Science and Technology.
- I am a *guest editor* of the special issue of Journal of Cleaner production titled “Food Waste: Challenges and Opportunity for the Emerging Bio-Economy” (2018)
- I have been a *Co-Editor of* Sewage Treatment Plants: Economic Evaluation of Innovative Technologies for Energy Efficiency, edited by **K. Stamatelatou** and K. Tsagarakis, IWA publishing 2015, London, UK.
- I am reviewer in 17 international journals
- I have participated or chair the scientific and/or organizing committees of 8 international conferences
- I have been a panel member for the evaluation of 7 PhD thesis
- I have been a panel member for the evaluation of research proposals submitted under the call of the Portuguese public funding agency for R&D (FCT) entitled «*Stimulus of Scientific Employment, Individual Support*» in the category of “Environmental Biotechnology and Engineering” (2018-2021)

Publications

I am the coauthor of 51 research papers in peer reviewed journals, 16 book chapters and 70 publications in proceedings of international and national conferences. The total number of citations excluding self-citations of all authors is 3050 and the h-index is 26. Publications per category of the last 5 years (2017-2022) are listed below.

Research papers in international peer reviewed journals

1. *	Kalogiannis, A., Vasiliadou, I.A., Spyridonidis, A., Diamantis, V., Stamatelatou, K. (2022). Biogas production from chicken manure wastes using an LBR-CSTR two-stage system: process efficiency, economic feasibility, and carbon dioxide footprint. <i>Journal of Chemical Technology and Biotechnology</i> , 97 (10), pp. 2952-2961. DOI: 10.1002/jctb.7170
2.	Papirio, S., Trujillo-Reyes, Á., di Perta, E.S., Kalogiannis, A., Kassab, G., Khoufi, S., Sayadi, S., Frunzo, L., Esposito, G., Feroso, F.G., Stamatelatou, K. (2022). Exploring the Biochemical Methane Potential of Wholesale Market Waste from Jordan and Tunisia for a Future Scale-Up of Anaerobic Digestion in Amman and Sfax Waste and Biomass Valorization, 13 (9), pp. 3887-3897. DOI: 10.1007/s12649-022-01790-1
3.	Vasiliadou, I.A., Kalogiannis, A., Spyridonidis, A., Katsaounis, A., Stamatelatou, K. Effect of applied potential on the performance of an electroactive methanogenic biocathode used for

	bioelectrochemical CO ₂ reduction to CH ₄ (2022) <i>Journal of Chemical Technology and Biotechnology</i> , 97 (3), pp. 643-652. DOI: 10.1002/jctb.6946
4.	Spyridonidis, A., Vasiliadou, I.A., Stamatelatos, K. Effect of Zeolite on the Methane Production from Chicken Manure Leachate (2022) <i>Sustainability (Switzerland)</i> , 14 (4), art. no. 2207, . DOI: 10.3390/su14042207
5.	Diamantis, V., Eftaxias, A., Stamatelatos, K., Noutsopoulos, C., Vlachokostas, C., Aivasidis, A. Bioenergy in the era of circular economy: Anaerobic digestion technological solutions to produce biogas from lipid-rich wastes (2021) <i>Renewable Energy</i> , 168, pp. 438-447. DOI: 10.1016/j.renene.2020.12.034
6.	Eftaxias, A., Diamantis, V., Michailidis, C., Stamatelatos, K. , Aivasidis, A. (2021). The role of emulsification as pre-treatment on the anaerobic digestion of oleic acid: process performance, modeling, and sludge metabolic properties. <i>Biomass Conversion and Biorefinery</i> 11 (2), pp. 251-260. , https://doi.org/10.1007/s13399-019-00600-4 .
7.	Eftaxias, A., Diamantis, V., Michailidis, C. Stamatelatos, K. , Aivasidis, A. (2020). Comparison of anaerobic digesters performance treating palmitic, stearic and oleic acid: determination of the LCFA kinetic constants using ADM1. <i>Bioprocess Biosyst Eng.</i> , 43(7), pp. 1329-1338
8. *	Zhurka, M., Spyridonidis, A., Vasiliadou, I.A., Stamatelatos, K. (2020). Biogas production from sunflower head and stalk residues : Effect of alkaline pretreatment. <i>Molecules</i> , 25 (1), art. no. 164.
9. *	Spyridonidis, A., Vasiliadou, I.A., Akrotos, C.S., Stamatelatos, K. (2020). Performance of a full-scale biogas plant operation in greece and its impact on the circular economy. <i>Water (Switzerland)</i> 12(11),3074, pp. 1-19
10.*	A.Spyridonidis, Th. Skamagkis, L. Lambropoulos, K. Stamatelatos (2018). Modeling of anaerobic digestion of slaughterhouse wastes after thermal treatment using ADM1. <i>Journal of Environmental Management</i> , 224 , 49-57.
11.*	S. Marnasidis, K. Stamatelatos , E. Verikouki and K. Kazantzis (2018). Assessment of the generation of empty pesticide containers in agricultural areas. <i>Journal of Environmental Management</i> , 224 , 37-48.

