

## CURRICULUM VITAE

### **Professor Nicolas Kalogerakis, PhD, P.Eng**

*Professor of Biochemical Engineering and  
Director, Laboratory of Biochemical Engineering  
& Environmental Biotechnology*  
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### **CV Highlights:**

Nicolas Kalogerakis is a professor of Biochemical Engineering in the Dept. of Environmental Engineering at the Technical University of Crete where he has served as Vice-President of the University Council and Department Head (twice). Prior to that he was a Professor at SUNY-Buffalo (USA) and at the University of Calgary (Canada) where he climbed quickly through all ranks. In 1997, he returned to Greece as the founding faculty member of the Environmental Engineering Dept. He holds a Diploma in Chemical Engineering from NTUA (Athens, Greece), a Master degree from McGill University (Montreal, Canada) and a PhD from the Univ. of Toronto (Canada). Last year, he was a Visiting Professor in the Dept of Chemical Engineering at the American University of Sharjah (UAE).

His area of expertise includes biochemical engineering & environmental biotechnology focusing on bioremediation and phytoremediation technologies for the restoration of contaminated sites; protection and restoration of the marine environment (oil spills and marine litter); novel oxygenation systems and wastewater treatment; and mathematical modeling of environmental processes. He has been very active in attracting external research funding totaling in excess of 25 million USD. Currently, Prof. Kalogerakis's group is participating in 4 EU funded research projects (Horizon-2020) and was the coordinator of KILL\*SPILL, a large FP7-project, that was recently completed.

He has served as a member of the European Commission (EC) Environment Committee (2007-2011) and as Sherpa in the EC, High Level Group on Key Enabling Technologies (2013-2015).

### **Bibliographic Data:**

208 papers, 11 editorials and 5 patents;  
*Scopus*: Citations >8100, H-index 47;  
*Google Scholar*: Citations >12100, H-index 58.

<b>Personal Data:</b>	Date and Place of Birth:	5-5-1954 – Athens, Greece
	Family Status:	Married with two children
	Nationality:	Greek and Canadian.

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## Education

- 1979 -1983 *Doctor of Philosophy*, Department of Chemical Engineering & Applied Chemistry  
University of Toronto, Toronto, Ontario, Canada.
- 1977 -1979 *Master of Engineering*, Department of Chemical Engineering,  
McGill University, Montreal, Quebec, Canada.
- 1972 -1977 *Dipl. Chem. Engineering*, Department of Chemical Engineering,  
National Technical University of Athens (NTUA), Athens, Greece.

## Academic Positions

- 1997 – present *Professor of Biochemical Engineering & Director*, Laboratory of Biochemical  
Engineering & Environmental Biotechnology, TU-Crete, Chania, Greece
- 2018 – 2019 *Visiting Professor*, Dept. of Chemical Engineering, American University of Sharjah,  
UAE
- 2008 – 2009 *Visiting Professor*, Dept. of Environmental Management, Cyprus University of  
Technology, Lemesos, Cyprus
- 1995 – 1997 *Professor of Biochemical Engineering*, Department of Chemical Engineering,  
State University of New York (SUNY), Buffalo, NY, USA.
- 1990 – 1995 *Professor of Chemical Engineering*
- 1986 – 1990 *Associate Professor of Chemical Engineering*
- 1983 – 1986 *Assistant Professor of Chemical Engineering*, Department of Chemical & Petroleum  
Engineering, University of Calgary, Calgary, Alberta, Canada.

## Administrative Positions

- 2013 – 2017 *Vice-President*, University Council, Technical University of Crete, Chania, Greece
- 2010 – 2013 *Vice-President*, Governing Council, University of Western Greece, Agrinio, Greece
- 2004 – 2008 *Head*, Dept. of Environmental Engineering, Technical University of Crete, Greece.
- 2000 – 2002 *Acting Head*, Dept. of Environmental Engineering, Technical University of Crete,  
Chania, Greece.
- 1997 – 2000 *Director of Graduate Studies*, Dept. of Environmental Engineering, Technical  
University of Crete, Chania, Greece
- 1989 - 1995 *Associate Director*, Pharmaceutical Production Research Facility (PPRF), University of  
Calgary, Calgary, Alberta, Canada.

