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RESEARCH

My research interest is in multifunctional use of plants for phytoremediation, an environmentally friendly technique used to decontaminate polluted soils and waters of heavy metals, organic contaminants and mineral nutrients using plants.

In the last few years my research is focused on phytoremediation as an active component of urban landscaping process in degraded areas. I am particularly interested in the additional environmental (i.e., beyond soil cleansing) and social benefits associated with this technology, including the technical constraints and knowledge gaps that should be further addressed to make this technique efficient on a larger scale.

The use of trees for the reclamation of brownfields shows several benefits in addition to depollution. Most tree species used for phytoremediation may actively reduce the volume of stormwater runoff and mitigate the risk of local flooding events. They can actively contribute to CO₂ sequestration and function as highly aesthetic living barriers for noise and air pollution attenuation. Some uncertainties associated with the use of this reclamation technique in urban areas (i.e., BVOC emission, pollen production) still need to be addressed. Nevertheless, within the large family of green technologies, phytoremediation has huge potential to be used as an effective tool for the cleanup of contaminated urban brownfields, thus contributing to the development of more sustainable modern towns.

EDUCATION

2003 - 2006	Ph.D. Agricultural Sciences (Energy Crops), Sant'Anna School of University Studies and Doctoral Research, Pisa (Italy). Ph.D. thesis: <i>"Water requirements of willow and poplar SRIC used as vegetation filters"</i>
1995 – 2001	Bachelor of Science, Forestry, Department of Plant Biology - University of Florence (Italy) Dissertation: <i>"Relationships between leaf anatomy and ozone sensitivity of European ash (Fraxinus excelsior L.)"</i>

PROFESSIONAL BACKGROUND

Mar 2025 – present	Associate Professor- Department of Biotechnology and Biosciences, University of Milano-Bicocca. Milan (Italy)
Apr 2022 – Feb 2025	Assistant Professor- Department of Biotechnology and Biosciences, University of Milano-Bicocca. Milan (Italy)
Jan 2020- Feb 2022	R&D PNAT s.r.l (www.pnat.net)
Jan 2014 – Dec 2019	Postdoctoral Research, Department of Agriculture, Food, Environment and Forestry- University of Florence (Italy). Supervisor: Prof. Stefano Mancuso
Apr 2010 – Nov 2013	Postdoctoral Research, Plant Biology Research Institute - University of Montreal (Canada). Research topic <i>"Using willows for phytoremediation of contaminated soils and waters"</i> .

Nov 2008 – Mar 2010	Supervisor: Prof. Michel Labrecque Postdoctoral Research, Sant'Anna School of University Studies and Doctoral Research, Pisa (Italy). <i>“Woody energy crops potential in Central Italy”</i> . Supervisor: Prof. Enrico Bonari
Apr 2006 - Jul 2007	Postdoctoral Research, Plant Biology Research Institute - University of Montreal (Canada). Research topic <i>“Physiological effects of high water supply on poplar and willow SRIC for remediation of aquaculture effluents”</i> . Supervisors: Prof. Michel Labrecque and Prof. Sébastien Sauvé
Oct 2004 – Mar 2005	Visiting Academic, School of Plant Biology – The University of Western Australia - Perth (Australia). Research topic: <i>“Water relations of natural Eucalyptus ecosystems threaten by climate change”</i> . Supervisor: Prof. Hans Lambers, Prof. Erik Veneklaas