Chapters in books

1. *	Vasiliadou I.A., Gioulounta K. and Stamatelatos K. (2022). Production of Biogas Via Anaerobic Digestion in "Handbook of biofuels production: Processes and technologies (third edition)", Woodhead Publishing Series in Energy, edited by Rafael Luque, Carol Lin, Karen Wilson, Chenyu Du
2.	Weiss, S., Ustak, S., Guibaud, G., Stamatelatos, K. , Collins, G., Esposito, G., Paulauskas, V.A., Wardak, C., Mucha, A.P., Savić, D., Stres, B., Feroso, F.G., Yekta, S.S., Lenz, M., Hullebusch, E.D., Çalli, B., & Roussel, J. (2018). Trace element supplementation as a management tool for anaerobic digester operation: benefits and risks : eBook. <i>Water intelligence online</i> , 17, 9781780409429.
3. *	K.Stamatelatos (2017) "Novel biological processes for nutrient removal and energy recovery from wastewater" in <i>Wastewater and Biosolids Management</i> , edited by I. Kalavrouziotis, IWA publishing, London, UK.

Participations in international conferences

1.	Kalogiannis A, Vasiliadou I.A. and Stamatelatos K. " Development of a two-stage anaerobic digestion system for treating fruit and vegetable wastes from open markets" 1st International Conference on Sustainable Chemical and Environmental Engineering, Rethymno, Greece, 31 August to 4 September 2022.
2.	Spyridonidis A., Vasiliadou I.A. and Stamatelatos K. "Biogas upgrade via ex-situ technologies" 17th International Conference on Environmental Science and Technology,

	Athens, Greece, 1 to 4 September 2021.
3.	I.A. Vasiliadou, A. Kalogiannis, A. Spyridonidis, A. Katsaounis, K. Stamatelatou “Bioelectrochemical reduction of carbon dioxide to methane” 2nd Online Symposium on Circular Economy and Sustainability, Online Event, Alexandroupolis, Greece, 14-16 July, 2021
4.	Stamatelatou, K. , Nikolaou, I., Martos, A., Rodriguez-Perez S., Esposito, G. “Making value from wastes: valorization of open market wastes in Mediterranean countries”, Online Symposium on Circular Economy and Sustainability Alexandroupolis, Greece, 1-3 July, 2020
5.	Spyridonidis, A., Margellou, A., Vasiliadou, I.A., Triantafyllidis, K.S., Stamatelatou, K. “Evaluation of biochemical methane potential from sunflower residues: effect of hydrothermal pretreatment”, Online Symposium on Circular Economy and Sustainability Alexandroupolis, Greece, 1-3 July, 2020
6.	Kalogiannis, A., Spyridonidis, A., Vasiliadou, I.A., Stamatelatou, K. “Biogas production from chicken manure wastes using a two-stage LBR-CSTR system: The effect of zeolite as bulking and adsorbing agent”, Online Symposium on Circular Economy and Sustainability Alexandroupolis, Greece, 1-3 July, 2020
7.	Spyridonidis A., Zhurka M., Vasiliadou I.A., Lytra V., Stamatelatou K. “Biogas production from sunflower residues: effect of pretreatment” (oral presentation). 16th International Conference on Environmental Science and Technology. Rhodes, Greece, 4 to 7 September 2019.
8.	A. Spyridonidis, I.A. Vasiliadou, K. Athanasiou, K. Stamatelatou. “Effect of zeolite addition on the biogas production from chicken manure leachate” (oral presentation). 16th World Congress on Anaerobic Digestion, 23-27 June 2019, Delft - The Netherlands.
9.	A. Spyridonidis, I.A. Vasiliadou, S. Antonoudis, C. Kivraki, K. Stamatelatou. “Anaerobic digestion of slaughterhouse wastes after hygienization in a continuous two-stage process” (poster presentation). 16th World Congress on Anaerobic Digestion, 23-27 June 2019, Delft - The Netherlands.
10.	A. Spyridonidis, K. Stamatelatou. “Simulation of biogas production from slaughterhouse wastewater in continuously operated anaerobic digesters” (oral presentation). 7th International Conference on Engineering for Waste and Biomass Valorisation, Prague, Czech Republic, July 2-5, 2018.
11.	A. Spyridonidis, S. Antonoudis, C. Kivraki, K. Stamatelatou «Comparison of two and one stage anaerobic digesters for treatment of slaughterhouse wastewaters» (oral presentation). “7th European Bioremediation Conference (EBC-VII)” Chania, June 25-28, 2018
12.	A. Spyridonidis, K. Stamatelatou «Valorisation of agroindustrial residues and biomass for production of biofuels and materials” (poster presentation). “7th European Bioremediation Conference (EBC-VII)” Chania, June 25-28, 2018
13.	A. Spyridonidis, Th. Skamagkis, L. Lambropoulos, K. Stamatelatou. “Anaerobic digestion of animal wastes after rendering in a CSTR – experimental and modeling results” 1st International Congress on Metals in Anaerobic Biotechnologies (poster presentation), pp 134, Seville, Spain, October 4th – 6th , 2017.
14.	A. Spyridonidis, K. Stamatelatou. “Simulation of biogas production from animal wastes after rendering in an anaerobic contact process” 1st International Congress on Metals in Anaerobic Biotechnologies (poster presentation), pp 135, Seville, Spain, October 4th – 6th, 2017
15.	K. Stamatelatou “Benefits and risks associated sewage reuse in agriculture”, WATER CHALLENGES IN XXI CENTURY. IWA conference, Livorno, Italy, 11-13 September 2017