## International Distinctions & Awards

- 2019 Distinguished Speaker at University of Toronto's seminar series "*Lectures on the  
Leading Edge*"
- 2019 Distinguished Speaker at McGill University's EUL seminar series
- 2017 *Research Excellence Award*, Technical University of Crete, Chania, Greece
- 2014 – present *Advisory Board member*, City of Scientific Research and Technology Applications  
(SRTA-City) Alexandria, Egypt
- 2013 – present *Advisory Board member*, CIIMAR – Interdisciplinary Centre of Marine and  
Environmental Research Porto, Portugal;
- 2013 *Top-10 most cited articles 2010-2011 Award*, Talanta, Elsevier
- 2010 *Top-50 most cited articles 2005-2009 Award*, J. Chromatography A, Elsevier
- 2008 – 2009 *Visiting Professor*, Cyprus University of Technology, (to set up graduate studies  
programs in Environmental Management & Technology).
- 2006 *Ecopolis 2006 Research Team Award* (Laboratory of Biochemical Engineering and  
Environmental Biotechnology – headed by Prof. N. Kalogerakis)

### **Representative in European Commission**

- European Commission Committee – China Collaborative Research Program, Greek Delegate (2017)
- European Commission Committee – Prize design for best technology collecting marine litter (2016)
- Sherpa European Commission - High Level Group on Key Enabling Technologies (2013-2015)
- Environment Committee – National representative for Greece (expert) – GSRT (2007-2011)
- EC-Working Group E on priority substances– National representative of the Ministry of Environment and Climate Change of Greece (2007–2010).

### **Evaluation Panels**

- *Vice Chair Environment Panel* – Marie Curie Actions (2004-07), DG Research, European Commission
- *Member Environment Panel* – Marie Curie Actions (2001-04), DG Research, European Commission
- *Member of Evaluation Committees* for FP-6 and FP-7 Collaborative RTD projects and Horizon-2020 Innovation and Research Actions, REA, European Commission (2001 – 2017).
- *Reviewer of Greek Research Funding Agencies* (1998 – 2017).
- *Member Environmental Sciences Panel* – SR&TD Project Grants, Fundação para a Ciência e a Tecnologia (FCT), Portugal (2014 – 2019).
- *Member of Expert Panel for Strategic Basic Research*, Research Foundation - Flanders (FWO), Belgium (2018-2019)

### **Accreditation Preparation**

- *Coordinator* of the U. of Calgary Faculty of Engineering Curriculum Submission to the Canadian Engineering Accreditation Board (1992-93)
- *Coordinator* of the TU-Crete, School of Environmental Engineering, self-evaluation submission to Greek Accreditation authorities (2009-10).

### **Journal Editorial Boards**

*Scientific Reports (Nature-Springer)*

*Frontiers in Environmental Sciences, Wastewater - Specialty Chief Editor (Nature Publishing Group);*

*New Biotechnology (Elsevier Publishers);*

*Microbial Biotechnology (Wiley & Society for Applied Microbiology)*

*Trends in Biotechnology (Elsevier Publishers);*

*Recent Patents on Engineering (Bentham Science Publishers);*

*The Open Chemical Engineering Journal (Bentham Science Publishers);*

*Journal of Environmental Engineering & Management (TU-lasi).*

### **Guest Editor**

Guest editor in special journal issues on bioremediation and/or phytoremediation:

*Water Air Soil Pollution: Focus;*

*Environment International;*

*Biodegradation;*

*Journal of Chemical Technology and Biotechnology (3 times);*

*European Journal of Soil Biology (2 times);*

*Process Biochemistry;*

*International journal of Phytoremediation;*

*New Biotechnology (2 times)*

### **Professional Memberships**

- European Federation of Biotechnology – Section on Environmental Biotechnology (since 2001)
- International Water Association – IWA (since 2003)

- The Canadian Society for Chemical Engineering - CSChE (since 1980)
- The American Institute of Chemical Engineers - AIChE (since 1985)
- The Chemical Institute of Canada - CIC (since 1980)
- The International Society of Petroleum Engineers - SPE (since 1990)
- The Association of Professional Engineers, Geologists & Geophysicists of Alberta (since 1984)
- New York Academy of Sciences - NY.Acad.Sc. (since 1994)
- The Scientific Research Society - ΣΧ (since 1996)
- Technical Chamber of Greece - TEE (since 1977)
- Hellenic Society of Chemical Engineers (since 1977)
- Global Network of Environmental Science & Technology (since 1997)