TEACHING / LECTURING EXPERIENCE

Sept 2019	Mendel University in Brno (Czech Republic) - Erasmus+ Staff Mobility for Lecturers (STA). Guest scientist. The goal of this mobility was to exchange of scientific and technical expertise regarding the field of phytotechnologies with a special emphasis on phytoremediation.
Sep 2018 –Apr 2020	University of Florence (Italy). Undergraduate course <i>“Botany and wood anatomy and identification”</i> (48h). The course introduces basic tree growth and wood formation, detailing both the macroscopic and microscopic anatomy of hardwoods and softwoods. The laboratories cover the macroscopic and microscopic identification of the main Italian hardwoods and softwoods.
Jan 2014-present	I am regularly giving seminars on <i>“Phytoremediation”</i> at the University of Florence (Italy).
Feb 2013	Seminar: <i>“Phytoremediation”</i> organized by the School of Landscape Architecture, University of Montreal (Dr. Danielle Dagenais).
Dec 2012	Seminar (2 hours): <i>“Phytotechnologies”</i> organized by the School of Horticulture of Montreal.
Feb – Apr 2011/12	Seminar series (10): <i>“Phytotechnologies”</i> , within the <i>“Green Solutions to Urban Challenges”</i> program organized by The Montreal Botanical Garden and aimed at helping high-school students to understand how plant science and technology contribute to building sustainable communities in urban areas.
Oct 2009	I held several seminars on <i>“Bioenergy crops”</i> (20 hours) within the training course <i>“Managements of bioenergy plants”</i> organised by So&Co -Training Agency (Italy), aimed at introducing the main agricultural and forest biomass sources to managers of bioenergy plants.

TRAINING COURSES

Jul 2021- Jul 2030	Successful awarded the Italian qualification (Abilitazione Scientifica Nazionale) as associate professor in the sector 07/E1 <i>“Agricultural chemistry, pedology and agricultural genetics”</i> .
Nov 2018 – Nov 2024	Successful awarded the Italian qualification (Abilitazione Scientifica Nazionale) as associate professor in the sector 07/B2 <i>“Science and technology of arboricultural and forest systems”</i> .
Jul 2013-present	Successful participation to the European Union test <i>“Call for expressions of interest for contract agents EPSO/CAST/S/5/2013 - Researcher (FG IV)”</i>

Agricultural, Environmental and Earth Sciences” with marks 29/30 points (passmark: 15 points).

Oct 2009 *“International Training Course on Trends in Measurements and Estimation of Crop Water Requirements” 5th - 9th October, Catania (Italy).*

Oct 2003 *“Curso Internacional de Proyectos de Cambio Climático en los sectores forestal y energía” Centro Agronomico Tropical de Investigación y Enseñanza (CATIE), Turrialba- Costa Rica.*

LANGUAGES

Italian (native speaker); English (professional working proficiency); French (C1-C2; TCF-Quebec); Spanish (basic)

COMPUTATIONAL SKILLS

Proficient in many Microsoft Office packages (Word, Excel, etc.), Mac OS10 operating systems, in the use of statistical (SPSS, R, Statgraph, CoHort) and biological/agro-ecological (WinRhizo, Cropwat, CO₂Fix) packages.

RESEARCH PROJECTS

I was involved in the following research projects:

- 2018-2021 Ministère de l'Économie, de la Science et de l'Innovation du Québec. *Création d'une boucle "économico-environnementale" pour le déploiement d'une plateforme de production intégrée économiquement viable de biocarburant et de produits biosourcés à haute valeur ajoutée à partir de biomasses issues de la phytoremediation.* PSR-SIIRI 2017-2018 (Canada, Italy and China)
- 2017-present: IPER *“Innovative Plant-based Environmental Remediation”*. University of Florence (Italy) funded by the Italian Ministry of Defence.
- 2014-present: VESPA *“Vegetation Systems for Pollution Avoidance”*. University of Florence (Italy) funded by the Italian Ministry of Defence.
- 2011-2013: Genome Canada. *“GenoRem: improving bioremediation of polluted soils through environmental genomics”* (Canada). <http://www.irbv.umontreal.ca/recherche/initiatives-majeures/genorem?lang=en>
- 2010-2012: City of Montreal. *“Willow short-rotation coppice for treatment of polluted groundwater at the Parc d'entreprises de la Pointe Saint-Charles”* (Canada).
- 2010-2013: Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques du Québec. *“Système écologique intégré à base de saule pour la décontamination des eaux usées, la valorisation des boues d'épuration et le chauffage à l'énergie renouvelable d'un édifice public”*, (Canada).
- 2010-2012: Canadian Federal Interdepartmental Program on Energy Research and Development (PERD) *“Short rotation intensive culture of willow in various regions of Eastern Canada”* (Canada).
- 2010-2011: Petromont and Co LP *“Using willow for phytoremediation on a former oil refinery”*. (Canada).
- 2008-2009: Grosseto Chamber of Commerce (Italy) *“Pilot project: estimation of biomass potential for bioenergy use in the Grosseto province –Italy”* (Italy).

