

# Tiziana Centofanti

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[Website](#)

## Research and Teaching Interests

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Ecosystem Restoration, Environmental Pollution, Nature-Based Solutions, Food Systems

## Education

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Ph.D. Environmental Sciences

Swiss Federal Institute of Technology Zurich (ETHZ), Switzerland

2001-2005

M.Sc. Agricultural Sciences (with distinction)

Marche Polytechnic University, Ancona, Italy

1998-1999

B.Sc. Agricultural Sciences

Marche Polytechnic University, Ancona, Italy

1994-1998

## Employment

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Assistant Professor

Dept. of Environmental Sciences and Policy, Central European University, Vienna

August 2025 -

Environmental Consultant

RTDS Group, Vienna, Austria

September 2024-July 2025

Environmental Scientist and Head of Research Division

Alchemia-nova GmbH, Vienna, Austria

2020 - 2024

Research Fellow

Environmental Social Science Research Group, Budapest, Hungary

2018 - 2021

Research Scientist

Center for Irrigation Technology, California State University Fresno (CA), USA  
2012-2015

Research Scientist

Dept. of Civil and Environmental Eng., U. of Maryland, College Park (MD), USA  
2007-2012

Post-doctoral Fellow

Soil and Agrifood Institute, Cranfield University, United Kingdom  
2006-2007

Research Assistant

Marche Polytechnic University, Italy  
1999-2001

## Research consultancy/Academic visiting positions

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Visiting Professor

Dept. of Environmental Sciences and Policy, Central European University, Vienna/Budapest  
April 2016 - March 2025

Visiting Professor

School of Public Policy, Central European University, Vienna/Budapest  
April 2017 - December 2024

Research Fellow

Center for Irrigation Technology, California State University Fresno (CA), USA  
July 2020 - Present

## Research Grants & Scholarships

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SYMBIOREM (Symbiotic, circular bioremediation systems and biotechnology solutions for improved environmental, economic and social sustainability in pollution control. EU HORIZON. Advisory Board Expert and former Scientific Coordinator, total budget €5,476,390 (2022-2026)

DIVAGRI (Revenue DIVERsification pathways in Africa through bio-based and circular AGRicultural innovations). Funded by EU H2020.  
Scientific Coordinator, total budget €8,956,000 (2021-2025)

Using drainage water to grow an alternative salt and boron tolerant crop-guayule- that produces natural latex and resin for the westside of the San Joaquin Valley in Central California. Funded by California Department of Water Resources.  
Co-investigator (with Gary Bañuelos), total budget \$250,000 (2020-2022)

- Visiting Scholar Grant to the Erasmus Mundus Masters Program in Environmental Sciences, Policy and Management (MESPOM) (February-June/2019)
- Greening the Margin: Building Cooperation and Public Goods among Roma and Non-Roma communities in Slovakia and Hungary. Funded by CEU ACRO Research Grant.  
Co-Principal Investigator (with Anand Murugesan), total budget €4,500 (2018-2019)
- Integrating economic and ecological experiments to examine environmental conservation norms. Funded by CEU ACRO Research Grant.  
Co-Principal Investigator (with Anand Murugesan), total budget €5,000 (2016-2018)
- Investigation of halophyte *Salsola soda* as an alternative salt-tolerant crop for phyto-management of salt-affected soils and waters high in boron and selenium. Funded by California Department of Water Resources.  
Co-Principal Investigator (with Gary Bañuelos), total budget \$250,000 (2015-2017)
- Determining nutritional quality in sustained deficit irrigated grapes. Funded by California Table Grape Commission.  
Co-Investigator (with Gary Bañuelos), total budget \$19,000 (2013-2014)
- In situ remediation of DDT and Dieldrin residues in old orchard soils at Beltsville Agricultural Research Center. Funded by U.S. Environmental Protection Agency.  
Co-Investigator (with Rufus Chaney), total budget \$200,000 (2011-2013)
- Erasmus Mundus European Scholarship (exchange student). University of Hohenheim, Germany (January-June/1998)
- Leonardo da Vinci European Scholarship (intern). East Malling Research Station, Kent, United Kingdom (April-September/1997)

## Publications

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### *Peer-reviewed journal articles*

