


PERSONAL INFORMATION	
SURNAME	KALANTZI
NAME	IOANNA
DATE OF BIRTH	18.05.1977
PLACE OF RESIDENCE	HERAKLION CRETE, GREECE
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EDUCATION	
10.2005 - 07.2013	PhD , Biology Department, University of Crete, Heraklion, Greece, Thesis Title: Heavy metals and aquaculture: effects on sediments, benthos and fish.
09.2002 - 09.2004	MSc , Department of Environmental Engineering, Technical University of Crete, Chania, Greece, Thesis Title: Benthic impacts of fish farming: meta-analysis of community and geochemical data, Grade: 9.67.
09.1996 - 03.2002	BSc , Chemistry Department, Aristotle University of Thessaloniki, Thessaloniki, Greece, Thesis Title: Study of gas adsorption on solid phases with Monte Carlo method, Grade: 7.29.
RESEARCH/WORKING EXPERIENCE	
10.2013 - present	Postdoctoral Researcher, Institute of Oceanography, Hellenic Centre for Marine Research (HCMR), Crete, Greece: Participate in sampling cruises, samples analysis for organic and inorganic contaminants, data analysis and drafting of reports, deliverables and scientific articles.
01.2006 - 07.2013	Research scientist, Biology Department, University of Crete, Greece: Participate in sampling cruises, analyze samples (seawater, sediment) for contaminants and biotic factors, data analysis, stakeholder communication, drafting of scientific articles.
09.2003 - 08.2004	Laboratorial Assistant and Lecturer, Ecology laboratory, Department of Environmental Engineering, Technical University of Crete, Greece
FELLOWSHIPS and AWARDS	
2013	PhD Scholarship (4 months), Institute of Oceanography, (HCMR), Crete, Greece
2008	ERASMUS Scholarship (4 months) in the Scottish Association of Marine Sciences (SAMS), University of Highlands and Islands (UHI), Scotland, UK.
2003 - 2004	MSc Scholarship, Department of Environmental Engineering, Technical University of Crete.
MEMBERSHIPS & REVIEWING ACTIVITIES	
2015 present	- Reviewer in 8 international peer reviewed journals (e.g. STOTEN; AQTOX; ESPR; AECT).
TEACHING ACTIVITIES	
2018 2019	- Invited lecturer - Undergraduate course "Marine Pollution", Department of Biology, University of Crete, Greece.
2017 2019	- Invited lecturer - Postgraduate course "Environmental Impact Assessment", Department of Biology, University of Crete, Joint Master Degree in Aquaculture, Environment and Society
2009 2019	- Training of 12 undergraduate and postgraduate students, Biology Department and Chemistry Department of the University of Crete.

RESEARCH GRANTS			
Project Title	Funding source	Period	Role
WFD: Water Framework Directive (2000/60/EU)	EU	2018-present 2014-2015	Sampling cruises, samples/ data analysis, reports/ scientific articles drafting
AQUACOSM: EU network of mesocosms facilities	EU-HORIZON 2020	2017-present	Experiments of microcosms and mesocosms, samples analysis, writing of scientific articles
JERICO-NEXT (Transnational Access to Coastal Observatories)	EU	2017-2018	Principal Investigator of the JERICO-NEXT Transnational Access to Coastal Observatories (EU) project: 'Monitoring of Organic Contaminants in the water of the Southern Europe with Passive Sampling'
TAPAS: Tools for Assessment and Planning of Aquaculture Sustainability	EU-HORIZON 2020	2016-present	Sampling cruises, samples analysis, deliverables and scientific articles drafting
POSEIDOMM: Photochemistry at the Ocean's Surface	MARIE Skłodowska-CURIE ACTIONS,	2016-2017	Mesocosm experiments and samples analysis for metals on microplastics and on organisms
AQUA-NANO: Fate of engineered nanoparticles and effects on marine pelagic ecosystem	GSRT	2014-2015	Microcosm and mesocosm experiments, sample analysis, deliverables, scientific reports/ articles drafting
HYPOXIA: Benthic pelagic coupling: hypoxia and regime shifts	GSRT	2014-2015	Samples analysis, drafting of scientific reports and papers
Fisheries Data Collection 2013	EU-GSRT	2013	Sampling cruises, data analysis
ADAMANT: Atmospheric deposition and Mediterranean sea water productivity	EU- NSRF	2012-2015	Mesocosm experiment, samples analysis for metal availability
PREVENT ESCAPE: Assessing the causes and developing measures to prevent the escape of fish from sea-cage aquaculture	EU-FP7	2009-2010	Sample analysis, sampling cruises and data analysis

