

CV date: November 2017

PERSONAL DATA

First and Family Name: Tiziana Di Lorenzo

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Institute: Institute of Ecosystem Study of the CNR (ISE-CNR)

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DEGREES

Ph.D in Groundwater Ecology, University of L'Aquila, Italy, 2007

M.A., Environmental Sciences, University of L'Aquila, Italy, 2001

CURRENT POSITION

Current position: permanent researcher at the Institute of Ecosystem Study of the CNR (ISE-CNR) from 2011

PROFESSIONAL ACADEMIC ACTIVITIES

1. 2011-2012: Adjunct Professor at the University of L'Aquila. Class degree in Environmental Biology: "Biodiversity analysis and statistical inference SSD-BIO05".

GRADUATE SUPERVISION

1. 2017: Marco Cifoni (Ph.D., Groundwater Ecology, University of L'Aquila, Italy), Thesis Supervisory.
2. 2016: Abdelhakim Mahi (Ph.D., Groundwater Ecology, University of Berk Belkaid-Tlemcen, Algeria), Thesis Supervisory.
3. 2013: Emilia Maria Melisa Valori (Master Degree, Economics, Management and Statistics, University Milano-Bicocca, Italy), Thesis Supervisory.

PUBLICATIONS

Peer reviewed articles: 25

Number of first-and last authorships during the last five years: 14

H-INDEX: 10 (SCOPUS)

Number of articles in Q1 journals: 13

Technical Reports: 2

Conference Proceedings: 44

Working papers: 3

PEER REVIEWED ARTICLES

1. Di Marzio W.D., Cifoni M., Sáenz M.E., Galassi D.M.P., **Di Lorenzo T** (*in print*). The ecotoxicity of binary mixtures of Imazamox and ionized ammonia on freshwater copepods: implications for environmental risk assessment in groundwater bodies. *Ecotoxicology and Environmental Safety*.
2. Iepure S., Rasines-Ladero R., Meffe R., Carreno F., Mostaza D., Sundberg A., **Di Lorenzo T.**, Barroso J.L., 2017. The role of groundwater crustaceans in disentangling aquifer type features – a case study of the Upper Tagus Basin, central Spain. *Ecohydrology*, 10(7), e1876.
3. Fattorini S., Lombardo P., Fiasca B., Di Cioccio A., **Di Lorenzo T.**, Galassi D.M.P., 2017. Earthquake-Related Changes in Species Spatial Niche Overlaps in Spring Communities. *Scientific Reports*, 7(1):443.
4. **Di Lorenzo T.**, Melita M., Cifoni M., Galassi D.M.P., Iannucci A., Biricolti S., Gori M., Baratti M., 2017. Effect of ammonia on the gene expression levels of the freshwater cyclopoid *Eucyclops serrulatus*. *Environmental Toxicology and Pharmacology* <http://dx.doi.org/10.1016/j.etap.2017.02.017>
5. Galassi D.M.P., Fiasca B., **Di Lorenzo T.**, Montanari A., Porfirio S., Fattorini S., 2017. Groundwater biodiversity in a chemoautotrophic cave ecosystem: how geochemistry regulates microcrustacean community structure. *Aquatic Ecology*, 51:75-90.
6. Cifoni M., Galassi D.M.P., Faraloni C., **Di Lorenzo T.**, 2017. Test procedures for measuring the (sub)chronic effects of chemicals on the freshwater cyclopoid *Eucyclops serrulatus*. *Chemosphere*, 173:89-98.