- 2008-2009: Fondazione Banca del Monte di Lucca (Italy) “*Assessing the potential for bioenergy chains implementation in Lucca region*”, (Italy).
- 2003-2004: Italian Ministry of Agricultural, Food and Forestry Policies “*The Bioenergy Farm Project : the use of dedicated crop to produce clean energy*”, (Italy).

MAJOR ACCOMPLISHMENTS IN SCIENTIFIC RESEARCH

Phytoremediation. The uptake of trace elements and the degradation of organic pollutants by plants have been my main research topics since the beginning of my first postdoctoral fellowship in Canada. I was involved in research projects aimed to develop green approaches to decontaminate polluted sites using plants. I assessed low cost solutions to restore the lost ecological integrity to these sites. By choosing species adapted to the harsh conditions that characterize these sites, I have completed several projects that simultaneously "green" and rehabilitate a site, following decontamination. Collaborations with several companies (refineries and civil engineering companies) and municipalities in Canada and recently in Italy were established over the last few years.

Energy crops. Another aspect of my research activities focuses on the use of fast-growing woody plants to address issues related to the production of biomass for bioenergy. Over the last ten years, studies were conducted to implement technology in the production of woody crops by maximising yield, enhancing feedstock quality and reducing production costs. This research has had significant impacts upon the development of new commercial activities in Italy and Canada. Based on my last research activities carried out at the Michel Labrecque’s Lab – University of Montreal, several private companies (willow suppliers for instance) were created over the last years in Québec (Agro Energie, Sauletech, Envirosaule, etc.).

Living structures. Besides my main research activities, I was also involved in projects on living noise barrier implementation in Canada. I worked with municipal partners to establish such structures and provided scientific follow-up in order to evaluate the pertinence and sustainability of these green walls. To date, several kilometres of living walls have been established in the Quebec municipalities and this contributes to the development of a new sector of activities in respect of sustainable development.

PUBLICATIONS

Peer Reviewed Journals

1. Palm E., **Guidi Nissim, W***, Colasurdo G., Van Volkenburgh E. (2024) “*Inducible tolerance to low Ca:Mg in serpentine ecotype of *Erythranthe guttata**”. Journal of Plant Physiology, accepted <https://doi.org/10.1016/j.jplph.2024.154355>
2. Bruno, A., Arnoldi I., Barzaghi B., Boffi M., Casiraghi M., Colombo B., Di Gennaro P., Epis S., Facciotti F., Ferrari N., Fesce E., Ficetola G.F., Fumagalli S., Galimberti A., Ghisleni G., **Guidi Nissim W.**, Mainardi L., Manenti R., Messina V., Negri A., Palm E., Piga B.E.A, Rainisio N., Tommasi N., Labra M. (2024) “*The One Health Approach in Urban Ecosystem Rehabilitation: An Evidence-Based Framework for Designing Sustainable Cities*”. iScience, accepted <https://doi.org/10.1016/j.isci.2024.110959>
3. Bazzicalupo M., Betuzzi F., Frigerio J., **Guidi Nissim W.**, Rapallo F., Ruffoni B., Cornara L., Copetta A., (2024). "Characterization of the floral traits, pollen micromorphology and DNA barcoding of the edible flowers from three basil taxa (*Lamiaceae*)" Genetic Resources and Crop Evolution, accepted <https://doi.org/10.1007/s10722-024-02170-5>
4. Guarino F., Ciatelli A., **Guidi Nissim W.**, Colzi I., Gonnelli C., Basso M.F., Vergata C., Contaldi F., Martinelli F., Castiglione S., (2024). “Epigenetic changes induced by chronic and acute chromium stress treatments in *Arabidopsis thaliana* identified by the MSAP-Seq. Chemosphere, in press <https://doi.org/10.1016/j.chemosphere.2024.142642>