AQUAGRIS (Sustainable Farming, Fisheries and Aquaculture)	EU-FP6	2008-2009	Data collection
Operational Programme for Fisheries	EU-GSRT	2007-2008	Bioindicators collection
CARRYING CAPACITY (aquaculture)	GSRT	2006-2007	Data analysis, reports drafting, stakeholder communication,
ECASA: Ecosystem Approach for Sustainable Aquaculture	EU-FP6 – STREP	2006-2009	Sampling cruises, samples analysis for contaminants
IBIS: Fish farming effects on benthic biogeochemical processes	PENED-GSRT	2005-2009	Sampling cruises and microcosm experiments, data analysis

SCIENTIFIC ACHIEVEMENTS (*MENTIONED SCIENTIFIC PUBLICATIONS CAN BE FOUND IN B1.1.1*)

Dr. Ioanna Kalantzi has been involved in 15 RTD projects (4 national and 11 EU funded), focusing on contaminants, such as metals, elements, POPs, and nanoparticles, in the marine environment and in marine organisms (fish, benthos, plankton) and on aquaculture ecosystem interactions. Results of her work have been published in 18 international peer reviewed journals (1 more scientific article is currently under review) – from which she is the first author in 9 papers, as well as in more than 17 conference presentations and posters, with 331 citations and an h-index 7 (Scopus, 6/3/2019). Her research interests include marine chemistry of water column and sediment ([Kalantzi et al. 2013a](#)), bioaccumulation of contaminants to aquatic organisms ([Kalantzi et al. 2019a](#); [Kalantzi et al. 2016b](#); [Sofoulaki et al. 2019](#); [Sanz-Lazaro et al. 2012](#)), bioavailability of contaminants, and speciation analysis of metals ([Kalantzi et al. 2017](#)), trophic transfer of contaminants through the food web ([Kalantzi et al. 2014](#)), and human risk assessment from the consumption of fish ([Kalantzi et al. 2013b](#), [2016a](#); [Sofoulaki et al. 2019](#)).

Dr. Kalantzi is a Chemist with an MSc in Environmental Sciences and a PhD in Biology which provides her with a broader vision of the Science. Her Ph.D. (Marine & Food Chemistry and Biology, University of Crete, 2013; [Kalantzi et al. 2013a](#), [2013b](#), [2014](#), [2016a](#)) has focused on the (1) development of quantitative analytical methods for total metal determination in environmental samples by the use of ICP-MS; (2) effects and bioaccumulation of metals and elements on the sediment and the biota (farmed fish, wild fish, benthos) in the marine environment, and (3) estimation of risks and benefits for humans through the consumption of fish. Moreover, she has participated in activities for the determination of other impacts on marine ecosystem ([Kalantzi & Karakassis 2006](#); [Papageorgiou et al. 2010](#)), for the implementation of Water Framework Directive and for the estimation of the impact of important pressures (e.g. nanoparticles) on the marine environment ([Kalantzi et al. 2019b](#); [Tsiola et al. 2017](#), [2018](#); [Toncelli et al. 2017](#); [Vasileadou et al. 2016](#); [ECASA](#)). In some projects, Dr. Kalantzi has been involved in communication and dissemination activities that included feed-back from experts or other important stakeholders with the form of questionnaires and Delphi exercises ([Karakassis et al. 2013](#); [TAPAS](#); [PREVENT ESCAPES](#); [CARRYING CAPACITY](#)). She has also participated in numerous oceanographic research campaigns in national and international marine research projects.

During her PhD at the Biology Department of the University of Crete, she was responsible for the design and establishment of a specialized clean room facility for metal analysis. Also she was the first scientist in the Biology Department that worked on the field of metal distribution and bioaccumulation in environmental samples by optimizing and validating the methods for metals analysis by the use of Inductively Coupled Plasma Mass Spectrometry (ICP-MS), thus allowing the

investigation of new hypotheses on anthropogenic impacts on marine organisms. In this new field for the Biology Department, at 12 BSc and MSc students have been trained and have conducted their research under her supervision. Currently, she is supervising an MSc thesis about the effects of contaminants on freshwater organisms from Greek lakes.

