

Curriculum Vitae In English

First name: Sotirios

Surname: Vasileiadis

Date and Place of Birth: 18/04/1977, Veroia, Greece

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Studies - Degrees:

- PhD in the Department of Agricultural and Environmental Chemistry of Università Cattolica del Sacro Cuore (Piacenza, Italy), specializing in targeted metagenomics and bioinformatics; degree conferred in 2012. Thesis title: “*Reflections of ecosystem services on the agricultural soil prokaryotic phylogenetic and functional diversity: PCR based approaches in prokaryotic ecology*”.
- MSc at the plant pathology department at plant-microbe interactions and biocontrol at Wageningen University (The Netherlands); degree conferred in 2008;
- Diploma in Agricultural Sciences with specialization in plant production at the Aristotle University of Thessaloniki (AUTH, Greece; 5-year degree / MSc-equivalent); degree conferred in 2003;

Relevant employment history:

- From July the 1st 2019 till today: Fellow at AUTH (Greece) at the project entitled “Novel technologies at anaerobic digestion aiming at methane production increase” (# 95663, action Research-Create-Innovate, EU Partnership Agreement 2014-2020. Topic: Characterization of the microbial population using massively parallel sequencing of the 16S rRNA gene aiming at the monitoring of population shifts in continuous stirred-tank reactors (CSTR).
- Marie Skłodowska Curie Actions Individual Fellowship fellow from July 1st of 2017 until June 30th 2019. Project title “EMIGRATE: Exploring MIncrobial networking in pesticides biodegradation; novel inocula and biocatalysts for biodepuration of agro-industrial Effluents”. The project aim is to identify the exact members, dissect their roles, and understand the interactions of a microbial consortium able to degrade a highly recalcitrant to degradation pesticide through a systems biology approach. Meta-genomics/transcriptomics/bolomics/proteomics methods and high throughput techniques heavily relying in large-dataset bio/chemo-informatics are being implemented by the fellow for achieving the project aims. The current project progress is recorded through publications and the project website: <http://emigrate.bio.uth.gr>
- Research Associate, FII (former CERAR) UniSA, from March 2014 to March 2017. Research Topic: *Microbial ecology of metal stressed environments (soil, water, wastewater, biosolids) and horizontal gene transfer events in wastewater* (supervised by E Donner and E Lombi). Tasks: experimental plan and protocol setup for screening microbial diversity and functions using high throughput sequencing (HTS) of phylogenetic marker genes combined with shotgun meta- genomics/transcriptomics and associated bio-informatics/statistics; student supervision and training; Assigned as Coordinator of the FII Microbiology Lab since May 1st 2015.
- Postdoctoral Researcher, Università Cattolica del Sacro Cuore, Feb 2012 – Feb 2014. Research topic: *Effects of synthetic and natural pesticides on the soil microbial communities* (SNAC project, supervised by M Trevisan). Tasks: protocol setup/performance for microbial diversity screening with HTS of phylogenetic marker genes and associated bio-informatics/statistics; genomics; student supervision and training.
- Research Assistant, Università Cattolica del Sacro Cuore, Dec 2011. Research topic: SNAC project (see above). Tasks: protocol setup/performance, microbial diversity screening with HTS of phylogenetic marker genes and associated bio-informatics/statistics.
- Research Assistant, NIOO-KNAW (Netherlands Institute of Ecology; currently in Wageningen, the Netherlands, supervised by JH Leveau and J Raaijmakers), Aug – Nov 2007. Research topic: *High*

throughput screening of large insert metagenomic libraries using fluorescent in situ hybridization (FISH) and flow cytometry. Tasks: handling of the metagenomic library (fosmids/*E. coli* hosts); FISH protocol development; epi-fluorescent microscopy; flow cytometry.

Industrial innovation:

- Contract and industry-academia collaboration with Advanced Analytical Technologies (AAT, Piacenza, Italy; www.aat-taa.eu); bioinformatics/statistics tasks; projects managed by Dr S Soldi.
- An industry-academia collaboration (UniSA-ECAS4) for the setup and application of molecular biology protocols in testing the antimicrobial efficacy of analytes.