5. Shang K., Michel Labrecque M., Gilles V., **Guidi Nissim W.** (2024) "A comprehensive review of planting approaches used to establish willow for environmental applications" *Ecological Engineering*, 204:107288 <https://doi.org/10.1016/j.ecoleng.2024.107288>
6. Pagliari S., Sicari M., Pansera L., **Guidi Nissim W.**, Mhalhel K., Rastegar S., Germanà A., Cicero N., Labra M., Cannavacciuolo C., Montalbano G., Campone L. (2024) "A comparative metabolomic investigation of different sections of Sicilian Citrus x limon (L.) Osbeck, characterization of bioactive metabolites and evaluation of in-vivo toxicity on zebrafish embryo". *Journal of Food Science*, 1–16. <https://doi.org/10.1111/1750-3841.17079>
7. Panzeri D., Toini E., Vertemara J., Silvestri G., Bunea V.V., Zecca G., **Guidi Nissim W.**, Wagensommer R. P., Zampella G., Labra M., Grassi F. (2024) "Small proteins, great promises: geographic bioprospecting of Bowman-Birk protease Inhibitors and domestication side-effects in African cowpea (Vigna unguiculata L.)" *Plant, people, Planet*, 1–14. <https://doi.org/10.1002/ppp3.10507>
8. Pioltelli E., Guzzetti L., Copetta A., Labra M., Galimberti A., **Guidi Nissim W.***, Biella P. (2024) "Assessing the analytical reliability of traditional and novel sampling methods for the study of flower rewards". *Ecosphere*, 15(3): e4796. <https://doi.org/10.1002/ecs2.4796>
9. Lapierre E., Frenette-Dussault C., Pitre, F.E Labrecque, M., **Guidi Nissim W.*** (2024). "Trace element translocation patterns in the epigeous parts of 15 common Canadian urban plant species grown in a contaminated soil". *Plant Biosystems*, 158(3), 438–446. doi.org/10.1080/11263504.2024.2320170
10. Palm E.R., Salzano, A.M., Vergine M., Negro C., **Guidi Nissim W*.**, Sabbatini L., Balestrini R., de Pinto M.C., Fortunato S., Gohari G., Mancuso S., Luvisi A., De Bellis L., Scaloni A., Vita F., (2024) "Response to salinity stress in four Olea europaea L. genotypes: a multidisciplinary approach". *Environmental and Experimental Botany*, 218: 105586 <https://doi.org/10.1016/j.envexpbot.2023.105586>
11. Frigerio J., Capotorti G., Del Vico E., Ouled Larbi M., Grassi F., Blasi C., Labra M., **Guidi Nissim W.** (2023) "Tree tracking: species selection and traceability for sustainable and biodiversity-friendly urban reforestation,". *Plant Biosystems*, 157:4, 920-934, [10.1080/11263504.2023.2234907](https://doi.org/10.1080/11263504.2023.2234907)
12. **Guidi Nissim W*.**, Castiglione S., Guarino F., Pastore M.C., Labra M. (2023) "Beyond cleansing: ecosystem services related to phytoremediation". *Plants*, 12(5), 1031; doi.org/10.3390/plants12051031
13. **Guidi Nissim W*.**, Corte Fadel G., Labrecque M., (2023) "Assessment of different procedures for in vitro propagation of Salix miyabeana". *Plant Biosystems* doi.org/10.1080/11263504.2023.2293035
14. Cannavacciuolo C., Pagliari S., Giustra C.M., Carabetta S., **Guidi Nissim W.**, Russo M., Branduardi P., Labra M., Campone L. (2023) "LC-MS and GC-MS data fusion metabolomics profiling coupled with multivariate analysis for the discrimination of different parts of Faustime fruit and evaluation of their antioxidant activity". *Antioxidants*, 12(3), 565; doi.org/10.3390/antiox12030565
15. Atzori G., **Guidi Nissim W*.**, Mancuso S., Palm E. (2022). "Intercropping salt-sensitive Lactuca sativa L. and salt-tolerant Salsola soda L. in a saline hydroponic medium: an agronomic and physiological assessment" *Plants*, 11(21), 2924 doi.org/10.3390/plants11212924
16. Podlasek, A., Vaverková M.D., Koda E., Paleologos E.K., Adamcová D., Bilgin A., Palm E.R., **Guidi Nissim W.**, (2022). "Temporal variations in groundwater chemical composition of landfill areas in the vicinity of agricultural lands: a case study of the Zdounky and Petrůvky landfills in the Czech Republic" *Desalination and Water Treatment*, 275:131-146 doi.org/10.5004/dwt.2022.28949
17. Vita F., Sabbatini L., Sillo F., Ghignone S., Vergine M., **Guidi Nissim W.**, Fortunato S., Salzano A.M., Scaloni A., Luvisi A., Balestrini R., De Bellis L., Mancuso S., (2022). "Salt stress in olive tree shapes resident endophytic microbiota". *Frontiers in Plant Science*, accepted doi.org/10.3389/fpls.2022.992395
18. Palm E, **Guidi Nissim W*.**, Gagnon-Fee, D., Labrecque, M., (2022). "Photosynthetic patterns during autumn in three different Salix cultivars grown on a brownfield site". *Photosynthesis Research*, doi.org/10.1007/s11120-022-00958-z

