

CURRICULUM VITAE



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EDUCATION

- 2021:** **Sabbatical leave**, Department of Agronomy, Food, Natural resources, Animals and Environment, University of Padova
- 2007:** **Post Doc**, Honored Scholarship, IKY for postgraduate studies
«Preferential flow of pesticide residues and contamination of groundwater bodies»
- 2005:** **PhD**, Pesticide Science Laboratory, School of Agriculture, AUTH
Thesis: «Fate of herbicides atrazine and metolachlor and their metabolites in soil».
- 2001:** **MSc in Plant Protection**, Pesticide Science Laboratory, School of Agriculture, AUTH
Thesis: « Development of an analytical method for the determination of Dithiocarbamate fungicide residues in Tobacco and Peaches».
- 1997:** **BSc in Agricultural Science**, Plant Protection Division, School of Agriculture, AUTH

Research Interests

Environmental fate of pesticide (adsorption, leaching, runoff, degradation, preferential flow, volatilization) and pollution of surface- and ground-water bodies.
Monitoring of pesticide residues in environmental samples (soil, air, water) food and feed.
Pesticide risk assessment and prioritization exercises.
Pesticide and their metabolite ecotoxicological behavior.
Postharvest treatments and fate of pesticides in raw and processed food.
Interactions of pesticides with microorganisms.
Pesticide remediation techniques.

PROFESSIONAL EXPERIENCE

- 2023-** Associate Professor of Pesticide Science, Pesticide Science Laboratory, School of Agriculture, Aristotle University of Thessaloniki (AUTH)
- 2022-2023:** Professor of Crop Protection & Agroecosystem Pollution, Laboratory of Agricultural Pharmacology and Ecotoxicology, Department of Agricultural Development, Democritus University of Thrace
- 2018-2022:** Associate Professor of Crop Protection & Agroecosystem Pollution, Laboratory of Agricultural Pharmacology and Ecotoxicology, Department of Agricultural Development, Democritus University of Thrace

- 2013-2018:** Assistant Professor of Crop Protection & Agroecosystem Pollution, Laboratory of Agricultural Pharmacology and Ecotoxicology, Department of Agricultural Development, Democritus University of Thrace
- 2009-2013:** Lecturer of Crop Protection & Agroecosystem Pollution, Laboratory of Agricultural Pharmacology and Ecotoxicology, Department of Agricultural Development, Democritus University of Thrace
- 2006-2009:** Technical manager, Pesticide Science Laboratory, School of Agriculture, Aristotle University of Thessaloniki “Development of ISO 17025:2005 quality systems
- 2003-2008:** Contract Assistant Professor, Department of Agricultural Development, Democritus University of Thrace and Technological Education Institute of Thessaloniki “Pesticide Science, Agricultural Pharmacology, Instrumental Analysis”
- 2000-2003:** Assistant Researcher, Laboratory of Pesticide Science of School of Agriculture of Aristotle University of Thessaloniki. “Strategies to accelerate the productive biodegradation of several herbicides under environmental stress conditions”
- 1997-2000:** Contract Researcher, Laboratory of Pesticide Science of School of Agriculture of Aristotle University of Thessaloniki. “Analysis of pesticide residues in Tobacco Fruits, Vegetables and Environmental matrices”