### Funded Research (competitive research programs since 2009)

<b>Funding agency &amp; Project title</b>	<b>Budget</b>	<b>Period</b>
EU-Horizon2020 – <b>ELECTRA</b> – R&I action program Electricity driven Low Energy and Chemical input Technology for Accelerated bioremediation. (Total project funding: 6.000.000 €)	275.625 €	2018-22
EU-Horizon2020 – <b>OILY MICROCOSM</b> – Marie Curie IF Global (TUC & MIT) Mechanistic Microscale Approach to the Microbial Degradation of Oil Droplets in Subsea Crude Oil Releases (postdoc: Dr. G. Kapellos)	176.408 €	2017-19
EU-Horizon2020 – <b>MADFORWATER</b> – R&I action program Development and application of integrated technological and management Solutions for wastewater treatment and efficient reuse in agriculture tailored to the needs of Mediterranean African Countries (Total project funding: 2.910.868 €)	215.000 €	2016-20
EU-Horizon2020 – <b>INMARE</b> – Innovation action program Industrial Applications of Marine Enzymes: Innovative screening and expression platforms to discover and use the functional protein diversity from the sea. (Total project funding: 6.000.000 €)	250.000 €	2015-19
EU-FP7- <b>KILL•SPILL</b> – RTD program Innovative Biotechnological Solutions for Combating Marine Oil Spills (Coordinator, Total project funding: 8.996.599 €)	448.080 €	2013-16
EU-FP7- <b>BIOCLEAN</b> – RTD program “New biotechnological approaches for biodegrading and promoting the environmental biotransformation of synthetic polymeric materials” (Total project funding: 2.995.988 €)	300.000 €	2012-15
EU-FP7- <b>WATER4CROPS</b> – RTD program “Integrating biotreated wastewater reuse and valorization with enhanced water use efficiency (WEF) to support the Green Economy in EU and India” (Total project funding: 5.973.764 €)	200.000 €	2012-16
GR-GSRT – program SYNERGASIA-II “Microalgae – Bioproducts” (Total project funding 650.000 €)	146.800 €	2012-15
EU-LIFE10 ENV/GR/601- <b>CHARM</b> “Chromium in Asopos groundwater system: remediation technologies and measures” (Total project funding 2.708.267 €)	590.538 €	2011-15
GR-GSRT – program HERAKLEITOS-II “Oil spill bioremediation in marine environments”	45.000 €	2010-13
GR-GSRT – program HERAKLEITOS-II “Membrane Bioreactor for municipal wastewater treatment”	45.000 €	2010-13

EU-FP7- <b>Minotaurus</b> – RTD program “Microorganism and enzyme immobilization: Novel techniques and approaches for upgraded remediation of underground-, wastewater and Soil” (Total project funding: 3.908.064 €)	289.864 €	2010-13
EU-FP7- <b>Ulixes</b> – RTD program “Unravelling and exploiting Mediterranean Sea microbial diversity and ecology for Xenobiotics’ and pollutants’ clean up” (Total project funding: 3.902.892 €)	285.004 €	2010-13
EU-CIP-Eco-innovation - OMIWAT program “Olive Mill Wastewater Treatment” (Total project funding: 1.348.730 €)	114.490 €	2010-12
GR-Ministry of Environment & Climate Change - Contract “Scientific support to the Water Agency” – Coordinator	147.600 €	2010-11
EEA GRANTS – EL0075 “Innovation Centre of Crete” – Coordinator (total project funding: 1.450.000 €)	498.800 €	2009-12
EEA GRANTS – EL0030 “Agricultural utilization of tertiary treated wastewater as an alternative water resource” (total project funding: 2.296.000 €)	318.000 €	2009-12
EU-LIFE07 – INF/IT/000438 – <b>Oleico+</b> “European awareness raising campaign for an environmentally sustainable olive mill waste management” (Total project funding 1.003.000 €)	95.000 €	2009-11

Plus, another 53-research projects over the period 1984 to 2009. Total research funding exceeds 20 million €.

### Publications by Prof. Nicolas Kalogerakis

(208 papers & 11 editorials, **Scopus: Citations > 8100, H-index 47**; Google Scholar: Citations >12100, H-index 58; ORCID# 0000-0001-7033-0302; Scopus Author ID: 36868874600)

### Patents

1. Docoslis, A., N. Kalogerakis, L.A. Behie and K.V.I.S. Kaler, "Filter for Perfusion Cultures of Animal Cells and the Like", US Patent 5,626,734 (May 6, 1997).
2. Koukaras, K., N. Kalogerakis, E.N. Kampouris, “Toxic Heavy Metals Removal System for Shellfish”, World patent WO 2009/083742 A1 (July 9, 2009).
3. Psillakis, E. and N. Kalogerakis, “Vacuum Assisted Headspace Microextraction sampling apparatus and method”, Greek patent (2012) EL 20110100054.
4. Kalogerakis, N., S. Fodelianakis, E. Antoniou, E. Korkaraki, “Production and application of a novel Bioaugmentation Pad for marine oil spills”, Greek patent (2015) EL 20140100211.
5. Antoniou, E., N. Kalogerakis, “Biosurfactant production of high purity by marine bacteria degrading the heavy fraction of crude oil”, Greek patent (2017) EL 20171009585.
6. Syranidou, E., N. Kalogerakis, “Perpetual recycling of C-C backbone weathered plastics by tailored marine consortia”, Greek patent pending (submitted Nov. 2019).