19. Capuana M., **Guidi Nissim W***, Klein J.D., (2022). "Protocol for In Vitro Propagation of *Salix acmophylla* (Boiss.). Studies on Three Ecotypes". Forests, in press. doi.org/10.3390/f13071124
20. **Guidi Nissim W.**, Labrecque, M., (2022). "Field assessment of trace element phytoextraction by different *Populus* clones established on brownfields in southern Quebec (Canada)". International Journal of Phytoremediation, doi.org/10.1080/15226514.2022.2074964
21. Palm E., Klein J.D., Mancuso S., **Guidi Nissim W***, (2022). "The physiological response of different brook willow (*Salix acmophylla* Boiss.) ecotypes to salinity". Plants, 11, 739 doi.org/10.3390/plants11060739
22. Panzeri. D., **Guidi Nissim W.**, Labra M., Grassi F., (2022). "Revisiting the domestication process of African *Vigna* species (Fabaceae): background, perspectives and challenges." Plants, 11(4), 532 doi.org/10.3390/plants11040532
23. Palm E., **Guidi Nissim W***, Adamcová D., Podlasek A., Jakimiuk A., Vaverková M.D., (2022). "Sinapis alba L. and Triticum aestivum L. as biotest model species for evaluating municipal solid waste leachate toxicity", Journal of Environmental Management, 302, 114012 doi.org/10.1016/j.jenvman.2021.114012
24. Masi M., **Guidi Nissim W.**, Pandolfi C., Azzarello E., Mancuso S., (2022). "Modelling botanical biofiltration of indoor air streams contaminated by volatile organic compounds". Journal of Hazardous Materials, 422, 126875. doi.org/10.1016/j.jhazmat.2021.126875
25. **Guidi Nissim W***, Labrecque, M., (2021). "Reclamation of urban brownfields through phytoremediation: implications for building sustainable and resilient towns" Urban Forestry & Urban Greening, 65, 127364. doi.org/10.1016/j.ufug.2021.127364
26. **Guidi Nissim W.**, Palm E., Pandolfi, C., Mancuso S., Azzarello E. (2021). "Relationship between Leachate Pollution Index and growth response of two willow and poplar hybrids: Implications for phyto-treatment applications" Waste Management, 136:162-173. doi.org/10.1016/j.wasman.2021.09.012
27. **Guidi Nissim W.**, Masi E., Pandolfi C., Mancuso S., Atzori G. (2021). "The response of halophyte (*Tetragonia tetragonioides* (Pallas) Kuntz) and glycophyte (*Lactuca sativa* L.) crops to diluted seawater and NaCl solutions: a comparison between two salinity stress types". Applied Sciences, 11(14), 6336. doi.org/10.3390/app11146336
28. Palm E., **Guidi Nissim W***, Mancuso S., Azzarello E. (2021). "Split-root investigation of the physiological response to heterogeneous elevated Zn exposure in poplar and willow" Environmental and Experimental Botany, 183:104347. doi.org/10.1016/j.envexpbot.2020.104347
29. **Guidi Nissim W***, Palm E., Pandolfi, C., Mancuso S., Azzarello E. (2021). "Willow and poplar for the phyto-treatment of landfill leachate in Mediterranean climate" Journal of Environmental Management, 277:111454. doi.org/10.1016/j.jenvman.2020.111454
30. Riccioli F., **Guidi Nissim W***, Masi M., Palm E., Mancuso S., Azzarello E. (2020). "Modeling the Ecosystem Services Related to Phytoextraction: Carbon Sequestration Potential Using Willow and Poplar", Applied Sciences, 10 (22), 8011. doi.org/10.3390/app10228011
31. Atzori, G., **Guidi Nissim W.**, Niccolai, A., Rodolfi, L., Biondi, N., Mancuso, S., Tredici, M.R. (2020). "Algae and Bioguno as promising source of organic fertilizers" Journal of Applied Phycology 32:3971–3981. doi.org/10.1007/s10811-020-02261-7
32. Atzori, G., **Guidi Nissim W***, Macchiavelli, T., Vita F., Azzarello E., Pandolfi C., Masi E., Mancuso S. (2020). "*Tetragonia tetragonioides* (Pallas) Kuntz. as promising salt-tolerant crop in a saline" agricultural context" Agricultural Water Management, 240: 106261. doi.org/10.1016/j.agwat.2020.106261
33. Desrochers V., Frenette-Dussault, C., **Guidi Nissim W.**, Brisson J., Labrecque M., (2020). "Using willow microcuttings for ecological restoration: An alternative method for establishing dense plantations" Ecological Engineering. 151: 105859. doi.org/10.1016/j.ecoleng.2020.105859
34. **Guidi Nissim W***, Palm E., Mancuso S., Azzarello E. (2019). "Trace element partitioning in a poplar phytoextraction stand in relation to stem size" Journal of Environmental Management, 247: 688-697. doi.org/10.1016/j.jenvman.2019.06.105