Participation in projects

Leader on behalf of DUTH

1	Project title	REINFORCEMENT OF RENEWABLE ENERGY ECONOMY THROUGH BIOPROCESSING OF BIOGAS TO BIOMETHANE (SUN-U _p CH ₄) (3209)
	Duration	από 15/06/2022 έως 14/06/2025
	Budget	100.799,40 €
	Funder	ΕΛΙΔΕΚ, ΕΛ.ΙΔ.Ε.Κ. ΓΙΑ ΤΗΝ ΕΝΙΣΧΥΣΗ ΜΕΛΩΝ ΔΕΠ ΚΑΙ ΕΡΕΥΝΗΤΩΝ/ΤΡΙΩΝ
1	Project title	«ΒΙΟ-ΗΛΕΚΤΡΟΧΗΜΙΚΗ ΑΝΑΒΑΘΜΙΣΗ ΒΙΟΑΕΡΙΟΥ ΣΕ ΜΕΘΑΝΙΟ (CH ₄): ΜΙΑ ΚΑΙΝΟΤΟΜΑ ΜΕΘΟΔΟΣ ΜΕΤΑΤΡΟΠΗΣ ΤΟΥ ΔΙΟΞΕΙΔΙΟΥ ΤΟΥ ΑΝΘΡΑΚΑ (CO ₂)» (ΚΕ 82484)
	Duration	από 10/03/2020 έως 04/01/2022
	Budget	€ 41.541,50
	Funder	ΥΠΟΥΡΓΕΙΟ ΕΘΝΙΚΗΣ ΠΑΙΔΕΙΑΣ ΚΑΙ ΘΡΗΣΚΕΥΜΑΤΩΝ
2	Project title	«ΧΟΡΗΓΗΣΗ ΥΠΟΤΡΟΦΙΑΣ ΣΤΟ ΠΛΑΙΣΙΟ ΤΗΣ ΔΡΑΣΗΣ: "2Η ΠΡΟΚΗΡΥΞΗ ΥΠΟΤΡΟΦΙΩΝ ΕΛΙΔΕΚ ΓΙΑ ΥΠΟΨΗΦΙΟΥΣ ΔΙΔΑΚΤΟΡΕΣ"-ΣΠΥΡΙΔΩΝΙΔΗΣ ΑΠΟΣΤΟΛΟΣ (1585)» (ΚΕ 82375)
	Duration	από 16/10/2019 έως 15/07/2022
	Budget	€ 29.700,00
	Funder	ΕΛΛΗΝΙΚΟ ΙΔΡΥΜΑ ΕΡΕΥΝΑΣ ΚΑΙ ΚΑΙΝΟΤΟΜΙΑΣ
3	Project title	«ΕΦΑΡΜΟΓΗ ΤΩΝ ΑΡΧΩΝ ΤΗΣ ΚΥΚΛΙΚΗΣ ΟΙΚΟΝΟΜΙΑΣ ΣΤΗ ΔΙΑΧΕΙΡΙΣΗ ΤΟΥ ΟΡΓΑΝΙΚΟΥ ΚΛΑΣΜΑΤΟΣ ΤΩΝ ΑΣΤΙΚΩΝ ΑΠΟΡΡΙΜΜΑΤΩΝ ΣΤΙΣ ΜΕΣΟΓΕΙΑΚΕΣ ΧΩΡΕΣ (CEOMED)» (ΚΕ 82346)