TEACHING EXPERIENCE

- 2023-** Pesticides, AUTH
- 2023-** Chemistry and mode of action of plant protection products
- 2023-** Pesticides in modern plant protection (M.Sc.), AUTH
- 2022** Contract Assistant Professor, AUTH
Course: Pesticides
- 2014-2023** Agroecosystems pollution, Postgraduate course
- 2010-2013** Ecology, DUTH
- 2010-2014** Integrated crop management & certification of agricultural products, DUTH
- 2010-2019** Agriculture and environment, DUTH
- 2009-2010** Ecological risk assessment, DUTH
- 2013-2023** Weed Science, DUTH
- 2010-2023** Agriculture and wetlands pollution, DUTH
- 2009-2022** Agricultural pharmacology, DUTH
- 2009-2010, 2013-2023** Ecotoxicology, DUTH
- 2009-2010, 2013-2023** Introduction to agricultural pharmacology, DUTH
- 2008-2009** Ecological water quality and management at a river basin level, Postgraduate courses, AUTH
- 2007-2008** Agricultural pharmacology, Instrumental analysis, Contract Assistant Professor DUTH
- 2005-2007** Introduction to agricultural pharmacology, Contract Assistant Professor DUTH
- 2003-2007** Contract Assistant Professor, T.E.I. Thessaloniki
Course: Pesticide Science / Agricultural Pharmacology
- 1998-2001, 2003** Laboratory practical sessions of Pesticide III, AUTH

THESIS SUPERVISION

- Phd Thesis:** Two ongoing and one completed
Member of the advisory committee of one and examination committee of six PhD Thesis
Member of the examination committee of 10 PhD Course on CROP SCIENCE του UNIVERSITA DEGLI STUDI DI PADOVA
- Master Thesis:** Sixteen
- Undergraduate Thesis:** Forty

RECENT PROJECTS

- 2023-2025** Fit-for-purpose and innovative risk assessment for low-concern pesticide active substances and uses, EFSA
- 2022-2025** DEVELOPMENT, VALIDATION, AND APPLICATION OF A FRANZ CELL METHODOLOGY TO STUDY THE PENETRATION OF CUTICLE BY INSECTICIDES, Syngenta
- 2023-2025** Application of full-scale on-farm biological systems to reduce the point source pollution of the water resources of Greece with pesticides (BIOBEDS), METRO 16 action
- 2023-2025** Intelligent system for weed identification and estimation of the necessity of spraying through biodiversity indicators (WeeDetect) METRO 16 action
- 2016-2022** KNOWledge for PEsticides Control (690618-KNOWPEC), MSCA-RISE European Commission Horizon 2020, (2016-2022)
- 2019-2022** Introduction of agroheritage concepts into higher education agenda for raising awareness and capacity of future agriculturists for conservation of this heritage (AGROHERITAGE, 2019-2022)
- 2018-2022** Ability of maize genotypes to utilize available inputs at the individual level and the screening for suitable mycorrhizal inoculants to improve productivity (2018-2022) of the Research-Innovation Action

RECENT PUBLICATIONS 52 international refereed journal publications, 70 international conference presentations and 8 national conferences, 2800 Citations, *h*-index=29, Reviewer of more than 200 papers in 45 journals

Refereed Journal Publications:

1. Sadok, I., Krzyszczak-Turczyn, A., Czech, B., Parlakidis, P., Vryzas, Z. (2025). Advancements in biochar-based materials for decontamination and analytical detection of pesticides and mycotoxins in food. *Food Chemistry*, 492:145467.
2. Parlakidis, P., Adamidis, G., Doulaveris, T., Makaridis, D., Alexoudis, C., Vryzas, Z., Gikas, G. (2024). Dissipation Kinetics and Dietary Risk Assessment of Boscalid Residues in Two Table-Grape Varieties Under Field Conditions. *Environments*, 11:18.
3. Parlakidis, P., Tokamani, M., Sandaltzopoulos, R., Tokatlidis, I., Sinapidou, E., **Vryzas, Z.** (2024). Evaluation of the removal efficacy of three fungicides by biomixtures: impact of bioaugmentation by plant growth promoting rhizobacteria and zeolite fortification. *International Journal of Environmental Analytical Chemistry*, 104:6089.
4. Arvanitidis, A., Adamidis, G., Parlakidis, P., Gikas, G., Alexoudis, C., **Vryzas, Z.** (2024). A Dynamic Multiple Reaction Monitoring Analytical Method for the Determination of Fungicide Residues in Drinking Water. *Environments*, 11:5.
5. Parlakidis, P., Adamidis, G., Gikas, G., Vasiliou, S., Kissa, M., Doitsinis, K., Alexoudis, C., **Vryzas, Z.** (2024). Dissipation Kinetics, Leaching, and Ecological Risk Assessment of S-Metolachlor and Benfluralin Residues in Soil. *Environments*, 11:18.
6. Parlakidis, P., Adamidis, G., Alexoudis, C., Pythoglou, P., Papadopoulos, S., **Vryzas, Z.** (2023). Adjuvant Effects on Pyraclostrobin and Boscalid Residues, Systemic Movement, and Dietary Risk in Garlic under Field Conditions. *Agriculture*, 13:1636.
7. Parlakidis, P., Gounari, I., Georgiou, A., Adamidis, G., **Vryzas, Z.**, Gikas, G.D. (2023). Removal of Two Triazole Fungicides from Agricultural Wastewater in Pilot-Scale Horizontal Subsurface Flow Constructed Wetlands. *Agronomy*, 13: 265.
8. Balaska, V., Adamidou, Z., **Vryzas, Z.** (2023). Sustainable Crop Protection via Robotics and Artificial Intelligence Solutions. *Machines*, 11: 774.
9. Karpouzas, D.G., **Vryzas, Z.**, Martin-Laurent, F. (2022). Pesticide soil microbial toxicity: setting the scene for a new pesticide risk assessment for soil microorganisms (IUPAC Technical Report). *Pure Appl. Chem.* 94(10): 1161 1194.

10. Parlakidis, P., Rodriguez M-S., Gikas, G.D., Alexoudis, C., Perez-Rojas, G., Pérez-Villanueva, M., Perez-Carrera A., Fernandez-Cirelli, A., **Vryzas, Z.** (2022). Occurrence of Banned and Currently Used Herbicides, in Groundwater of Northern Greece: A Human Health Risk Assessment Approach. *International Journal of Environmental Research and Public Health*, 19, 8877
11. Parlakidis, P., Tokamani, M., Sandaltzopoulos, R., Tokatlidis, I., Sinapidou, E., **Vryzas, Z.** (2022). Evaluation of the removal efficacy of three fungicides by biomixtures: impact of bioaugmentation by plant growth promoting rhizobacteria and zeolite fortification. *International Journal of Environmental Analytical Chemistry*, Article in Press.