35. Atzori, G., **Guidi Nissim W.**, Caparrotta, S., Santantoni, F., Masi E. (2019). "Seawater and water footprint in different cropping systems: a chicory (*Cichorium intybus* L.) case study" *Agricultural Water Management*, 211: 172-177. doi.org/10.1016/j.agwat.2018.09.040
36. **Guidi Nissim W.**, Lafleur B., Labrecque M. (2018). "The performance of five willow cultivars under different pedoclimatic conditions during the second rotation", *Forests* 9, 349. doi.org/10.3390/f9060349
37. **Guidi Nissim W***, Martellini T., Cincinelli A., Alvisi L., Palm E., Mancuso S., Azzarello E. (2018). "Phytoremediation of sewage sludge contaminated by trace elements and organic compounds". *Environmental Research*, 164:356–366. doi.org/10.1016/j.envres.2018.03.009
38. Pray TJ., **Guidi Nissim W.**, St-Arnaud M., Labrecque M., (2018). "Investigating the Effect of a Mixed Mycorrhizal Inoculum on the Productivity of Biomass Plantation Willows Grown on Marginal Farm Land". *Forests*, 9(4), 185. doi.org/10.3390/f9040185
39. **Guidi Nissim W***, Palm E., Mancuso S., Azzarello E. (2018). "Trace element phytoextraction from contaminated soil: a case study under Mediterranean climate". *Environmental Science and Pollution Research*, 25: 9114–9131. doi.org/10.1007/s11356-018-1197-x
40. Gonzalez E., Pitre F.E, Pagé A.P., Marleau J., **Guidi Nissim W.**, St-Arnaud M., Labrecque M., Joly S., Yergeau E., Brereton N.J.B. (2018). "Trees, Fungi and Bacteria: Tripartite Metatranscriptomics of a Root Microbiome Responding to Soil Contamination." *Microbiome*, 6: doi.org/10.1186/s40168-018-0432-5
41. Bibbiani S., Colzi I., Taiti C., **Guidi Nissim W.**, Papini A., Mancuso S, Gonnelli C. (2018). "Smelling the metal: volatile organic compound emission under Zn excess in the mint *Tetradenia riparia*". *Plant Science* 271:1-8. doi.org/10.1016/j.plantsci.2018.03.006
42. Palm E., **Guidi Nissim W.**, Mancuso S., Giordani C., Azzarello E., (2017). "Root potassium and hydrogen flux rates as potential indicators of plant response to zinc, copper and nickel stress". *Environmental and Experimental Botany*, 143:38-50. doi.org/10.1016/j.envexpbot.2017.08.009
43. Sassoli M., Taiti C., **Guidi Nissim W.**, Costa C., Mancuso S., Menesatti P., Fioravanti M. (2017). Characterization of VOC emission profile of different wood species during moisture cycles. *iForest*, 10: 576-584. doi.org/10.3832/for2259-010
44. Taiti C., Costa C., **Guidi Nissim W***, Bibbiani S., Azzarello E., Masi E., Pandolfi C., Pallottino F., Menesatti P., Mancuso S. (2017). "Assessing VOC emission by different wood cores using the PTR-ToF-MS technology". *Wood Science and Technology*, 51(2): 273–295. doi.org/10.1007/s00226-016-0866-5
45. **Guidi Nissim W.**, Labrecque M., (2016). "Planting microcuttings: an innovative method for establishing a willow vegetation cover". *Ecological Engineering*, 91(1): 472–476. doi.org/10.1016/j.ecoleng.2016.03.008
46. Brereton N., Gonzalez E., Marleau J., **Guidi Nissim W.**, Labrecque M., Joly S., Pitre F. (2016). "Comparative transcriptomic approaches exploring contamination stress tolerance in *Salix* sp. reveal the importance for a metaorganismal de novo assembly approach for non-model plants". *Plant Physiology*, 171: 3-24. doi.org/10.1104/pp.16.00090
47. Atzori, G., **Guidi Nissim W.**, Caparrotta S., Vignolini P., Masi E., Azzarello E., Pandolfi C., Gonnelli C., Mancuso S. (2016). "Potential and constraints of different seawater and freshwater blends as growing media for three vegetable crops", *Agricultural Water Management*, 176: 255-262. doi.org/10.1016/j.agwat.2016.06.016
48. Bazihizina, N., C. Taiti, N. Serre, C. Nocci, F. Spinelli, **Guidi Nissim W.**, E. Azzarello, L. Marti, M. Redwan, C. Gonnelli and S. Mancuso, (2016). "Awaiting better times: A quiescence response and adventitious root primordia formation prolong survival under cadmium stress in *Tetradenia riparia* (Hochst.) Codd". *Environmental and Experimental Botany* 130: 1-10. doi.org/10.1016/j.envexpbot.2016.05.006
49. Desjardins D., Pitre F. E., **Guidi Nissim W.**, Labrecque M. (2016). "Differential uptake of silver, copper and zinc suggests complementary species-specific phytoextraction potential"