### Recent refereed journal publications (2010 - present)

1. Christofilopoulos, S., A. Kaliakatsos, I. Gounaki, D. Venieri and N. Kalogerakis, “Evaluation of a constructed wetland for wastewater treatment: Addressing emerging organic contaminants and antibiotic resistant bacteria”, *New Biotechnology*, 52: 94-103 (2019).
2. Kaliakatsos, A., S. Christofilopoulos, N. Kalogerakis and D. Venieri “Efficiency of two constructed wetland systems for wastewater treatment: removal of bacterial indicators and enteric viruses”, *J. Chem. Techn. Biotechnol.*, 94: 2123–2130 (2019).
3. Valentina Riva, Francesca Mapelli, Evdokia Syranidou, Elena Crotti, Redouane Choukrallah, Nicolas Kalogerakis and Sara Borin, “Root Bacteria Recruited by Phragmites australis in Constructed Wetlands Have the Potential to Enhance Azo-Dye Phytodepuration”, *Microorganisms*, 7: 384 (2019).

4. Tian, I., Q. Chien, W. Jiang, L. Wang, H. Xie, N. Kalogerakis, Y. Ma and R. Ji, "A carbon-14 radiotracer-based study on the phototransformation of polystyrene nanoplastics in water versus in air", *Environ. Sci.: Nano*, 6: 2907-2917 (2019).
5. Syranidou E, Karkanorachaki, K, Amorotti F, Avgeropoulos A, Kolvenbach B, Zhou N-Y, Fava F, Corvini P and Kalogerakis N, "Biodegradation of mixture of plastic films by tailored marine consortia", *J. Hazard. Mater.*, 375: 33–42 (2019).
6. Cappello S, Cruz Viggí C, Yakimov M, Rossetti S, Matturro B, Molina L, Segura A, Marques S, Yuste L, Sevilla E, Rojo F, Sherry A, Mejeha OK, Head IM, Malmquist L, Christensen JH, Kalogerakis N and Aulenta F, "Combining electrokinetic transport and bioremediation for enhanced removal of crude oil from contaminated marine sediments: Results of a long-term, mesocosm-scale experiment" *Water Research*, 157 (2019) 381-395.
7. Lilli MA, Nikolaos P. Nikolaidis NP, George P. Karatzas GP, Nicolas Kalogerakis N, "Identifying the controlling mechanism of geogenic origin chromium release in soils", *J. Hazard. Mater.*, 366: 169–176 (2019).
8. Syranidou E, Thijs S, Avramidou M, Weyens N, Venieri D, Pintelon I, Vangronsveld J and Kalogerakis N, "Responses of the Endophytic Bacterial Communities of *Juncus acutus* to Pollution with Metals, Emerging Organic Pollutants and to Bioaugmentation with Indigenous Strains", *Front. Plant Sci.* 9:1526 (2018).
9. Karkanorachaki K, Kiparissis S, Kalogerakis GC, Yiantzi E, Psillakis E, Kalogerakis N, "Plastic pellets, meso- and microplastics on the coastline of Northern Crete: Distribution and organic pollution", *Marine Pollution Bulletin*, 133, 578–589 (2018).
10. Kapellos GE, Paraskeva CA, Kalogerakis N and Doyle PS, "Theoretical Insight into the Biodegradation of Solitary Oil Microdroplets Moving through a Water Column", *Bioengineering*, 5, 15 (2018).
11. Frascari D, Zanolli G,... Kalogerakis, N,... Ortega CV, "Integrated technological and management solutions for wastewater treatment and efficient agricultural reuse in Egypt, Morocco and Tunisia", *Integrated Environmental Assessment & Management*, 14: 447-462 (2018).
12. Syranidou E, Karkanorachaki K, Amorotti F, Franchini M, Repouskou E, Kaliva M, Vamvakaki M, Kolvenbach B, Fava F, Corvini PF-X, Kalogerakis N. "Biodegradation of weathered polystyrene films in seawater microcosms", *Scientific Reports*, 7:17991 (2017).
13. Syranidou E, Karkanorachaki K, Amorotti F, Repouskou E, Kroll K, Kolvenbach B, Corvini PF-X, Fava F, Kalogerakis N. "Development of tailored indigenous marine consortia for the degradation of naturally weathered polyethylene films", *PLoS ONE*, 12(8): e0183984 (2017).
14. Mapelli, F., Scoma, A., Michoud, G., Aulenta, F., Boon, N., Borin, S., Kalogerakis, N., Daffonchio, D., "Biotechnologies for Marine Oil Spill Cleanup: Indissoluble Ties with Microorganisms", *Trends in Biotechnology*, 9: 860-870 (2017).
15. Kalogerakis N, Karkanorachaki K, Kalogerakis GC, Triantafyllidi E, Gotsis AD, Partsinevelos P and Fava F., "Microplastics generation: Onset of fragmentation of polyethylene films in marine environment mesocosms". *Front. Mar. Sci.* 4: 84 (2017).
16. Syranidou, E., S. Christofilopoulos and N. Kalogerakis, "Juncus spp.—The halophyte for all (phyto)-remediation purposes?", *New Biotechnology*, 38: 43–55 (2017).
17. Syranidou, E., S. Christofilopoulos, M. Politi, N. Weyens, D. Venieri, J. Vangronsveld and N. Kalogerakis "Bisphenol-A removal by the halophyte *Juncus acutus* in a phytoremediation pilot: Characterization and potential role of the endophytic community", *J. Hazard. Mater.*, 323: 350–358 (2017).
18. Lilli MA, Syranidou E, Palliou A, Nikolaidis NP, Karatzas G, Kalogerakis N, "Assessing the impact of geogenic chromium uptake by carrots (*Daucus carota*) grown in Asopos river basin", *Environmental Research*, 152: 96–101 (2017).
19. Christofilopoulos, S., E. Syranidou, G. Gkavrou, E. Manousaki and N. Kalogerakis, "The role of halophyte *J. acutus* L. in the remediation of mixed contamination in a hydroponic greenhouse experiment", *J. Chem. Technol. Biotechnol.*, 91: 1665–1674 (2016).
20. Syranidou E, Christofilopoulos S, Gkavrou G, Thijs S, Weyens N, Vangronsveld J and Kalogerakis N, "Exploitation of Endophytic Bacteria to Enhance the Phytoremediation Potential of the Wetland Halophyte *Juncus acutus*", *Frontiers in Microbiology*, 7: 1016 (2016).
21. Paranychianakis NV, M Tsiknia, and N Kalogerakis, "Pathways regulating the removal of nitrogen in planted and unplanted subsurface flow constructed wetlands", *Water Research*, 102: 321-329 (2016).