PUBLICATIONS

1. Hopwood M.J., Sanchez N., Polyviou D., Leiknes O., Gallego-Urrea J., Achterberg E.P., Ardelan M., Aristegui J., Bach L., Besiktepe S., Heriot Y., Kalantzi I., Kurt T.T., Santi I., Tsagaraki T., Turner D. (2019) Trace chemical species in marine incubation experiments, part A. Experiment design and bacterial abundance control extracellular H₂O₂ concentrations. *Biogeosciences* (*under review*)
2. Kalantzi I., Mylona K., Toncelli C., Bucheli T.D., Knauer K., Pergantis S.A., Pitta P., Tsiola A., Tsapakis M. (2019) Ecotoxicity of silver nanoparticles on plankton organisms: A review. *Journal of Nanoparticles Research* 21:65 DOI:10.1007/s11051-019-4504-7
3. Kalantzi I., Mylona K., Pergantis S.A., Coli A. Panopoulos S., Tsapakis M. (2019) Elemental distribution in the different tissues of broodstock from Greek hatcheries. *Aquaculture* 503:175-185 DOI:10.1016/j.aquaculture.2019.01.004
4. Sofoulaki K., Kalantzi I., Machias A., Pergantis S.A., Tsapakis M. (2019) Metals in sardine and anchovy from Greek coastal areas: Public health risk and nutritional benefits assessment. *Food and Chemical Toxicology* 123:113-124 DOI:10.1016/j.fct.2018.10.053
5. Sofoulaki K., Kalantzi I., Machias A., Mastoraki M., Chatzifotis S., Mylona K., Pergantis S.A., Tsapakis M. (2018) Metals and elements in sardine and anchovy: Species specific differences and correlations with proximate composition and size. *Science of the Total Environment* 645:329-338 DOI:10.1016/j.scitotenv.2018.07.133
6. Tsiola A., Toncelli C., Fodelianakis S., Michoud G., Bucheli T.D., Gavriilidou A., Kagiorgi M., Kalantzi I., Knauer K., Kotoulas G., Mylona K., Papadopoulou E., Psarra S., Santi I., Tsapakis M., Daffonchio D., Pergantis S.A., Pitta P. (2018) Low-dose addition of silver nanoparticles stresses marine plankton communities. *Environmental Science Nano* 5(8):1965-1980 DOI:10.1039/C8EN00195B
7. Tsiola A., Pitta P., Callol A.J., Kagiorgi M., Kalantzi I., Mylona K., Santi I., Toncelli C., Pergantis S.A., Tsapakis M. (2017) The impact of silver nanoparticles on marine plankton dynamics: Dependence on coating, size and concentration. *Science of the Total Environment* 601-602:1838-1848 DOI:10.1016/j.scitotenv.2017.06.042
8. Toncelli C., Mylona K., Kalantzi I., Tsiola A., Pitta P., Tsapakis M., Pergantis S.A. (2017) Silver nanoparticles in seawater: A dynamic mass balance at part per trillion silver concentrations. *Science of the Total Environment* 601-602:15-21 DOI:10.1016/j.scitotenv.2017.05.148
9. Kalantzi I., Mylona K., Sofoulaki K., Tsapakis M., Pergantis S.A. (2017) Arsenic Speciation in Fish from Greek Coastal Areas. *Journal of Environmental Sciences* 56, 300-312 DOI:10.1016/j.jes.2017.03.033
10. Vasileiadou K., Pavlodi C., Kalantzi I., Apostolaki E., Chatzigeorgiou G., Chatzinikolaou E., Pafilis E., Papageorgiou N., Fanini L, Konstas S., Fragopoulou N., Arvanitidis C. (2016) Environmental variability and heavy metal concentrations from five lagoons in the Ionian Sea (Amvrakikos Gulf, W Greece). *Biodiversity Data Journal* 4: e8233 DOI:10.3897/BDJ.4.e8233
11. Kalantzi I., Zeri C., Catsiki V.A., Tsangaris C., Stroglyoudi E., Kaberi H., Vergopoulos N., Tsapakis M. (2016) Assessment of the use of copper alloy aquaculture nets: Potential impacts on the marine

environment and on farmed fish. *Aquaculture* 465:209-222
DOI:10.1016/j.aquaculture.2016.09.016