- Bañuelos, G.S., Centofanti, T., Zambrano, M.C., Arroyo, I.S. and Wang, D. (2025). Selenium biofortification in field-grown tomatoes as affected by *Stanleya pinnata*-derived organic Se application, biochar and irrigation. *Journal of Agriculture and Food Research*, 102162. DOI: [10.1016/j.jafr.2025.102162](https://doi.org/10.1016/j.jafr.2025.102162)
- Bañuelos, G.S., Centofanti, T., Zambrano, M.C., Arroyo, I. and Wang, D. (2025). Selenium biofortification and growth of onions as affected by Se application, biochar and irrigation. *Journal of Food Composition and Analysis*, 140, 107217. DOI: [10.1016/j.jfca.2025.107217](https://doi.org/10.1016/j.jfca.2025.107217)
- Bañuelos, G.S., Centofanti, T., Zambrano, M.C., Vang, K. and Lone, T. (2022). *Salsola soda* as selenium biofortification crop under high saline and boron growing conditions. *Frontiers in Plant Science*, 13, 996502. DOI: [10.3389/fpls.2022.996502](https://doi.org/10.3389/fpls.2022.996502)
- Centofanti, T., Murugesan A. (2021). Leader and citizens participation for the environment. Experimental evidence from communities in Eastern Europe. *Journal of Behavioral and Experimental Economics*, 100, 101915. DOI: [10.1016/j.socec.2022.101915](https://doi.org/10.1016/j.socec.2022.101915)
- Balasz, B., Kelemen, E., Centofanti, T., Vasconcelos, M. W., Iannetta, P. M. (2021). Integrated policy analysis to identify transformation paths to more-sustainable legume-based food and feed value-chains in Europe. *Agroecology and Sustainable Food Systems*, 45(6), 931–953. DOI: [10.1080/21683565.2021.1884165](https://doi.org/10.1080/21683565.2021.1884165)
- Balázs, B., Kelemen, E., Centofanti, T., Vasconcelos, M.W., Iannetta, P.P.M. (2021). Policy