Grants/Awards:

Project Grants Received

- Project coordinator of Marie Skłodowska Curie H2020 Individual Fellowship [IF] for the period July 2017 – June 2019. Title: “EMIGRATE: Exploring Microbial networking in pesticides biodegradation; novel inocula and biocatalysts for biodegradation of agro-industrial Effluents”. Project number 749463 with maximum estimated funding of €152,653.20.
- Joint Chief Investigator (JCI) in the South Australian PRIF International Research Grant Program IRPG 45 with partners from Nereus COST-action, the IWRC (University of Cyprus, Cyprus) and the Volcani Center (Agricultural Research Organisation, Israel), 2015-2020, (Donner, Lombi, Vasileidis, Thierry, Fatta-Kassinos, Cytryn). Total funding \$992,000 (SA PRIF: A\$400,000; UniSA: A\$180,000; Nereus A\$292,000; Volcani \$120,000). “Transfer and control of antibiotic resistance bacteria and their genes during wastewater treatment and reuse”.
- JCI in South Australian PRIF Industry Linkage Research Grant with ECAS4 Industry Partner, 2014-2015, (Elmas, Donner, Nann, Lombi, Vasileidis). Total funding A\$232,800 (ECAS4: A\$140,000; SA PRIF: A\$92,800). “Sanitisation and disinfection using electrochemically generated disinfectants”.
- Australian Synchrotron Access Grant; 48 h beamtime on the X-ray Absorption Spectroscopy beamline, April 2015. “Role of soil properties in controlling silver selective pressure and its effects on soil bacterial communities.” (AS151/XAS/9123; Donner, Lombi, Vasileidis, Brunetti). As the commercial rate for synchrotron beamtime is currently \$15K/day, this is the equivalent of \$30K in facility access funding.

Networking grant

ECRNA – ERC Networking Award. Visiting researcher in the Dept of Biotech. and Biochem. of the UTh (Thessaly, Greece) June/July 2015 (Australian- A - \$5,550).

Awards-Scholarships

Italian Society of Agricultural Chemistry PhD thesis distinction award (500 €) /// PhD scholarship (~45,000 € total / 3 years) /// MSc scholarship (~21,000 € total / 2 years)

Student supervision and support and teaching activities at workshops/summerschools:

- Actively engaged in research student co-supervision and training since the latter stages of PhD. Co-supervision of 2 PhD students, 3 MSc students and several visiting students.
- Teaching support activities, training of students and visiting researchers in molecular biology laboratory methods; teaching bioinformatics and associated statistical methods; assisting with the reporting of related research results; conducting student evaluation.
- Teaching of bioinformatics courses at the Biochemistry and Biotechnology department of the University of Thessaly (1-week crash course with modules entitled “DNA sequencing”, “Bacterial genome assembly primer” and “Bacterial genome assembly practical”, 20-27 Feb 2018, Viopolis, Larissa) and invited speaker at the Mikrobiokosmos 2018 Summer-School (session entitled “Prokaryotic genome assembly and annotation”, 24-28 June, Moni Paou, Argalasti, Volos) and the NEREUS COST-action ES1403 Training School (session “Next generation sequencing approaches for ARB & ARGs screening in wastewater, soil and plant environments”, 29-31 May, Nicosia, Cyprus).

Academic reviewing activity:

- Regular reviewer for scientific journals, including: Scientific Reports (NPG), Soil Biology and Biochemistry, Journal of Applied Microbiology, Applied Environmental Soil Science, BIOMED Research International, Environmental Science and Pollution Research, International Journal of Microbiology, Pedobiologia, Science of the Total Environment, The Scientific World Journal, Waste

Management & Research, **Water Research**, **Ecology Letters**, **Associate Review Editor in Frontiers in Microbiology** since July 2015.

- **Australian Research Council (ARC) National Competitive Grants Program (NCGP)** assessor since Oct. 2018. **Natural Environment Research Council (UK)** reviewer since Nov. 2018.

Publication list

[BC] Scholarly book chapters

1. Voolaid V, Donner E, **Vasileiadis S**, Berendonk T (2017). Bacterial diversity and antibiotic resistance genes in wastewater treatment plant influents and effluents. In *Antimicrobial resistance in the wastewater treatment process*. Keen, P. L. and Fugère, R. eds. (Hoboken, New Jersey, USA: Wiley Blackwell), pp 157-178.
2. **Vasileiadis S**, Puglisi E, Cocconcelli PS, Trevisan M (2013). Screening phylogenetic and functional marker genes in soil microbial ecology. In *Omics in soil science*. Nannipieri, P, Pietramellara G and Renella G. eds. (Norfolk, UK: Caister Academic Press), pp 45-61.