22. Yiantzi, E, Kalogerakis, N, Psillakis, E, "Vacuum-assisted headspace solid phase microextraction of polycyclic aromatic hydrocarbons in solid samples", *Analytica Chimica Acta*, 927: 46-54 (2016).
23. Dokou, Z., V. Karagiorgi, G.P. Karatzas, N.P. Nikolaidis, N. Kalogerakis, "Large scale groundwater flow and hexavalent chromium transport modeling under current and future climatic conditions: the case of Asopos River Basin", *Environmental Science and Pollution Research*, 23: 5307-5321 (2016).
24. Fodelianakis, S., E. Antoniou, F. Mapelli, M. Magagnini, M. Nikolopoulou, R. Marasco, M. Barbato, A. Tsiola, I. Tsikopoulou, L. Giaccaglia, M. Mahjoubi, A. Jaouani, R. Amer, E. Hussein, F.A. Al-Horani, F. Benzha, M. Blaghe, H.I. Malkawi, Y. Abdel-Fattah, A. Cherif, D. Daffonchio and N. Kalogerakis, "Allochthonous bioaugmentation in *ex situ* treatment of crude oil-polluted sediments in the presence of an effective degrading indigenous microbiome", *J. Hazard. Mater.*, 287: 78-86 (2015).
25. Babatsouli, P., S. Fodelianakis, N. Paranychanakis, D. Venieri, M. Dialynas, N. Kalogerakis, "Single Stage Treatment of Saline Wastewater with Marine Bacterial-Microalgae Consortia in a Fixed-bed Photobioreactor", *J. Hazard. Mater.*, 292: 155-163 (2015).
26. Bargiela, R, F Mapelli, D Rojo, B Chouaia, J Tornés... "Bacterial population and biodegradation potential in chronically crude oil-contaminated marine sediments are strongly linked to temperature", *Scientific Reports* 5, Article number: 11651 (2015) doi:10.1038/srep11651.
27. Gertler, C, R Bargiela, F Mapelli, X Han, J Chen, T Hai... "Conversion of Uric Acid into Ammonium in Oil-Degrading Marine Microbial Communities: a Possible Role of Halomonads" *Microbial ecology*, 70: 724-740 (2015).
28. Yiantzi, E, Kalogerakis, N, Psillakis, E, "Vacuum-assisted headspace solid phase microextraction of polycyclic aromatic hydrocarbons in solid samples", *Analytica Chimica Acta*, 890: 108-116 (2015).
29. Babatsouli, P., Palogos, I., Michalodimitraki, E., Costa, C., Kalogerakis, N. "Evaluation of a MBR pilot treating industrial wastewater with a high COD/N ratio", *J. Chem. Techn. Biotechnol.*, 90: 26-33 (2015).
30. Antoniou E, Fodelianakis S, Korkakaki E and Kalogerakis N "Biosurfactant production from marine hydrocarbon-degrading consortia and pure bacterial strains using crude oil as carbon source", *Front. Microbiol.* 6: 274 (2015).
31. Kalogerakis N, J Arff, IM Banat, OJ Broch, D Daffonchio, T Edvardsen, H. Equiraun, L Giuliano, A Handa, K Lopez-de-Ipina, I Marigomez, I Martinez, G Oie, F Rojo, J Skjermo, G Zanaroli and F Fava, "The role of environmental biotechnology in exploring, exploiting, monitoring, preserving, protecting and decontaminating the marine environment", *New Biotechnology*, 32: 157-167 (2015).
32. Mauro Majone, M, R Verdini, F Aulenta, S Rossetti, V Tandoi, N Kalogerakis, S Agathos, S Puig, G Zanaroli, F Fava, "In situ groundwater and sediment bioremediation: barriers and perspectives at European contaminated sites", *New Biotechnology*, 32: 133-146 (2015).
33. Dimitroula, H, Syranidou, E, Manousaki, E, Nikolaidis, NP, Karatzas, GP, Kalogerakis, N. "Mitigation measures for chromium-VI contaminated groundwater – The role of endophytic bacteria in rhizofiltration", *J. Hazard. Mater.*, 281: 114-120 (2014).
34. Lilli, MA, Daniel Moraetis, D, Nikolaidis, NP, Karatzas, GP, Kalogerakis, N. "Characterization and mobility of geogenic chromium in soils and river bed sediments of Asopos basin", *J. Hazard. Mater.* 281: 12-19 (2014).
35. Manousaki, E., K. Galanaki, L. Papadimitriou and N. Kalogerakis, "Metal Phytoremediation by the Halophyte *Limoniastrum Monopetalum* (L.) Boiss: Two Contrasting Ecotypes", *Int. J. Phytoremediation*, 16: 755–769 (2014).
36. Petoussi, M.A., S. Christofilopoulos and N. Kalogerakis, "Dynamics of a rhizodegradation pilot unit treating groundwater contaminated with Bisphenol-A", *Environmental Engineering Management J.*, 13: 2173–2178 (2014).
37. Palogos I, Babatsouli P, Costa C, Kalogerakis N "Computer simulation of a submerged membrane bioreactor treating high COD industrial wastewater", *Front. Environ. Sci.*, 2: 30 (2014). doi: 10.3389/fenvs.2014.00030
38. Daffonchio, D., et al., "Bioremediation of Southern Mediterranean oil polluted sites comes of age", *New Biotechnology*, 30: 743-748 (2013).
39. Nikolopoulou, M., N. Pasadakis, H. Norf and N. Kalogerakis, "Enhanced *ex situ* bioremediation of crude oil contaminated beach sand by supplementation with nutrients & Rhamnolipids", *Mar. Pollut. Bull.* 77: 37–44 (2013).
40. Nikolopoulou, M., P. Eickenbusch, N. Pasadakis, D. Venieri and N. Kalogerakis, "Microcosm evaluation of