50. **Guidi Nissim W.**, Hasbroucq S., Kadri H., Pitre F.E., Labrecque M. (2015). "Potential of selected Canadian plant species for phytoextraction of trace elements from selenium-rich soil contaminated by industrial activity". *International Journal of Phytoremediation*, 17(8): 745-752. doi.org/10.1080/15226514.2014.987370
51. Gonzalez E., Brereton N.J.B., Marleau J., **Guidi Nissim W.**, Labrecque M., Pitre F.E., Joly S. (2015). "Meta-transcriptomics indicates biotic cross-tolerance in willow trees cultivated on petroleum hydrocarbon contaminated soil". *BMC Plant Biology*, 15: 246-264. doi.org/10.1186/s12870-015-0636-9
52. **Guidi Nissim W.**, Jerbi A., Lafleur B., Fluet R., Labrecque M. (2015). "Willows for the treatment of municipal wastewater: long-term performance under different irrigation rates". *Ecological Engineering* 81: 395-404. doi.org/10.1016/j.ecoleng.2015.04.067
53. Grenier V., Pitre, F.E., **Guidi Nissim W.**, Labrecque M. (2015). "Genotypic differences explain most of the response of willow cultivars to petroleum-contaminated soil". *Trees - Structure and Function*, 29(3): 871-881. doi.org/10.1007/s00468-015-1168-5
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EDITORIAL ACTIVITIES