[J] Peer-Reviewed journal articles

(ISI Web of Science Core and InCites™ Journ. Citat. Rep: **total citations 347 (320 excluding self-citations); average IF 4.3; H-index 12**)

(Google Scholar: **total citations 543; H-index 15**)

ISI Web of Science metrics are shown below

1. Khaksar, M, **Sotirios, V**, Sekine, R, Brunetti, G, Scheckel, K G, Vasilev, K, Lombi, E, Donner, E (2019; doi 10.1039/C9EN00738E). Chemical characterisation, antibacterial activity, and (nano)silver transformation of commercial personal care products exposed to household greywater. *Environmental Science: Nano*, *Journal ranking: 11/250 in Environmental Sciences; Impact factor: 7.7*
2. Soldi, S, **Vasileiadis, S**, Lohner, S, Uggeri, F, Puglisi, E, Molinari, P, Donner, E, Decsi, T S, Sailer, M, Theis, S (2019; doi 10.3920/bm2018.0116). Prebiotic supplementation over a cold season specifically modulates the gut microbiota composition of 3 to 6 year-old children. *Beneficial Microbes*, *Journal ranking: 75/125 in Microbiology; Impact factor: 2.3 Citations: 2*
3. Suciu, N, **Vasileiadis, S**, Puglisi, E, Pertile, G, Tourna, M, Pappolla, A, Ferrarini, A, Sulowicz, S, Fornasier, F, Lucini, L, Karpouzas, D, Trevisan, M (2019; doi 10.1016/j.apsoil.2019.01.016) Botanical and low-dose pesticides pose no risk for soil microorganisms even at high dose rates. *Appl Soil Ecol*, *Journal ranking: 8/34 in Soil Science; Impact factor: 2.9*
4. **Vasileiadis, S**, Puglisi, E, Papadopoulou, E S, Pertile, G, Suciu, N, Pappolla, R A, Tourna, M, Karas, P A, Papadimitriou, F, Kasiotakis, A, Ipsilanti, N, Ferrarini, A, Sulowicz, S, Fornasier, F, Menkissoglu-Spiroudi, U, Karpouzas, D G (2018). Blame it on the metabolite: 3,5-dichloraniline rather than the parent compound is responsible for decreasing diversity and function of soil microorganisms. *Appl Environ Microbiol*, doi 10.1128/aem.01536-18, **spotlight article**, *Journal ranking: 39/160 in Biotechnology and Applied Microbiology; Impact factor: 3.6 Citations: 1*
5. **Vasileiadis, S**, Brunetti, G, Marzouk, E, Wakelin, S, Kowalchuk, G A, Lombi, E, Donner, E (2018). Silver toxicity thresholds for multiple soil microbial biomarkers. *Environ Sci Technol*, 52, 8745–8755, *Journal ranking: 11/241 in Environmental Sciences; Impact factor: 6.6 Citations: 2*
6. Papadopoulou, E S, Perruchon, C, **Vasileiadis, S**, Rousidou, C, Tanou, G, Samiotaki, M, Molassiotis, A, Karpouzas, D G (2018). Metabolic and evolutionary insights in the transformation of diphenylamine by a *Pseudomonas putida* strain unravelled by genomic, proteomic and transcription analysis. *Front Microbiol* 9, *Journal ranking: 31/125 in Microbiology; Impact factor: 4.0*
7. Lohner, S, Jakobik, V, Mihályi, K, Soldi, S, **Vasileiadis, S**, Theis, S, Sailer, M, Sieland, C, Berényi, K, Boehm, G, Decsi, T (2018). Inulin-type fructan supplementation of 3 to 6 year-old children is associated with higher fecal bifidobacterium concentrations and fewer febrile episodes requiring medical attention. *The Journal of Nutrition*, 148, 1300-1308, *Journal ranking: 16/81 in Nutrition and Dietetics; Impact factor: 4.4 Citations: 2*
8. Karas, P A, Baguelin, C, Pertile, G, Papadopoulou, E S, Nikolaki, S, Storck, V, Ferrari, F, Trevisan,