7. Stoch F., Barbara F., **Di Lorenzo T.**, Porfrio S., Petitta M., Galassi D.M.P., 2016. Exploring copepod distribution patterns at three nested spatial scales in a spring system: habitat partitioning and potential for hydrological bioindication. *Journal of Limnology*, 75(1): 1-13.
8. **Di Lorenzo T.**, Cannicci S., Spigoli D., Cifoni M., Baratti M., Galassi D.M.P., 2016. Bioenergetic cost of living in polluted freshwater bodies: respiration rates of the cyclopoid *Eucyclops serrulatus* under ammonia-N exposures. *Fundamental and Applied Limnology*, 188(2):147-156.
9. **Di Lorenzo T.**, Borgoni R., Ambrosini R., Cifoni M., Galassi D.M.P., Petitta M., 2015. Occurrence of volatile organic compounds in shallow alluvial aquifers of a Mediterranean region: Baseline scenario and ecological implications. *Science of the Total Environment*, 538:712-723.
10. Mugnai R., Messana G., **Di Lorenzo T.**, 2015. Hyporheic invertebrate assemblages at reach scale in a Neotropical stream in Brazil. *Brazilian Journal of Biology*, 75(4).
11. Mugnai R., Messana G., **Di Lorenzo T.**, 2015. The hyporheic zone and its functions: Revision and research status in Neotropical regions (Article) [A zona hiporréica e as suas funções: Revisão e estado da arte da pesquisa na região neotropical]. *Brazilian Journal of Biology*, 75(3): 524-534.
12. Mugnai R., Sousa F.N.F., **Di Lorenzo T.**, 2015. Monitoring hyporheic habitats: Techniques for unclogging minipiezometers. *Pan-American Journal of Aquatic Sciences*, 10(2): 168-171.
13. **Di Lorenzo T.**, Borgoni R., Ambrosini R., Cifoni M., Galassi D.M.P., Petitta M., 2015. Occurrence of volatile organic compounds in shallow alluvial aquifers of a Mediterranean region: Baseline scenario and ecological implications. *Science of the Total Environment*, 538: 712-723.
14. **Di Lorenzo T.**, Di Marzio W.D., Cifoni M., Fiasca B., Baratti M., Sáenz M.E., Galassi D.M.P., 2015. Temperature effect on the sensitivity of the copepod *Eucyclops serrulatus* (Crustacea, Copepoda, Cyclopoida) to agricultural pollutants in the hyporheic zone. *Current Zoology* 61 (4): 629-640.
15. **Di Lorenzo T.**, Di Marzio W.D., Spigoli D., Baratti M., Messana G., Cannicci S., Galassi D.M.P., 2015. Metabolic rates of a hypogean and an epigeal species of copepod in an alluvial aquifer. *Freshwater Biology*, 60, 426-435.
16. Baratti M., Cattonaro F., **Di Lorenzo T.**, Galassi D.M.P., Iannilli V., Iannucci A., Jensen J., Larsen P.F., Nielsen R.O., Pertoldi C., Postolache D., Pujolar J.M., Randi E., Ruiz-Gonzalez A., Thirstrup J.P., Vendramin G.G., Zalewski A., 2015. Genomic Resources Notes Accepted 1 October 2014-30 November 2014. *Molecular Ecology Resources*, 15: 458-459.
17. **Di Lorenzo T.**, Cifoni M., Lombardo P., Fiasca B., Galassi D.M.P., 2015. Ammonium threshold value for groundwater quality in the EU may not protect groundwater fauna: evidence from an alluvial aquifer in Italy. *Hydrobiologia*, 743(1): 139-150.
18. Galassi D.M.P., Lombardo P., Fiasca B., Di Cioccio A., **Di Lorenzo T.**, Petitta M., Di Carlo P., 2014. Earthquakes trigger the loss of groundwater biodiversity. *Scientific Reports*, 4, 6273.
19. **Di Lorenzo T.**, Di Marzio W.D., Sáenz M.E., Baratti M., Dedonno A.A., Iannucci A., Cannicci S., Messana G., Galassi D.M.P., 2014. Sensitivity of hypogean and epigeal freshwater copepods to agricultural pollutants. *Environ. Sci. Pollut. Res.*, 21(6): 4643-4655..
20. Di Marzio W.D., Castaldo D., **Di Lorenzo T.**, Di Cioccio A., Sáenz M.E., Galassi D.M.P., 2013. Developmental endpoints of chronic exposure to suspected endocrine-disrupting chemicals on benthic and hyporheic freshwater copepods. *Ecotoxicology and Environmental Safety*, 96: 86-92.
21. **Di Lorenzo T.**, Galassi D.M.P., 2013. Agricultural impact in Mediterranean alluvial aquifers: do groundwater communities respond? *Fundamental and Applied Limnology*, 182(4): 271-282.
22. **Di Lorenzo T.**, Stoch F., Galassi D.M.P., 2013. Incorporating the hyporheic zone within the river discontinuum: Longitudinal patterns of subsurface copepod assemblages in an Alpine stream. *Limnologica*, 43: 288-296.
23. **Di Lorenzo T.**, Brilli M., Del Tosto D., Galassi D.M.P., Petitta M., 2012. Nitrate source and fate at the catchment scale of the Vibrata River and aquifer (central Italy): an analysis by integrating component approaches and nitrogen isotopes. *Environ Earth Sci.* 67(8), pp. 2383-2398.
24. Galassi D.M.P., Stoch F., Fiasca B., **Di Lorenzo T.**, Gattone E., 2009. Groundwater biodiversity patterns in the Lessinian Massif of northern Italy. *Freshwater Biology*, 54(4): 830-847.
25. Di Marzio W.D., Castaldo D., Pantani C., **Di Lorenzo T.**, Sáenz M.E., Galassi D.M.P., 2009. Relative sensitivity of hyporheic copepods to chemicals. *Source of the Document Bulletin of Environmental Contamination and Toxicology* 82(4): 488-491.

OTHER ARTICLES

1. Galassi D.M.P., Stoch F., Fiasca B., Piermarocchi A., **Di Lorenzo T.**, 2014. Ecosistemi dipendenti dalle acque sotterranee: biodiversità, funzioni ecosistemiche ed effetto dei cambiamenti climatici. *Biologia Ambientale*, 28(2): 1-8.