- Interventions Promoting Sustainable Food- and Feed-Systems: A Delphi Study of Legume Production and Consumption. *Sustainability*, 13(14), 7597. DOI: [10.3390/su13147597](https://doi.org/10.3390/su13147597)
- Zhu H., Bañuelos G.S., Centofanti T. (2019). Feasibility of growing halophyte agretti (*Salsola soda*) as an alternative boron-tolerant food crop in unproductive boron-laden regions. *Plant and Soil*, 445, 323–334. DOI: [10.1007/s11104-019-04280-x](https://doi.org/10.1007/s11104-019-04280-x)
- Centofanti T., Bañuelos G.S., Ayars J.E. (2019). Fruit nutritional quality under deficit irrigation: the case of table grapes in California. *Journal of the Science of Food and Agriculture*, 99(5), 2215–2225. DOI: [10.1002/jsfa.9415](https://doi.org/10.1002/jsfa.9415)
- Centofanti T., Bañuelos G.S., Wallis C. E. (2018). Fruit quality of pomegranate grown in arid environment and irrigated with saline water. *Sustainable Water Resources Management*, 4(4), 951–964. DOI: [10.1007/s40899-017-0191-7](https://doi.org/10.1007/s40899-017-0191-7)
- Centofanti T., Bañuelos G.S., Wallis C. E., Ayars J.E. (2017). Deficit irrigation strategies and their impact on yield and nutritional quality of pomegranate fruit. *Fruits*, 72(1), 47–54. DOI: [10.17660/th2017/72.1.5](https://doi.org/10.17660/th2017/72.1.5)
- Centofanti T., McConnell L.L., Chaney R.L., Beyer N.W., Davis A.P., Jackson D. (2016). Assessment of trace element accumulation by earthworms in an orchard soil remediation study using soil amendments. *Water, Air & Soil Pollution*, 227, 350. DOI: [10.1007/s11270-016-3055-0](https://doi.org/10.1007/s11270-016-3055-0)
- Centofanti T., Andrade N.A., McConnell L.L., Chaney R.L., Hapeman J.C., Torrents A., Beyer N.W., Nguyen A., Anderson M.O., Novak J.M., Jackson D. (2016). Organic amendments for risk mitigation of organochlorine pesticide residues in old orchard soils. *Environmental Pollution*, 210, 182–191. DOI: [10.1016/j.envpol.2015.11.039](https://doi.org/10.1016/j.envpol.2015.11.039)
- Centofanti T., Bañuelos G.S. (2015). Evaluation of the halophyte *Salsola soda* as alternative crop for saline soils high in selenium and boron. *Journal of Environmental Management*, 157, 96–102. DOI: [10.1016/j.jenvman.2015.04.005](https://doi.org/10.1016/j.jenvman.2015.04.005)
- Centofanti, T., Sayers, Z., Davis, A.P., Sicher, R.S., Cabello-Conejo, M.I., Kidd, P.S., Kakei, Y., Nishizawa, N.K., Chaney, R.L. (2013). Xylem composition and root-to-shoot Ni translocation in *Alyssum* species. *Plant and Soil*, 373, 59–75. DOI: [10.1007/s11104-013-1782-1](https://doi.org/10.1007/s11104-013-1782-1)
- Cabello-Conejo, M.I., Centofanti, T., Kidd, P.S., Prieto-Fernandez, A., Chaney, R.L. (2013). Evaluation of plant growth regulators to increase Ni phytoextraction by *Alyssum* species. *International Journal of Phytoremediation*, 15(4), 365–375. DOI: [10.1080/15226514.2012.702806](https://doi.org/10.1080/15226514.2012.702806)
- Centofanti, T., Siebecker, M.G., Chaney, R.L., Davis, A.P., Sparks, D.L. (2012). Hyperaccumulation of nickel by *Alyssum corsicum* is related to solubility of Ni mineral species. *Plant and Soil*, 359, 71–83. DOI: [10.1007/s11104-012-1176-9](https://doi.org/10.1007/s11104-012-1176-9)
- Centofanti, T., Tappero, R.V., Davis, A.P., Chaney, R.L. (2011). Chelator-buffered nutrient solution is ineffective in extracting Nickel from seeds of *Alyssum*. *International Journal of Phytoremediation*, 13(5), 434–440. DOI: [10.1080/15226514.2010.483264](https://doi.org/10.1080/15226514.2010.483264)
- Chaney, R.L., Fellet, G., Torres, R., Centofanti, T., Green, C.E., Marchiol, L. (2009). Using chelator-buffered nutrient solution to limit Ni phytoavailability to the Ni-hyperaccumulator *Alyssum murale*. *Northeastern Naturalist*, 16(Special Issue 5), 215–222. DOI: [10.1656/045.016.0517](https://doi.org/10.1656/045.016.0517)
- Fellet, G., Centofanti, T., Chaney, R.L., Green, C.E. (2009). NiO(s) (bunsenite) is not available to *Alyssum* species. *Plant and Soil*, 319, 219–223. DOI: [10.1007/s11104-008-9863-2](https://doi.org/10.1007/s11104-008-9863-2)
- Centofanti, T., Hollis, J.M., Blenkinsop, S., Fowler, H.J., Truckell, I., Dubus, I.G., Reichenberger, S. (2008). Development of agro-environmental scenarios to support pesticides risk assessment in Europe. *Science of the Total Environment*, 407, 574–588. DOI:

[10.1016/j.scitotenv.2008.08.017](https://doi.org/10.1016/j.scitotenv.2008.08.017)

- Centofanti, T., Flühler, H., Frossard, E. (2007). Time-dependent distribution of surface-applied radionuclides and their recovery in maize during the growing season. *Journal of Environmental Quality*, 36, 280–290. DOI: [10.2134/jeq2006.0056](https://doi.org/10.2134/jeq2006.0056)
- Centofanti, T., Frossard, E. (2006). Uptake and translocation of <sup>134</sup>Cs by maize roots as affected by heterogeneous distribution of <sup>134</sup>Cs. *Plant and Soil*, 284, 293–303. DOI: [10.1007/s11104-006-0048-6](https://doi.org/10.1007/s11104-006-0048-6)
- Centofanti, T., Penfield, R., Albrecht, A., Pellerin, S., Flühler, H., Frossard, E. (2005). Is the transfer factor the relevant tool to assess the soil-to-plant transfer of radionuclides under field conditions? *Journal of Environmental Quality*, 34, 1972–1979. DOI: [10.2134/jeq2004.0412](https://doi.org/10.2134/jeq2004.0412)