- M, Ferrarini, A, Fornasier, F, **Vasileiadis, S**, Tsiamis, G, Martin-Laurent, F, Karpouzas, D G (2018). Assessment of the impact of three pesticides on microbial dynamics and functions in a lab-to-field experimental approach. *Sci Total Environ* 637-638, 636-646, *Journal ranking: 27/241 in Environmental Sciences; Impact factor: 4.6 Citations: 5*
9. Mandal, S, Donner, E, **Vasileiadis, S**, Skinner, W, Smith, E, Lombi, E (2018). The effect of biochar feedstock, pyrolysis temperature, and application rate on the reduction of ammonia volatilisation from biochar-amended soil. *Sci Total Environ* 627, 942-950, *Journal ranking: 27/241 in Environmental Sciences; Impact factor: 4.6 Citations: 11*
 10. Hassan, H, Jin, B, Donner, E, **Vasileiadis, S**, Saint, C, Dai, S (2018). Microbial community and bioelectrochemical activities in MFC for degrading phenol and producing electricity: Microbial consortia could make differences. *Chem Eng J* 332, 647-657, *Journal ranking: 3/50 in Environmental Engineering; Impact factor: 6.7 Citations: 26 Highly cited!*
 11. Perruchon, C, **Vasileiadis, S**, Rousidou, K, Papadopoulou, E, Tanou, G, Samiotaki, M, Garagounis, C, Molassiotis, A, Papadopoulou, K, Karpouzas, D (2017). Metabolic pathway and cell adaptation mechanisms revealed through genomic, proteomic and transcription analysis of a *Sphingomonas haloaromaticamans* strain degrading ortho-phenylphenol. *Scientific Reports* 7, 6449, *Journal ranking: 12/64 in Multidisciplinary Sciences; Impact factor: 4.1 Citations: 1*
 12. Garau G, Silveti M, **Vasileiadis S**, Donner E, Deiana S, Lombi S, Castaldi P, (2017) Use of municipal solid wastes for chemical and microbiological recovery of soils contaminated with metal(loid)s. *Soil Biol Biochem* 11, 25-35, *Journal ranking: 2/34 in Soil Sciences; Impact factor: 4.9 Citations: 13*
 13. Perruchon C., Chatzinotas A., Omirou M., **Vasileiadis S.**, Menkissoglu-Spiroudi U., Karpouzas D.G., (2017) Isolation of a bacterial consortium able to degrade the fungicide thiabendazole and determination of its metabolic pathway: the key role of a *Sphingomonas* phylotype. *Appl Microbiol Biotechnol*, *Journal ranking: 46/160 in Biotechnology and Applied Microbiology; Impact Factor: 3.3 Citations: 2*
 14. Perruchon C, Patsioura V, **Vasileiadis S**, Karpouzas DG (2016). Isolation and characterisation of a *Sphingomonas* strain able to degrade the fungicide ortho-phenylphenol. *Pest Manag Sci*, 72, 113-124, *Journal ranking: 8/87 in Agronomy; Impact Factor: 3.2 Citations: 14*
 15. **Vasileiadis S**, Puglisi E, Trevisan M, Scheckel KG, Langdon KA, McLaughlin MJ, Lombi E, Donner E (2015) Changes in soil bacterial communities and diversity in response to long-term silver exposure. *FEMS Microbiol Ecol*, *Journal ranking: 41/125 in Microbiology; Impact factor: 3.5 Citations: 12*
 16. Soldi S, **Vasileiadis S**, Uggeri F, Campanale M, Morelli L, Fogli M, Calanni F, Grimaldi M, A G (2015). Modulation of the gut microbiota composition by rifaximin in non-constipated irritable bowel syndrome patients: a molecular approach. *Clin Exp Gastroenterol*, 8, 309-325 *Citations: 36*
 17. Perruchon C, Papadopoulou ES, Zouborlis S, Batiannis C, **Vasileiadis S**, Karpouzas DG (2015) Isolation of a diphenylamine-degrading bacterium and characterization of its metabolic capacities, bioremediation and bioaugmentation potential. *Environ Sci Pollut Res*, 22, 19485-19496. *Journal ranking: 71/241 in Pollution; Impact factor: 2.8 Citations: 4*
 18. Campos M, Perruchon C, **Vasileiadis S**, Menkissoglu-Spiroudi U, Karpouzas GD, Diez CM (2015). Isolation and characterization of bacteria from acidic pristine soil environment able to transform iprodione and 3,5-dichloraniline. *Int Biodeterior Biodegrad*, 104, 201-211. *Journal ranking: 41/160 in Environmental Sciences; Impact factor: 3.6 Citations: 9*
 19. Algora C, **Vasileiadis S**, Wasmund K, Trevisan M, Krüger M, Puglisi E, Adrian L (2015). Manganese and iron as structuring parameters of microbial communities in arctic marine sediments from the Baffin Bay. *FEMS Microbiol Ecol*. doi: 10.1093/femsec/fiv056. *Journal ranking: 41/125 in Microbiology; Impact factor: 3.5 Citations: 9*
 20. Karpouzas DG, Kandeler E, Bru D, Friedel I, Auer Y, Kramer S, **Vasileiadis S**, Petric I, Udikovic-Kolic N, Djuric S, Martin-Laurent F (2014). A tiered assessment approach based on standardized methods to estimate the impact of nicosulfuron on the abundance and function of the soil microbial community. *Soil Biol Biochem* 75, 282-291 *Journal ranking: 2/34 in Soil Sciences; Impact factor: 4.9; Citations: 25*
 21. Suciú NA, Ferrari F, **Vasileiadis S**, Merli A, Capri E, Trevisan M (2013). Pesticides water decontamination in oxygen-limited conditions. *J Environ Sci Health, Part B*, 48, 793-799, *Journal*