	Duration	18/09/2019 έως 31/08/2022
	Budget	€ 312.762,07
	Funder	ΥΠΟΥΡΓΕΙΟ ΕΘΝΙΚΗΣ ΠΑΙΔΕΙΑΣ ΚΑΙ ΘΡΗΣΚΕΥΜΑΤΩΝ και ΕΥΡΩΠΑΪΚΟΣ ΜΗΧΑΝΙΣΜΟΣ ΓΕΙΤΟΝΙΑΣ (ΕΝΙ)
4	Project title	«ΠΑΡΑΚΟΛΟΥΘΗΣΗ ΜΟΝΑΔΑΣ ΒΙΟΑΕΡΙΟΥ ΑΒΑΣ» (ΚΕ 82066)
	Duration	από 14/03/2018 έως 30/11/2022
	Budget	€ 25.880,00
	Funder	ΑΒΑΤΟ ΒΙΟΑΕΡΙΟ ΞΑΝΘΗΣ ΑΝΩΝΥΜΗ ΕΤΑΙΡΕΙΑ
5	Project title	«ΕΡΕΥΝΗΤΙΚΗ ΥΠΟΔΟΜΗ ΓΙΑ ΤΗΝ ΑΞΙΟΠΟΙΗΣΗ ΑΠΟΒΛΗΤΩΝ ΚΑΙ ΑΕΙΦΟΡΟΥ ΔΙΑΧΕΙΡΙΣΗΣ ΦΥΣΙΚΩΝ ΠΟΡΩΝ - "ΑΞΙΟΠΟΙΗΣΗ ΑΓΡΟΤΟΒΙΟΜΗΧΑΝΙΚΩΝ ΥΠΟΛΕΙΜΜΑΤΩΝ ΚΑΙ ΒΙΟΜΑΖΑΣ ΓΙΑ ΠΑΡΑΓΩΓΗ ΒΙΟΚΑΥΣΙΜΩΝ ΚΑΙ ΥΛΙΚΩΝ" (ΥΠΟΕΡΓΟ 7)» (ΚΕ 82039)
	Duration	από 20/12/2017 έως 31/05/2021
	Budget	€ 180.000,00
	Funder	ΥΠΟΥΡΓΕΙΟ ΑΝΑΠΤΥΞΗΣ ΚΑΙ ΕΠΕΝΔΥΣΕΩΝ
6	Project title	«ΠΑΡΑΚΟΛΟΥΘΗΣΗ ΚΑΙ ΥΠΟΣΤΗΡΙΞΗ ΜΟΝΑΔΑΣ ΑΝΑΕΡΟΒΙΑΣ ΧΩΝΕΥΣΗΣ ΣΤΟ ΑΒΑΤΟ ΞΑΝΘΗΣ» (ΚΕ 81913)
	Duration	από 31/05/2017 έως 29/11/2017
	Budget	: € 4.000,00
	Funder	ΑΒΑΤΟ ΒΙΟΑΕΡΙΟ ΞΑΝΘΗΣ ΑΝΩΝΥΜΗ ΕΤΑΙΡΕΙΑ
7	Project title	«ΜΕΛΕΤΗ ΚΙΝΗΤΙΚΗΣ ΑΝΑΕΡΟΒΙΑΣ ΧΩΝΕΥΣΗΣ ΘΕΡΜΙΚΑ ΚΑΤΕΡΓΑΣΜΕΝΩΝ ΖΩΙΚΩΝ ΑΠΟΒΛΗΤΩΝ (RENDERING)» (ΚΕ 81853)