- auto-chthonous bioaugmentation to combat marine oil spills”, *New Biotechnology*, 30: 734-742 (2013).
41. Psillakis, E, E. Yiantzi, N. Kalogerakis, “Downsizing vacuum-assisted headspace solid phase microextraction”, *J. Chrom A*, 1300: 119-126 (2013).
  42. Kalogerakis, N., M. Politi, S. Foteinis, E. Chatzisymeon, D. Mantzavinos, “Recovery of antioxidants from olive mill wastewaters: A viable solution that promotes their overall sustainable management”, *Journal of Environmental Management*, 128: 749-758 (2013)
  43. Paranychianakis, NV, M Tsiknia, G Giannakis, NP Nikolaidis, N Kalogerakis, “Nitrogen cycling and relationships between ammonia oxidizers and denitrifiers in a clay-loam soil”, *Applied Microbiology and Biotechnology*, 97: 5507-5515 (2013)
  44. Nikolopoulou, M., N. Pasadakis, N. Kalogerakis, “Evaluation of autochthonous bioaugmentation and biostimulation during microcosm-simulated oil spills”, *Mar. Pollut. Bull.* 72: 165–173 (2013).
  45. Papaphilippou, PC, C Yiannapas, M Politi, VM Daskalaki, C Michael, N Kalogerakis, D Mantzavinos, D Fattakassinou, “Sequential coagulation–flocculation, solvent extraction and photo-Fenton oxidation for the valorization and treatment of olive mill effluent”, *Chemical Engineering Journal*, 224: 82-88 (2013).
  46. Psillakis, E, Yiantzi, E, Sanchez-Prado, L, Kalogerakis, N, “Vacuum-assisted headspace solid phase microextraction: Improved extraction of semivolatiles by non-equilibrium headspace sampling under reduced pressure conditions”, *Analytica Chimica Acta*, 742: 30-36 (2012).
  47. Sanchez-Prado, L, Kalafata, K, Risticvic, S, Pawliszyn, J, Lores, M, Llompart, M, Kalogerakis, N, Psillakis, E, “Ice photolysis of 2,2',4,4',6-pentabromodiphenyl ether (BDE-100): Laboratory investigations using solid phase microextraction”, *Analytica Chimica Acta*, 742: 90-96 (2012).
  48. Daffonchio, D et al., “ULIXES, unravelling and exploiting Mediterranean Sea microbial diversity and ecology for xenobiotics' and pollutants' clean up”, *Reviews in Environmental Science and Bio-Technology*, 11: 207-211 (2012).
  49. Psillakis, E, Mousouraki, A, Yiantzi, E, Kalogerakis, N, “Effect of Henry's law constant and operating parameters on vacuum-assisted headspace solid phase microextraction”, *J. Chrom A*, 1244: 55-60 (2012).
  50. Moraetis, D, Nikolaidis, NP, Karatzas, GP, Dokou, Z, Kalogerakis, N, Winkel, LHE, Palaogianni-Bellou, A, “Origin and mobility of hexavalent chromium in North-Eastern Attica, Greece”, *Applied Geochemistry*, 27: 1170-1178 (2012).
  51. Manousaki E and N Kalogerakis, “Halophytes Present New Opportunities in Phytoremediation of Heavy Metals and Saline Soils”, *Industrial & Engineering Chemistry Research*, 50: 656-660 (2011).
  52. Moraetis, D., Stamati, F.E., Nikolaidis, N.P., Kalogerakis, N., “Olive mill wastewater irrigation of maize: Impacts on soil and groundwater”, *Agricultural Water Management*, 98: 1125 - 1132 (2011).
  53. Stamati FE, Nikolaidis NP, Venieri D, Psillakis E. and Kalogerakis N., “Dissolved organic nitrogen as an indicator of livestock impacts on soil biochemical quality”, *Applied Geochemistry* 26: S340-S343 (2011).
  54. Manousaki, E. and N. Kalogerakis, “Halophytes – a new trend in phytoremediation”, *Int. J. Phytoremediation*, 13: 959-969 (2011).
  55. Latos M, P Karageorgos, N Kalogerakis and M Lazaridis, “Dispersion of Odorous Gaseous Compounds Emitted from Wastewater Treatment Plants”, *Water Air Soil Pollution*, 215: 667–677 (2011).
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Plus, 11 editorial prefaces to special journal issues and 125 publications over the period 1979 to 2009. All publications are available at <https://scholar.google.gr/citations?user=QUZwvIUAAAAJ&hl=en>