- ranking: 177/241 in Environmental Sciences; Impact factor: 1.3; Citations: 2*
22. Suciú NA, Tiberto F, **Vasileiadis S**, Lamastra L, Trevisan M (2013). Recycled paper-board for food contact materials: Contaminants suspected and migration into foods and food simulant. *Food Chem* 141, 4146-4151. *Journal ranking: 5/71 in Applied Chemistry; Impact factor: 4.9; Citations: 42*
 23. **Vasileiadis S**, Puglisi E, Arena M, Cappa F, van Veen JA, Cocconcelli PS, Trevisan M (2013). Soil microbial diversity patterns of a lowland spring environment. *FEMS Microbiol Ecol*, 86, 172-184
 24. *Journal ranking: 41/125 in Microbiology; Impact factor: 3.5; Citations: 14*
 25. **Vasileiadis S**, Coppolecchia D, Puglisi E, Balloi A, Mapelli F, Hamon RE, Daffonchio D, Trevisan M (2012). Response of ammonia oxidizing bacteria and archaea to acute zinc stress and different moisture regimes in soil. *Microb Ecol*, 64: 1028-1037. *Journal ranking: 37/158 in Ecology; Impact factor: 3.6; Citations: 13*
 26. Puglisi E, **Vasileiadis S**, Demiris K, Bassi D, Karpouzas D, Capri E, Cocconcelli P, Trevisan M (2012). Impact of fungicides on the diversity and function of non-target ammonia-oxidizing microorganisms residing in a litter soil cover. *Microb Ecol* 64, 692-701. *Journal ranking: 37/158 in Ecology; Impact factor: 3.6; Citations: 23*
 27. **Vasileiadis S**, Puglisi E, Arena M, Cappa F, Cocconcelli PS, Trevisan M (2012). Soil bacterial diversity screening using single 16S rRNA gene V regions coupled with multi-million read generating sequencing technologies. *PLoS One* 7, e42671. *Journal ranking: 15/64 in Multidisciplinary Sciences; Impact factor: 2.7; Citations: 59*
 28. Puglisi E, Hamon R, **Vasileiadis S**, Coppolecchia D, Trevisan M (2011). Adaptation of soil microorganisms to trace element contamination: a review of mechanisms, methodologies, and consequences for risk assessment and remediation. *Crit Rev Environ Sci Technol*, 42, 2435-2470. *Journal ranking: 6/241 in Environmental Sciences; Impact factor: 7.7; Citations: 7*
 29. Coppolecchia D, Puglisi E, **Vasileiadis S**, Suciú N, Hamon R, Maria Beone G, Trevisan M (2011). Relative sensitivity of different soil biological properties to zinc. *Soil Biol Biochem* 43, 1798-1807. *Journal ranking: 2/34 in Soil Sciences; Impact factor: 4.9; Citations: 22*
 30. Moszczynska A, **Vasileiadis S**, Zanetti M (2009). Pesticide researchers face formidable challenges: Annual Meeting Report of the Mediterranean Group of Pesticide Research, Piacenza, Italy, 13 and 14 November 2008. *TrAC Trends in Analytical Chemistry*, 28: 135-140. *Journal ranking: 3/80 in Analytical Chemistry; Impact factor: 7.0*

ICOI Conference oral presentations (presenter)