12. Gikas, G.D., **Vryzas, Z.**, Karametos, I., Tsihrintzis, V. (2022). Pyraclostrobin removal in pilot-scale horizontal subsurface flow constructed wetlands and in porous media filters. *Processes*, 10, 414.
13. Gikas, G.D., Parlakidis, P., Mavropoulos, T., **Vryzas, Z.** (2022). Particularities of fungicides and factors affecting their fate and removal efficacy: A review. *Sustainability* 14,4056.
14. Parlakidis, P., Mavropoulos, T., **Vryzas, Z.**, Gikas, G.D. (2022). Fluopyram removal from agricultural equipment rinsing water using HSF pilot-scale constructed wetlands. *Environmental Science and Pollution Research*, 29, 29584-29596.
15. Gikas, G.D., **Vryzas, Z.**, Koshis, Z. (2022). Experiments on Fluometuron Removal from Simulated Agricultural Wastewater in Porous Media Filters. *Environmental Processes*, 9, 1.
16. Karasmanaki, E., Dimopoulou, P., **Vryzas, Z.**, Karipidis, P., Tsantopoulos, G. (2021) Is the environmental behavior of farmers affecting their pesticide practices? A case study from Greece. *Sustainability*, 13, 1452, 1-15.
17. **Vryzas, Z.**, Ramwell, C., Sans, C. (2020) Pesticide prioritization approaches and limitations in environmental monitoring studies: From Europe to Latin American countries. *Environment International* 143, 105917.
18. Tسابουλα, Α., Παπαδάκης, Ε.-Ν., **Vryzas, Z.**, Κοτοπούλου, Α., Κιντζικoglou, Κ., Παπαδοπούλου-Μουρκιδου, Ε. (2019). Assessment and management of pesticide pollution at a river basin level part I: Aquatic ecotoxicological quality indices. *Science of the Total Environment*, 653, 1597-1611.
19. Tسابουλα, Α., Μενεξες, Γ., Παπαδάκης, Ε.-Ν., Κοτοπούλου, Α., Κιντζικoglou, Κ., **Vryzas, Z.**, Παπαδοπούλου-Μουρκιδου, Ε. (2019). Assessment and management of pesticide pollution at a river basin level part II: Optimization of pesticide monitoring networks on surface aquatic ecosystems by data analysis methods. *Science of the Total Environment*, 653, 1612-1622.
20. **Vryzas, Z.** (2018). Pesticide fate in soil-sediment-water environment in relation to contamination preventing actions. (2018). *Current Opinion in Environmental Science & Health* 4, 5-9.
21. Παπαδάκης, Ε.-Ν., Tسابουλα, Α., **Vryzas, Z.**, Κοτοπούλου, Α., Κιντζικoglou, Κ., Παπαδοπούλου-Μουρκιδου, Ε. (2018). Pesticides in the rivers and streams of two river basins in northern Greece. *Science of the Total Environment*, 624, 732-743.
22. Carazo Rojas, E., Perez-Rojas, G., Pérez-Villanueva, M., Chinchilla-Soto, Chin-Pampillo, J.S., Aguilar-Mora, P., Alpízar-Marín, M., Masis-Mora, M., Rodríguez-Rodríguez, C. E., **Vryzas, Z.** (2018). Pesticide monitoring and ecotoxicological risk assessment in surface water bodies and sediments of a tropical agro-ecosystem. *Environmental Pollution*, 241, 800-809.
23. Gikas, G., **Vryzas, Z.**, Tsihrintzis, V.A. (2018). S-metolachlor herbicide removal in pilot-scale horizontal subsurface flow constructed wetlands. *Chemical Engineering Journal*, 339, 108-116.
24. Gikas, G., Pérez-Villanueva, M., Tsioras, M., Alexoudis, C., Perez-Rojas, G., Masis-Mora, M., Lizano-Fallas, V., Rodríguez-Rodríguez, C. E., **Vryzas, Z.**, Tsihrintzis, V.A. (2018). Low-cost