12. Kalantzi I., Pergantis S.A., Black K.D., Shimmield T.M., Papageorgiou N., Tsapakis M., Karakassis I. (2016) Metals in tissues of seabass and seabream reared in sites with oxic and anoxic substrata and risk assessment for consumers. *Food Chemistry* 194:659-670 DOI: 10.1016/j.foodchem.2015.08.072
13. Kalantzi I., Papageorgiou N., Sevastou K., Black K.D., Pergantis S.A., Karakassis I. (2014). Metals in benthic macrofauna and biogeochemical factors affecting their trophic transfer to wild fish around fish farm cages. *Science of the Total Environment* 470-471:742-753 DOI: 10.1016/j.scitotenv.2013.10.020
14. Karakassis I. Papageorgiou N., Kalantzi I., Sevastou K., Koutsikopoulos C. (2013). Adaptation of fish farming production to the environmental characteristics of the receiving marine ecosystems: a proxy to carrying capacity. *Aquaculture* 408-409:184-190 DOI:10.1016/j.aquaculture.2013.06.002
15. Kalantzi I., Black K.D., Pergantis S.A., Shimmield T.M., Papageorgiou N., Sevastou K., Karakassis I. (2013). Metals and other elements in tissues of wild fish from fish farms and comparison with farmed species in sites with oxic and anoxic sediments. *Food Chemistry* 141:680-694 DOI:10.1016/j.foodchem.2013.04.049
16. Kalantzi I., Shimmield T.M., Pergantis S.A., Papageorgiou N., Black K.D., Karakassis I. (2013). Heavy metals, trace elements and sediment geochemistry at four Mediterranean fish farms. *Science of the Total Environment* 444:128-137 DOI:10.1016/j.scitotenv.2012.11.082
17. Sanz-Lázaro C., Malea P., Apostolaki E.T., Kalantzi I., Marín A., Karakassis I. (2012). The role of the seagrass *Posidonia oceanica* in the cycling of trace elements. *Biogeosciences* 9:2497-2507 DOI:10.5194/bg-9-2497-2012
18. Papageorgiou N., Kalantzi I., Karakassis I. (2010). Effects of fish farming on the biological and geochemical properties of muddy and sandy sediments in the Mediterranean Sea. *Marine Environmental Research* 69:326-336 DOI:10.1016/j.marenvres.2009.12.007
19. Kalantzi I., Karakassis I. (2006). Benthic impacts of fish farming: meta-analysis of community and geochemical data. *Marine Pollution Bulletin* 52:484-493 DOI:10.1016/j.marpolbul.2005.09.034

CONFERENCES

1. Kalantzi I., Mylona K., Sofoulaki K., Tsapakis M., Pergantis S.A. (2017) Arsenic Speciation in Fish from Greek Coastal Areas. 10th International Conference on Instrumental Methods of Analysis, Heraklion, Greece, 17-21 September, **2017**
2. Kalantzi I., Catsiki V.A., Zeri C., Kaberi H., Stroglyoudi E., Tsangaris C., Tsapakis M. Assessment of the use of copper alloy aquaculture nets: Potential impacts on the marine environment. 11th National Symposium on Oceanography and Fisheries, Mytilini, Greece, 13-17 May, **2015**
3. Sofoulaki K., Kalantzi I., Machias A., Nikolioudakis N., Chatzifotis S., Tsapakis M. Preliminary results of the presence of metals in *Engraulis encrasicolus* and *Sardina pilchardus* and human risk assessment. 11th National Symposium on Oceanography and Fisheries, Mytilini, Greece, 13-17 May, **2015**
4. Kagiorgi M., Tsiola A., Callol A., Kalantzi I., Mylona K., Toncelli C., Pergantis S.A., Pitta, P., Tsapakis, M. Silver nanoparticles effects on the pico-planktonic communities of the Cretan sea, studied with the use of a mesocosm experiment. 11th National Symposium on Oceanography and Fisheries, Mytilini, Greece, 13-17 May, **2015**