1. **Vasileiadis S.**, C. Perruchon, M. Omirou, B. Scheer, L. Adrian, N. Steinbach, A. Agüera, A. Chatzinotas, and D.G. Karpouzas, Roles and interactions of the members of a bacterial consortium along the degradation of the recalcitrant fungicide thiabendazole revealed via multi-omic approach, in Mikrobiokosmos 8th Conference "Microbial Communities as growth engines for Greece". 2019: Patras, Greece.
2. **Vasileiadis S**, Perruchon, C, Omirou, M, Scheer, B, Adrian, L, Steinbach, N, Chatzinotas, A, Karpouzas, D G (2018). Elucidating the roles and interactions of the members of a bacterial consortium along the degradation of the recalcitrant fungicide thiabendazole via a multi-omic approach. *Hellenic Bioinformatics* 11, Thessaloniki, Greece, 15 - 18 November.
3. **Vasileiadis S**, Brunetti, G, Marzouk, E, Wakelin, S, Kowalchuk, G, Lombi, E, Donner, E (2017). Community-wide functional and structural microbial responses to silver in nine soils. *MICROBIOKOSMOS: 10 years of Microbial Communities in Action*, Athens, Greece, 7-9 April.
4. **Vasileiadis S**, Puglisi E, Trevisan M, Langdon K, McLaughlin M, Lombi E, Donner E (2014). Silver selective pressure on soil microbial communities revealed by high throughput sequencing diversity screening. SETAC Europe, Basel, Switzerland, May 11-15.
5. **Vasileiadis S**, Puglisi E, Trevisan M, Lombi E, Donner E (2013). Shifts in microbial diversity in Australian soils exposed to silver. *XXXI Convegno Nazionale SICA*, Napoli, September 16-17.
6. **Vasileiadis S**, Puglisi E, Arena M, Cappa F, Cocconcelli PS, Trevisan M (2012). Bacterial diversity assessment of highly complex soil environments using multi-million read generating sequencing technologies. *4th International Congress EUROSIL 2012, Soil Science for the Benefit for the Mankind and Environment*, Bari, Italy, 02-06 July.
7. **Vasileiadis S**, Balloi A, Mapelli F, Coppolecchia D, Puglisi E, Daffonchio D, Trevisan M, Hamon RE (2009). Biochemical and molecular insights in the adaptation of soil microcosms to high zinc

concentrations. 19th International Symposium in Environmental Biogeochemistry, Hamburg, Germany, 14-19 September.

[COC] Conference oral presentations (co-author)

1. Brunetti, G, **Vasileiadis, S**, Drigo, B, Wu, X, Saint, C, Lombi, E, Donner, E (2018). Effects of single pulse silver, copper, and zinc selective pressure on wastewater microbial diversity and antibiotic resistance. XENOWAC II 2018, Limassol, Cyprus, 10-12 October.
2. Donner, E, **Vasileiadis, S**, Brunetti, G, Bell, J, Wu, X, Aleer, S, Short, M, Saint, C, Lombi, E, Drigo, B (2018). Microbiome and mobile antibiotic resistome in wastewater treatment plants and recycled wastewater products. ISME 17, Leipzig, Germany, 12-17 August.
3. Pietta E, Gazzola S, **Vasileiadis S**, Montealgre MC, Roh JH, Murray BE, Cocconcelli PS (2014). Phylogenomic analyses and PBP5 progression of Enterococcus faecium strains isolated from food and other sources. ECCO XXXIII - Molecular Taxonomy from biodiversity to biotechnology 33rd Annual Meeting of the European Culture Collections' Organisation, Valencia, Spain, 11-13 June.
4. Gazzola S, **Vasileiadis S**, Cocconcelli PS (2014). Genomic Analysis of the food isolate Staphylococcus epidermidis UC 7032. 2nd International Symposium for Fermented Meat, Valencia, Spain, 20-23 October.
5. **Vasileiadis S**, Arena M, Puglisi E, Cappa F, Cocconcelli PS, Trevisan M (2011). Single hypervariable region usage for 16S rDNA diversity screening of complex soil environments. XXIX Convegno SICA, Foggia, Italy, 21-23 September.
6. Puglisi E, **Vasileiadis S** (2011). High-throughput sequencing approaches to elucidate prokaryotic diversity patterns. International Conference on Soil Omics, Nanjing, China, 19-23 November.
7. Puglisi E, Coppolecchia D, **Vasileiadis S**, Hamon RE, Trevisan M (2011). Structural and functional responses of soil microbial communities to zinc stress as revealed by a combined biochemical and biomolecular approach. ICOBTE (International Conference on Biogeochemistry of Trace Elements), Firenze, Italy, 3-7 July.
8. Puglisi E, **Vasileiadis S**, Cappa F, Cocconcelli PS, Trevisan M (2010). Applicazione di tecniche di sequenziamento di nuova generazione per analisi metagenomica della biodiversità del suolo. XXIII Convegno SICA, Piacenza, Italy, 20-21 September.
9. **Vasileiadis S**, Balloi A, Mapelli F, Coppolecchia D, Puglisi E, Daffonchio D, Trevisan M, Hamon RE (2010). Short-term responses of ammonia oxidizers to increasing Zn concentrations: a soil microcosm approach. XXVIII Convegno Nazionale della Società Italiana di Chimica Agraria, Piacenza, Italy, 20-21 September.
10. Puglisi E, **Vasileiadis S**, Demiris C, Karpouzas DG, Capri E, Cocconcelli PS, Trevisan M (2010). Nitrifiers report on vineyard litter responses to fungicides. Med. Group of Pesticides Research (MGPR) 2010 Conference, Pesticides in the Mediterranean Area, Catania, 11-12 November.
11. Puglisi E, **Vasileiadis S**, Cappa F, Trevisan M, Cocconcelli PS (2010). Meta-genomic analysis of soil microbial communities in the "fontanili" (low-land springs) environments. Soil Metagenomics 2010, Branschweig, Germany, 8-10 December.
12. Coppolecchia D, Puglisi E, **Vasileiadis S**, Suciù NA, Hamon RE, Trevisan M (2009). Modelli dose-risposta per valutare l'EC50 di attività biologiche in suolo contaminato con zinco. XXVII Convegno Nazionale della Società Italiana di Chimica Agraria, Matera, Italy, 15-18 September.
13. Puglisi E, Coppolecchia D, Balloi A, Mapelli F, Hamon RE, **Vasileiadis S**, Daffonchio D, Trevisan M (2009). Approfondimenti biochimici e molecolari dei meccanismi d'attacco del suolo ad alte concentrazioni di zinco. XXVII Convegno Nazionale della Società Italiana di Chimica Agraria, Matera, Italy, 15-18 September.
14. Puglisi E, Hamon RE, **Vasileiadis S**, Coppolecchia D, Trevisan M (2009). Adaptation of soil microorganisms to trace element contamination: Mechanisms and consequences for risk assessment. 19th International Symposium in Environmental Biogeochemistry, Hamburg, Germany, 14-19 September.
15. van de Mortel JE, **Vasileiadis S**, Raaijmakers JM (2008). Natural cyclic lipopeptide surfactants: modes of action and effects on plant growth. Xth Meeting of the Working Group: Biological control of fungal and bacterial plant pathogens, Interlaken, Switzerland, 9-12 September.