Editorial Board Membership

- Co-Editor, *iForest - Biogeosciences and Forestry* (www.sisef.it/iforest/static/?id=board)
- Coordinating Editor, *Restoration Ecology*, (<https://onlinelibrary.wiley.com/page/journal/1526100x/homepage/editorialboard.html>)
- Editorial Board, *International Journal of Phytoremediation* (www.tandfonline.com/toc/bijp20/current)
- Editorial Board, *Applies Sciences* (www.mdpi.com/journal/applsci/editors)
- Guest Editor, "Phytotechnologies: Lessons from the Field on the Use of Plants to Improve Polluted Environments"- *Applies Sciences* (https://www.mdpi.com/journal/applsci/special_issues/phytotechnologies)

Peer Review Activities

I reviewed several papers for the following scientific journals:

Advances in Horticultural Science, Agricultural and Forest Meteorology, Agricultural Water Management, Applied Sciences, BioEnergy Research, Biomass and Bioenergy, Canadian Journal of Forest Research, Chemosphere, Diversity, Ecological Engineering, Ecological Indicators, Ecosystem Health and Sustainability, Environmental Pollution, Forests, Environmental Science and Pollution Research, European Journal of Forest Research, Forest Products Journal, Frontiers in Plant Science, Industrial Crops and products, International Journal of Phytoremediation, Journal of Geochemical Exploration, Journal of Hazardous Materials, Journal of King Saud University – Science, Pedosphere, Plant Growth Regulation, Plant Signaling & Behavior, The Science of the Total Environment, Scientific Reports, Journal of Environmental Management.

Reviewer activity for book proposals

"Phytomanagement of Fly Ash" (current title "Phytomanagement of Polluted Sites"). Elsevier (2018) ISBN: 9780128139127. Editor Dr. Vimal Chandra Pandey

"Appraisal of Metal(oids) in the Ecosystem". Elsevier (2020) proposed by Dr. Vinod Kumar, Anket Sharma e Raj Setia in press.

ORGANISATION OF SCIENTIFIC MEETINGS

Member of the International Scientific Committee of the "14th International Phytotechnologies Conference (IPC)" - Montreal Sept 25th - 29th, 2017 (www.ipc2017.org/en/committees-0)

AFFILIATIONS

- *The International Union for Conservation of Nature*
- *Italian Society of Silviculture and Forest Ecology (SISEF)*
- *Siena Academy of Science (Accademia dei Fisiocritici)*

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