approaches for the removal of terbuthylazine from agricultural wastewater: constructed wetlands and biopurification system. *Chemical Engineering Journal*, 335, 647-656.

25. Papaevangelou, V.A., Gikas, G.D. **Vryzas, Z.**, Tsihrintzis, V.A. (2017). Treatment of agricultural equipment rinsing water containing a fungicide in pilot-scale horizontal subsurface flow constructed wetlands. *Ecological Engineering*, 101, 193-200.

26. **Vryzas, Z.** (2016). The plant as metaorganism and research on next-generation systemic pesticides - prospects and challenges. *Frontiers in Microbiology*, 7, 1968.

27. Tسابουλα, Α., Παπαδάκης, Ε.-Ν., **Vryzas, Z.**, Κοτοπούλου, Α., Κιντζικόγλου, Κ., Παπαδοπούλου-Μουρκίδου, Ε. (2016). Environmental and human risk hierarchy of pesticides: A prioritization method, based on monitoring, hazard assessment and environmental fate. *Environment International*, 91, pp. 78-93.

International Conferences:

1. Arts G. H.P., Vryzas, Z, et al., Environmental Risk Assessment for Low-Concern Active Substances. *SETAC 9th World Congress, 29 September – 3 October 2025, Johannesburg, South Africa*

2. Vryzas Z. New Approach Methodologies in Risk assessment of biopesticides. *59th Congress of the European Societies of Toxicology, EUROTOX, Athens, Greece, 14 to 17 September 2025.*

3. Vryzas Z., Arts G. H.P., Dalakouras A., Fragkoulis G., Guijarro B., Karazafeiris E., Karpouzas D., Menkissoglu-Spiroudi U., Papadakis E-N., Papadopoulou K., Patino M-J., Polst B., Prados J-L A., Steenbergh A., Tsaloumi S., Tsampoula A. Problem Formulation for the Risk Assessment of Low-Concern Pesticides. *35th ANNUAL MEETING SETAC EUROPE, 11 – 15 MAY 2025 VIENNA, AUSTRIA*

4. Vryzas Z. Importance of Applying New Approach Method in Pesticide Risk Assessment. *Emerging Environmental Contaminants – Current Status, Challenges and Perspectives Conference, 9-10 April 2025, Rzeszów, Poland*

5. Vryzas Z. Low Risk Pesticides in EU: Prospects and Challenges. *Kocaeli International Engineering-Natural Sciences and Health Technologies Conference, 11-13 October 2024, KOCAELI, TURKEY*

6. **Vryzas Z.** Pesticide risk indicators, trends in the European pesticide market and threats to EU agricultural production. *9th Latin American pesticide Residue Workshop, Panamas, 21-24 May 2023.*

7. **Vryzas Z.** Reconsidering the Environmental Fate of Pre and Post- Emergent Herbicides and Weed Resistance Management under New Technological Advances: The Soya Case Study. *15th IUPAC Crop Protection congresses, "Futuristic Approaches Towards Seed to Market Strategies", New Delhi, India, 14-17 March 2023.*

8. Adamidis G., Parlakidis P., Alexoudis C., Orfanoudakis M., Sinapidou E., Tokatlidis I., **Vryzas Z.** Effect of mycorrhizal fungus on thiamethoxam, azoxystrobin and fludioxonil behavior on maize rhizosphere under field conditions. 2022. *Pesticide Behaviour in Soils, Water and Air Conference, August 31st - September 2nd 2022, University of York.*

9. Ramwell, C., **Vryzas, Z.**, Sans, C. To what extent can European pesticide risk assessment be employed in Latin America? 2022. *Pesticide Behaviour in Soils, Water and Air Conference, August 31st - September 2nd 2022, University of York.*

10. Bozini V., Parlakidis P., Adamidis G., Alexoudis C., **Vryzas Z.** Investigation of impact of physicochemical properties of penetration pesticides in apples from North Greece. 2022. *11th European CONFERENCE on Pesticides and Related Organic Micropollutants in the Environment & 17th Symposium on Chemistry and Fate of Modern Pesticides, June 23rd -26th 2022, Conference Center "Karolos Papoulias" University of Ioannina.*