[CP] Conference posters

1. **Vasileiadis, S**, Perruchon, C, Omirou, M, Steinbach, N, Chatzinotas, A, Karpouzas, D G (2018). Interactomics of the degradation of a recalcitrant pesticide by a soil-enriched bacterial consortium. ISME 17, Leipzig, Germany, 12-17 August.
2. Karpouzas, D G, Perruchon, C, Baguelin, C, Tourna, M, Rousidou, C, **Vasileiadis, S**, Storck, V, Martin-Laurent, F (2018). Functional metagenomic analysis of biobed systems: an invaluable source of genes for the degradation of pesticides. ISME 17, Leipzig, Germany, 12-17 August.
3. Katsoula, A, **Vasileiadis, S**, Karpouzas, D G (2018). Rhizosphere and phyllosphere response to repeated application of the fungicide iprodione: Selection for biodegradation or toxicity? ISME 17, Leipzig, Germany, 12-17 August.
4. Papadopoulou, E S, **Vasileiadis, S**, Karas, P A, Puglisi, E, Trevisan, M, Nicol, G W, Martin-Laurent, F, Menkissoglou-Spiroudi, U, Karpouzas, D G (2018). Ammonia oxidizing microorganisms: optimum candidate biomarkers in the assessment of the soil microbial ecotoxicity of pesticides. SETAC Europe 28th annual meeting, Rome, Italy, 13-17 May.
5. **Vasileiadis S**, Brunetti G, Drigo B, Wu X, Lombi E, Saint C, Donner E (2016). Silver, copper, and zinc induced cross-resistance to antibiotics in a wastewater bacterial community. ANTIMICROBIAL RESISTANCE MEETING finding solutions to a threat on worldwide public health, One Great George Street, London, 24 November.
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Motivation, mentors and competences.