5. Mylona K., Toncelli C., Tsiola A., Kalantzi I., Kagiorgi M., Pitta P., Pergantis S.A., Tsapakis, M. Single Particle ICP-MS for the quantification of silver nanoparticles in seawater at environmentally relevant concentrations. 11th National Symposium on Oceanography and Fisheries, Mytilini, 13-17, **2015**
6. Tsiola A., Pitta P., Callol A., Kagiorgi M., Kalantzi I., Tsapakis M. The impact of silver nanoparticles to planktonic microorganisms: from viruses to pico- and nano- sized protists (110). SETAC Europe 25th Annual Meeting, Barcelona, Spain, 3-8 May, **2015**
7. Kalantzi I., Tsiola A., Tsangaris C., Callol Junyer A., Kagiorgi M., Knauer K., Toncelli C., Mylona K., Pergantis S.A., Pitta P., Tsapakis M. Ecotoxicity of silver nanoparticles to marine planktonic communities at environmentally relevant concentrations: A microcosm approach (MO288). SETAC Europe 25th Annual Meeting, Barcelona, Spain, 3-8 May 2015, **2015**
8. Mylona K., Toncelli C., Tsiola A., Kalantzi I., Kagiorgi M., Pitta P., Pergantis S.A., Tsapakis M. Development of single particle ICP-MS for the detection of silver nanoparticles in a complex matrix (TU231). SETAC Europe 25th Annual Meeting, Barcelona, Spain, 3-8 May, **2015**
9. Toncelli C., Mylona K., Kalantzi I., Tsapakis M., Pergantis S.A. Transformation and fate of silver nanoparticles in seawater: use of single particle ICP-MS in complex matrix (TU232). SETAC Europe 25th Annual Meeting, Barcelona, Spain, 3-8 May, **2015**
10. Kagiorgi M., Tsiola A., Callol A, Kalantzi I., Milona K., Pergantis S.A., Toncelli C., Pitta P., Tsapakis M. The impact of silver nanoparticles on the pico-planktonic community of the Eastern Mediterranean Sea, studied with the use of a microcosm experiment. ASLO Aquatic Sciences Meeting, Granada, Spain, 22-27 February, **2015**
11. Toncelli C., Mylona K., Pergantis S.A., Kalantzi I., Tsapakis M. Pushing to the limits of single particle ICP-MS: fate of silver nanoparticles in seawater at environmentally relevant concentrations. SETAC North America 35th Annual Meeting, Vancouver, BC, Canada, 9-13 November, **2014**
12. Tsapakis M., Pergantis S.A., Sarropoulou E., Pitta P., Kalantzi I., Toncelli C., Kordatos K., Zeri C., Kaberi E., Knauer K., Bucheli T. Aqua-Nano project: Fate of engineered nanoparticles and effects on marine pelagic ecosystem (MO154). SETAC Europe 24th Annual Meeting, Basel, Switzerland, 11-15 May, **2014**
13. Kalantzi I., Black K.D., Pergantis S.A., Papageorgiou N., Shimmield T.M., Tsapakis M., Karakassis I. Heavy metals, trace elements and sediment geochemistry at four Mediterranean fish farms (MO247). SETAC Europe 24th Annual Meeting, Basel, Switzerland, 11-15 May, **2014**
14. Kalantzi I., Papageorgiou N., Sevastou K., Black K.D., Pergantis S.A., Tsapakis M., Karakassis I. Metals in benthic macrofauna and biogeochemical factors affecting their trophic transfer to wild fish around fish farm cages (MO035). SETAC Europe 24th Annual Meeting, Basel, Switzerland, 11-15 May, **2014**
15. Kalantzi I., Black K.D., Pergantis S.A., Shimmield T.M., Papageorgiou N., Sevastou K., Tsapakis M., Karakassis I. Metals and other elements in tissues of wild fish from fish farms and comparison with farmed species in sites with oxic and anoxic sediments (MO034). SETAC Europe 24th Annual Meeting, Basel, Switzerland, 11-15 May, **2014**
16. Vetsis E., Kalantzi I., Papageorgiou N., Karakassis I. Heavy metals concentrations in farmed and wild fish tissues. 14th Hellenic Conference of Ichthyologists, Piraeus, Greece, 6-9 May, **2010**
17. Papageorgiou N., Kalantzi I., Apostolaki E., Sevastou K., Karakassis I. Changes in benthic diversity and ecosystem function I response to organic enrichment from fish farming. Proceedings of the World Conference on Marine Biodiversity, Valencia Spain, 11-15 November, **2008**

PERSONAL SKILLS

LANGUAGES **Mother Tongue:** Greek

Other languages: Advanced knowledge of written and spoken of English

- First Certificate in English – University of Cambridge (1993)
- State Certification of foreign language Proficiency – Ministry of National Education and Religious Affairs, Hellenic Republic (2005)
- Advanced Level Certificate in English – Hellenic American University (2005)

TECHNICAL SKILLS Excellent knowledge of many PC applications (MS-Windows 95/98//2000/NT/XP/7/10, MS-Office) and statistical packages (Systat5, Primer5, CANOCO, R programming)

Knowledge of R Statistics (data exploration, regression, GLM and GAM)

Laboratory organization and financial management including consumables and equipment orders and marketing.