### Books and Book Chapters

1. Nikolopoulou, M & N. Kalogerakis, "Ex Situ Bioremediation Treatment (Landfarming)" In: *Hydrocarbon and Lipid Microbiology Protocols: Pollution Mitigation and Waste Treatment Applications*, Springer Protocols Handbooks, pp 195-220, 2017.
2. Nikolopoulou M. & N. Kalogerakis, "Bioreactor Design to Emulate Deep-Sea Hydrocarbon Releases Including Formation of Gas Hydrates" In: *Hydrocarbon and Lipid Microbiology Protocols*, Springer Protocols Handbooks, pp 1-14, 2016.
3. Nikolopoulou, M & N. Kalogerakis, "Biostimulation strategies for enhanced bioremediation of marine oil spills including chronic pollution" In: *Handbook of hydrocarbon and lipid microbiology*, pp 2521-2529, 2010 (updated version in 2016).
4. Kalogerakis, N. & S. Christofilopoulos, "Rhizodegradation in constructed wetlands" In: *Immobilized Biocatalysts for Bioremediation of Groundwater and Wastewater*. Eds. Hochstrat R, Wintgens T, Corvini P, IWA Publishing; p. 97–105. 2015.
5. Kalogerakis, N., "Ex-situ Bioremediation of Contaminated Soils" In: *Soil and Sediment Remediation*, Eds. Liens, P., T. Grotenhuis and H. Tabak, IWA Publishing, 151-175, 2005.
6. Kalogerakis, N., "Innovative Slurry-Phase and Solid-Phase Technologies for Soil Bioremediation" In: *Innovative approaches to the bioremediation of contaminated sites*, Ed. Fava, F., 2005.
7. Kalogerakis, N., "A Sequential Approach to Nonlinear Regression of Ill-Conditioned Multi-parameter ODE Models", In: *Recent Developments in Optimization and Optimal Control in Chemical Engineering*, Ed. R. Luus, 19-35, 2002.
8. Englezos, P. and N. Kalogerakis, *Applied Parameter Estimation for Chemical Engineers*, Marcel Dekker, New York, NY, 2001.

Plus, another eight (8) book chapters in the period 1986 – 1996.

### Presentations at Scientific Conferences.

More than 250 presentations at international conferences and professional meetings. Many invited presentations at Conferences, Universities & Research Organizations, as well as workshops organized by the European Commission.