Ever since my master's degree I became very familiar with, and was fascinated by soil microorganisms for their central role in ecosystem services. Soil, with its immense microbial diversity and its functional redundancy, is housing, among others, microbial processes responsible for the mineralization and sequestration of nutrients, the manipulation of plant hormones and hormonal balances, and also the control of microbial plant and animal pathogens. Such processes secure our survival and proliferation through several pathways like e.g. those manifested in agriculture. Furthermore, the soil microorganisms comprise a major source of biological and genetic material that ensures our health and wellbeing. A couple of very characteristic examples are those of antibiotics (to their vast majority they are derived from soil microorganisms like the *Streptomyces* spp., while the "tradition" is maintained to date with the late promising discovery of teixobactin derived from the soil strain *Eleftheria terrae*), and enzymes that degrade recalcitrant organic compounds like lignins (a well-established strain in biopulping is that of the basidiomycete *Phanerochaete chrysosporium*).

Throughout my research career and previous training, I have systematically and progressively been developing my expertise and reputation in the use of molecular biology based and enzyme activity measurement approaches for soil microbial ecology. I have gained extensive experience with the use of high-throughput sequencing methods and bioinformatics for microbiology and also with the development and use of fluorescently labeled substrate based high throughput analysis of soil enzymes. I am also well experienced with the use of culture-dependent approaches in environmental microbiology and other standard microbiology methods. I began my trip in microbial ecology during my MSc thesis carried out in the laboratory of Professor Jos Raaijmakers at the Plant Pathology department of Wageningen UR where I familiarized with culture based microbiology approaches, enzymatic assays, microscopy and polymerase chain reaction methods. During my MSc internship, I worked as a Research Assistant with Professor Johan Leveau (currently in UC Davis) where I developed skills in single cell genomics with fluorescent in situ hybridization (FISH), fluorescence microscopy and flow cytometry.

During my PhD I familiarized with environmental analytical chemistry under the supervision of Professor Marco Trevisan while in my secondment in the Netherlands Institute of Ecology (NIOO-KNAW) under the supervision of Prof. George A. Kowalchuk (currently in the university of Utrecht), I have familiarized with high throughput sequencing approaches in microbial ecology. Since then, I have set-up methods facilitating fast, cost effective and detailed screening of microbial diversity in multiple environments using high throughput sequencing of microbial phylogenetic and functional marker genes. My interest in microbial genomics and bioinformatics further evolved during tasks carried out in collaboration with the Department of Microbiology at the Catholic University of Piacenza. There I also gained significant experience with soil exo-enzyme activities associated with the carbon (α/β -1,4-glucosidase and β -xylosidase activities), phosphorous (alkaline/acid phosphatase activities), sulfur (arylsulfatase activity), and also activities relying on periplasm enzymes like the central to the nitrogen cycle potential nitrification. Furthermore, during my stay in Piacenza, I collaborated with Professor Dimitrios Karpouzas of the Biochemistry and Biotechnology Department of the University of Thessaly (Larisa, Greece), within the context of which collaboration I carried out shotgun (meta)genomics/transcriptomics analyses.

All the aforementioned sequence-analysis associated tasks have further expanded and deepened my bioinformatics repertoire, my statistics background, my programming skills

(strong knowledge of R and Bash programming and basic knowledge of Perl, Python, Java and c++) and my microbial biochemical and ecological understanding and knowledge. During my appointment at FII (formerly CERAR) in Adelaide, UniSA, where I collaborated closely with Dr Erica Donner and Prof. Enzo Lombi, I have also been gaining deeper understanding of state-of-the-art techniques for environmental chemistry, and am now incorporating these techniques (e.g. synchrotron-based X-ray Absorption Spectroscopy) in my own research to characterize chemical selective pressures operating on microbial communities in a range of target environmental matrices (e.g. soil, water, wastewater). Apart from the sequence-based analysis of microbial diversity and total metagenome analysis using high throughput sequencing techniques, I have used my previous experience with soil enzymes. This experience was very important for the setup of fluorescently labeled substrate based high throughput protocols for the analysis of the aforementioned soil enzyme activities, except for potential nitrification, with the addition of β -D-cellobiohydrolase (carbon cycle), L-leucine aminopeptidase (nitrogen cycle) and β -1,4-N-acetylglucosaminidase (nitrogen cycle).

In my current appointment, I am working on an ideal for screening with the current 2nd and 3rd generation sequencing technologies microbial consortium, able to degrade a highly recalcitrant compound. We have thus far employed Illumina HiSeq and PacBio sequencing technologies for the performance of the metagenomics and metatranscriptomic analysis. We have managed to generate metagenome assembled genomes (MAGs) and also to analyzed their proteome with an Orbitrap MS/MS shotgun approach. This approach has complemented my previous experience (12 Bioproject datasets submitted at SRA thus far) with high-end bioinformatics which was further extended with the use and data analysis of Nanopore data with the MinION device and chipset.