11. Adamidis G., Arabatzis D., Parlakidis P., Alexoudis C., **Vryzas Z.** Effect of mycorrhizal fungus on Thiamethoxam uptake on maize and respective residues on guttation. *SETAC EUROPE 32nd ANNUAL MEETING, May15th – 19th 2022, Copenhagen, Denmark.*
12. Parlakidis P., Tokamani M., Sandaltzopoulos R., **Vryzas Z.** Evaluation of alternative biomixtures and plant growth–promoting rhizobacteria (PGPR) bioaugmentation on dissipation of three fungicides. *48st IUPAC World Chemistry Congress – 104th Canadian Chemistry Conference and Exhibition, 13 – 20 August 2021, Montreal, Canada.*
13. Gikas G.D., Parlakidis P., Mavropoulos T., **Vryzas Z.** Factors affecting fungicide removal efficacy from agricultural runoff by constructed wetlands: A commentary. *3rd Euromediterranean Conference of Environmental Integration. 10-13 June 2021, Tuisse, Tunisia.*
14. Parlakidis P., Mavropoulos T., Gikas G.D., **Vryzas Z.** Removal of a fungicide/nematicide in pilot-scale horizontal subsurface flow constructed wetlands. *Sixth International Symposium on Green Chemistry Sustainable Development and Circular Economy, September 20-23, 2020, Thessaloniki Greece.*
15. **Vryzas, Z.** Pesticide fate in soil-sediment-water environment in relation to contamination preventing and management actions: The KNOWPEC experience. *21 International Chemical Congress of Pacific Basin Societies, 16-21 December, 2021.*
16. Sans, C., **Vryzas, Z.**, Ramwell, C., Cedergreen, N., Alvarez, M., Cirelli, A., Rodríguez-Rodríguez, C., Pérez Rojas, G. Monitoring and prioritization of pesticides in European and Latin American Countries – The KNOWPEC experience. *4th International Caparica Conference on Pollutant Toxic Ions and Molecules 2021, 31st October – 04th November, Caparica, Portugal.*
17. Adamidis, G., Arampatzis, D., Parlakidis, P., Alexoudis, C., Tokatlidis, I., Sinapidou, E., Papathanasiou, F., Papadopoulos, I., **Vryzas, Z.** Effect of mycorrhizal fungus on Thiamethoxam uptake and translocation on maize and respective residues on guttation. *III. BALKAN AGRICULTURAL CONGRESS, 29 August - 1 September 2021, Edirne, Turkey.*
18. **Vryzas, Z.** Pesticide registration approaches and technological advances in the agricultural sector: Can legacy pesticides be reconsidered in agricultural production? *8th Latin American pesticide Residue Workshop, Panamas, 18-20 May 2021.*
19. Parlakidis, P., **Vryzas, Z.** Evaluation of alternative biomixtures and plant growth–promoting rhizobacteria (PGPR) bioaugmentation on dissipation of three fungicides. *IUPAC/CCCE 2021, 51st IUPAC General Assembly, 48th World Chemistry Congress, 104th Canadian Chemistry Conference and Exhibition, August 13 - August 20, 2021 – Canada.*
20. Gavreil, A., Giouzepas, R., Alexoudis, C., Orfanoudakis, M., Sinapidou, E., Tokatlidis, I.S., **Vryzas, Z.** Response of 14 maize genotypes to a pesticide cocktail. *XXIVth EUCARPIA Maize and Sorghum Conference Technical University of Munich, Freising, Germany, October 2019.*
21. **Vryzas, Z.** Pesticide monitoring studies in environmental samples: The most reliable sampling, extraction and analytical techniques over the last two decades. *14th IUPAC Crop Protection congresses, “Crop Protection: Education of the Future Generation”, Ghent, Belgium, May 2019.*
22. Parlakidis, P., Adamidou, Z.C., Papadakis, E.-N., Menkissoglu-Spirodi, U., **Vryzas, Z.** Dissipation of pesticide in raw and processed pears. *14th IUPAC Crop Protection congresses, “Crop Protection: Education of the Future Generation”, Ghent, Belgium, May 2019*
23. Tsaoulou, A., Papadakis, E.-N., Kotopoulou, A., Kintzikoglou, K., **Vryzas, Z.**, Papadopoulou-Mourkidou, E. Water quality assessment of surface- and ground-water bodies of Evros river basin: inorganic contaminants. *International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE) and SECOTOX June, 2017, Thessaloniki, Greece*
24. Tsaoulou, A., Papadakis, E.-N., **Vryzas, Z.**, Kotopoulou, A., Kintzikoglou, K., Papadopoulou-Mourkidou, E. Pesticide monitoring campaigns in surface- and ground-water bodies of an

Europe - Asia transboundary river basin. Pesticide Behaviour in Soils, Water and Air 30 August - 1 September 2017, York, UK

25. Rodríguez-Rodríguez, C.E., Pérez G., Pérez-Villanueva, M., Masis-Mora, M., Sans, C., Ramwell C., Cedergreen, N., Alvarez, M., Fernández Cirelli, A., **Vryzas, Z.**, Carazo Rojas, E.

Pesticides in Costa Rica: European Perception vs Practices - Knowledge for Pesticides Control (KNOWPEC). 6th Latin American Pesticide Residue Workshop, San Jose, Costa Rica, May 2017