### Recent Invited Presentations (2016 – 2019) – Keynote or Plenary

1. "Biodegradation of C-C backbone plastics and microplastics in the marine environment", University of Toronto (Lecture on Leading Edge series), Toronto, Canada, Oct 30, 2019.
2. "Biodegradation of plastics and secondary microplastics in the marine environment", ISPTS-2019 conference, Hoboken, NJ, USA, Oct 25-28, 2019.
3. "Biodegradation of microplastics and nanoplastics in the marine environment", McGill University (EUL series), Montreal, Canada, Oct 23, 2019.
4. "Biodegradation of Secondary Microplastics and Nanoplastics in the Marine Environment", 15<sup>th</sup> International Symposium on Persistent Toxic Substances, Basel, Switzerland, 6-9 Nov 2018.
5. "Plastics degradation processes in the marine environment", Plastic Litter in Mediterranean Sea: Problems and Solutions, ECOMONDO-2018, Rimini, Italy, Nov 6-9, 2018.
6. "Management and Bioremediation of Marine Oil Spills", Sustainable Source Zone Remediation,

ECOMONDO-2018, Rimini, Italy, Nov 6-9, 2018.

7. *“Biodegradation of mesoplastics and microplastics by indigenous marine microbes and generation of nanoplastics due to biodegradation”*, 4th International Conference on Environmental Pollution and Health, Tianjin, China, 18-20 May 2018
8. *“Mitigation measures for pollution in the marine environment”*, International Conference on Environmental Pollution, Risk Assessment and Remediation, Mahdia – Tunisia, 19-20 April 2018
9. *“Can biodegradation of plastics and microplastics be an effective solution for marine litter?”*, ECOMONDO-2017, Rimini, Italy, Nov 7-10, 2017.
10. *“Bio-degradation of PE and PS films in the marine environment: Any hope for clean oceans?”*, 9<sup>th</sup> International Conference on Environmental Engineering & Management, Bologna, Italy, Sept 6-9, 2017.
11. *“Biodegradation Kinetics of Weathered Marine Litter – Polyethylene and Polystyrene Plastic Films”*, 6<sup>th</sup> International Symposium on Biosorption, Biodegradation/bioremediation, Prague, Czech Republic, June 25 – 29, 2017.
12. *“Innovations needed for a Litter-free Mediterranean Sea”*, European Commission - BLUEMED – A basin of research and innovation for sustainable growth, Sliema, Malta, April 18-19, 2017.
13. *“Combating Marine Oil Spills Employing Biotechnological Methods”*, 7<sup>th</sup> Conference of the Scientific Society “Mikrobiokosmos”, Athens, Greece, April 7-9, 2017.
14. *“Bio-degradation of plastic debris in the marine environment: Any hope for a clean Med Sea?”*, Tackling marine litter from research to action, European Parliament, Brussels, Belgium, Feb 1, 2017.
15. *“The role of endophytic bacteria in phytoremediation”*, State-of-the-art technologies: challenge for the research in Agricultural and Food Sciences, Belgrade, Serbia, April 18-20, 2016.
16. *“Biotechnologies for marine oil spills”*, Environment & Natural Materials Research Institute at SRTA-City, Alexandria, Egypt, April 4-6, 2016.
17. *“Integrated biotechnological solutions for combating marine oil spills”*, 1<sup>st</sup> Applied Biotechnology, Biodegradation & Environmental Management (ABBEM) Conference, Agrinio, Greece, Jan 28-29, 2016.

### Teaching Activities & Graduate Student Supervision

Extensive experience in developing courses and teaching at the undergraduate (U) and graduate (G) level.

<i>Environmental Engineering Courses:</i>	<i>Chemical Engineering Courses:</i>
Chemical & Biochemical Engineering (U & G), Bioremediation Engineering (U & G), Biorefineries (G) Advanced wastewater treatment (G)	Biochemical Engineering (U & G), Chemical reaction kinetics (U), Chemical Engineering Thermodynamics (U), Unit Operations (U)
<i>Common Core Engineering Courses:</i>	Process Dynamics and Control (U & G).
Probability and Statistics for Engineers (U), Regression Analysis (G)	

Received the *“Superior Teacher Award”* at the University of Calgary for the faculty of Engineering (1986-87).

Prof. Kalogerakis has supervised 4 and co-supervised 8 PhD students at the University of Calgary; and has also supervised 12 PhD students and co-supervised 6 PhD students at the Technical University of Crete. Also, he has supervised about 30 MSc students in Canada, US and Greece. In addition, Prof. Kalogerakis has served in numerous PhD examination Committees worldwide.

### Conference Organization

*Conference Chair of the European Bioremediation Conferences series (I to VII) held in Chania, Crete Greece (2001-2018). First two conferences funded by EU’s Marie Curie - High Level Conferences award (2001 & 2003).*

*Conference Chair of 11<sup>th</sup> International Phytotechnologies Conference, Heraklion, Crete, Greece (2014)*

*Member of Scientific Committee of many International Conferences held in Europe, Canada & North Africa.*