### Book Chapters

- Vasconcelos, M.W., Grusak, M.A., Pinto, E., Gomes, A., Ferreira, H., Balazs, B., Centofanti, T., Ntatsi, G., Savvas, D., Karkanis, A., Williams, M. (2020). The Biology of Legumes and Their Agronomic, Economic, and Social Impact. *In: The Plant Family Fabaceae*. Hasanuzzaman, M., Araujo, S. and Gill, S.S. (eds.) Springer, Singapore. DOI: [10.1007/978-981-15-4752-2\\_1](https://doi.org/10.1007/978-981-15-4752-2_1)
- Centofanti, T., Bañuelos, G.S. (2019). Practical uses of halophytic plants as a source of food and fodder. *In: Halophytes and Climate Change: Adaptive Mechanisms and Potential Uses*. Hasanuzzaman, M., Shabala, S. and Fujita, M. (eds.) CABI, Wallingford, UK. pp. 324–342. DOI: [10.1007/978-981-97-3157-2\\_5](https://doi.org/10.1007/978-981-97-3157-2_5)
- Centofanti, T. (2015). Phytoextraction of trace metals – principles and applications. *In: Environmental Sustainability: the role of green technology*. Thangavel, P. and Sridevi, G. (eds.) Springer Publishing, New York, USA. pp. 217–227. DOI: [10.1007/978-81-322-2056-5\\_3](https://doi.org/10.1007/978-81-322-2056-5_3)
- Chaney, R.L., Broadhurst, C.L., Centofanti, T. (2010). Phytoremediation of soil trace elements. *In: Trace Elements in Soils*. Hooda, P.S. (ed.) John Wiley & Sons, Ltd., Chichester, UK. pp. 311–339. DOI: [10.1002/9781444319477.ch14](https://doi.org/10.1002/9781444319477.ch14)

### Multimedia

- Centofanti T., Bañuelos G.S., Wallis C., Ayars J.E. 2015. Deficit irrigation: is it impacting yield and nutritional quality of fruits? *New Ag International Magazine*, English edition, March-April 2015, pp: 54-56. *Invited paper*.
- Kohkha S. October 20, 2014. [Drought-stressed crops may be better for you](#). The California Report Statewide Radio Program/KQED Public Radio. *Invited interview*.

## Professional Service

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- Proposal reviewer. French National Research Agency (ANR). AAP générique, 2020.
- Invited lecturer. EIT Climate-KIC Catapult Programme. Delivered a lecture on *Food Policy* (November 2018 & September 2019)
- Invited lecturer. Regional Academy of the United Nations. Delivered a lecture on *Climate-smart agriculture and gendered impact of climate change* (September 2019)

Member of the organising committee for the International Workshop: *Rhizosphere, preferential flow and bioavailability. A holistic view of soil-to-plant transfer?*. September 21-26, 2002, Ascona, Switzerland.

## Mentoring and Supervision

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Supervised Master's students in Environmental Sciences and Public Policy at CEU (2017–2022)

Mentored undergraduate interns through national programs (USDA, ACS, 2014)

Trained research assistants in laboratory settings (California State University Fresno, 2012–2015)

Hosted visiting Ph.D. students for research stays (2008, 2010)

## Teaching

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### Central European University, Austria

*Introduction to Environmental Sustainability* (2025) Undergraduate

*Global Environmental Change, Health, and Policy* (2019, 2022-2025) Undergraduate

*Introduction to Quantitative Methods* (2025) Graduate

*Green Technologies for Environmental Pollution* (2025) Graduate

*Introduction to Circular Economy* (2023, 2024, 2026) Graduate

*Environmental Pollution and Biological Remediation Methods* (2016-2024) Graduate

*Agroecology and Organic Farming Systems* (2018, 2019, 2020, 2022, 2023) Graduate

*Food Policy and Politics* (2018, 2019, 2020) Graduate

*Science, Society, and Environmental Policy* (2017 & 2018) Graduate

### Szent István University, Hungary

*Environmental Management* (co-taught with György Végvári) (2016) Graduate

### California State University Fresno, USA

*Plant Nutrition and Soil Chemistry* (co-taught with Gary Bañuelos) (2014) Graduate