	Duration	από 21/12/2016 έως 21/12/2020
	Budget	€ 8.878,14
	Funder	Ε.Τ.Α.Α. ΤΟΜΕΙΣ ΜΗΧΑΝΙΚΩΝ ΚΑΙ Ε.Δ.Ε
8	Project title	«ΕΚΚΙΝΗΣΗ ΜΟΝΑΔΑΣ ΑΝΑΕΡΟΒΙΑΣ ΧΩΝΕΥΣΗΣ ΣΤΟ ΑΒΑΤΟ ΞΑΝΘΗΣ» (ΚΕ81774)
	Duration	από 20/07/2016 έως 19/01/2017
	Budget	€ 4.960,00
	Funder	ΑΕΙΦΟΡΟΣ ΤΕΧΝΙΚΗ ΠΕΡΙΒΑΛΛΟΝΤΙΚΗ ΕΝΕΡΓΕΙΑΚΗ ΕΠΕ
9	Project title	ΑΞΙΟΠΟΙΗΣΗ ΑΠΟΒΛΗΤΩΝ ΓΙΑ ΠΑΡΑΓΩΓΗ ΕΝΕΡΓΕΙΑΣ» (ΚΕ 81262)
	Duration	από 10/11/2013 έως 09/11/2016
	Budget	€ 9.629,18
	Funder	φορέας χρηματοδότησης: Ε.Τ.Α.Α. ΤΟΜΕΙΣ ΜΗΧΑΝΙΚΩΝ ΚΑΙ Ε.Δ.Ε.
10	Project title	«ΠΑΡΑΓΩΓΗ ΒΙΟΚΑΥΣΙΜΩΝ ΑΠΟ ΑΠΟΒΛΗΤΑ ΜΕΣΩ ΒΙΟ-ΔΙΕΡΓΑΣΙΩΝ» (ΚΕ2026/80706)
	Duration	από 10/11/2010 έως 09/11/2013
	Budget	€ 15.673,90
	Funder	Ε.Τ.Α.Α. ΤΟΜΕΙΣ ΜΗΧΑΝΙΚΩΝ ΚΑΙ Ε.Δ.Ε.

Primary investigator

<ul style="list-style-type: none"> • «Developing advanced Biorefinery schemes for integration into existing oil production/transesterification plants», 7th framework programme – Energy theme, Support Action, EU (SUSTOIL) 2008-2010 (επιστημονικά υπεύθυνος: Γεράσιμος Λυμπεράτος)
<ul style="list-style-type: none"> • «Valorization of cheese whey for the biotechnological production of energy», GSRT «Consortia of Research and Technological Development in National Priorities» (PEP – DEL 15) 2006 – 2008 (επιστημονικά υπεύθυνος: Γεράσιμος Λυμπεράτος)
<ul style="list-style-type: none"> • «Development of a viable solution for the management of olive mill wastewaters, emphasizing on the valorization of the by-products » GSRT «Consortia of Research and Technological Development in National Priorities» (Activity A11) 2006 – 2008 (επιστημονικά υπεύθυνος: Γεράσιμος Λυμπεράτος)
<ul style="list-style-type: none"> • «Automatic control and optimization of the operation of anaerobic digesters for biogas production » GSRT – PENED03 (03ED605) 2005 - 2011 (επιστημονικά υπεύθυνος: Γεράσιμος Λυμπεράτος).
<ul style="list-style-type: none"> • «Biological Treatment and valorization of olive mill wastewater: mechanisms and integrated applications». GSRT – FP66 («Consortia of Research and Technological Development in National Priorities») 2003 – 2007 (επιστημονικά υπεύθυνος: Γεράσιμος Λυμπεράτος)
<ul style="list-style-type: none"> • «Bioprocessing of sewage sludge for safe recycling on agricultural land – BIOWASTE». EU (QLKS-CT2002-01138) 2002 – 2005 (επιστημονικά υπεύθυνος: Γεράσιμος Λυμπεράτος)
<ul style="list-style-type: none"> • «Ecotoxicological Assessments and Removal Technologies for Pharmaceuticals in Wastewaters (REMPHARMAWATER)». EU (EVK1-2000-0048) 2000 – 2003 (επιστημονικά υπεύθυνος: Γεράσιμος Λυμπεράτος)