TECHNICAL REPORTS

1. Di Lorenzo T., 2017. "Valutazione dello stato di compromissione, delle tendenze di inquinamento, delle proroghe e deroghe di obiettivi di qualità, dei corpi idrici sotterranei della Regione Abruzzo ai sensi del Decreto Legislativo 30/2009 – Parte I". Regione Abruzzo.
2. Di Lorenzo T., 2017. "Valutazione dello stato di compromissione, delle tendenze di inquinamento, delle proroghe e deroghe di obiettivi di qualità, dei corpi idrici sotterranei della Regione Abruzzo ai sensi del Decreto Legislativo 30/2009 – Parte II". Regione Abruzzo.

CONFERENCE PROCEEDINGS

1. **Di Lorenzo T.**, Stoch F., Fiasca B., Gattone E., De Laurentiis P., Ranalli F. & Galassi D.M.P., 2005. Environmental quality of deep groundwater in the Lessinian Massif (Italy): signpost for sustainability. In: *World Subterranean Biodiversity. Proceedings of an international symposium, Villeurbanne, France, 2004*, 115-125.

CHAPTER IN BOOKS

2. **Di Lorenzo T.**, 2008. La Procedura GEcoRA. In: *Quaderno Habitat n. 20 "Le Acque Sotterranee. La biodiversità nascosta"*. Ministero dell'Ambiente e della Tutela del Territorio e del Mare e Museo Friulano di Storia Naturale, 124-125. A cura di F. Stoch. 157 pp.

NATIONAL AND INTERNATIONAL RESEARCH PROJECTS

1. 2017-2018: PI of the project "Test e validazione del sistema di indicatori" del progetto AQUALIFE (LIFE12 BIO/IT/000231)". Funded by University of L'Aquila.
2. 2016-2017: PI of the project "Valutazione dello stato di compromissione, delle tendenze di inquinamento, delle proroghe e deroghe di obiettivi di qualità, dei corpi idrici sotterranei della Regione Abruzzo ai sensi del Decreto Legislativo 30/2009". Funded by Regione Abruzzo.
3. 2015-2017: PI of the project "Attività di supporto del progetto europeo AQUALIFE" (LIFE12 BIO/IT/000231)". Funded by University of L'Aquila.
4. 2015: PI of the project "Groundwater invertebrate drift at karst springs: a tool for assessing karst biodiversity and community dynamics (BIOKARST)". Funded by ExpeER (Experimentation in Ecosystem research) project.

NATIONAL AND INTERNATIONAL RESEARCH COLLABORATIONS

1. 2017-2020: PI of the project "Accordo ex art. 15 L 241/90 per la collaborazione scientifica sull'ecologia degli ambienti di grotta, parte acquatica – Agreement ex. Art. 15 L 241/90 for the scientific collaboration concerning cave ecology, aquatic part". Partner involved: Università di Firenze, Dipartimento di Scienze della Terra.
2. 2015-2018: PI of the project between Foundation IMDEA Agua (Madrid Spain) and ISE-CNR for establishing and developing a cooperative relationship between the two research entities on the following specific activities: groundwater ecology status assessment, groundwater ecotoxicology risk assessment, surface/groundwater interactions (the hyporheic and shallow aquifers) – a hydrological and biological approach.
3. 2013: participant to the scientific project "Ecotoxicology and genetic of groundwater and ecotonal crustaceans". Project partners: ISE-CNR Sesto Fiorentino and Laboratorio UTAGRI-ECO dell'ENEA.

INTERNATIONAL EXCHANGE

My own stay

1. 2017 (1 month): 1 month-stay at Foundation IMDEA Agua (Madrid Spain) for research activities dealing with aquatic ecotoxicology.

Reception of international researchers

1. 2014 (15 days): 15-day stay of Prof. Walter Dario Di Marzio (CONICET, Argentina) for research activities dealing with aquatic ecotoxicology.

PARTECIPATION IN CONGRESS COMMITTEE

1. Scientific Committee Member at the International Conference on Subterranean Biology, 27-31 August 2018 (University of Aveiro).

INVITATION TO GIVE KEYNOTE LECTURE

1. July 2014: Keynote speaker at the Conference "Copepoda and the Global Environment", Hanyang University, Seoul, Korea: "Breathless and sensitive: groundwater copepod metabolism and response to pollutants".

ASSIGNMENT AS EXTERNAL REVIEWER

1. 2013: Reviewer of the project "Futuro in ricerca 2013" promoted by Italian Ministry of Instruction, University and Research (MIUR - Ministero dell'Istruzione, dell' Universita' e della Ricerca).

MEMBER OF AN EXAMINING COMMITTEE

1. 2017: Rubén Rasines Ladero (Ph.D., Groundwater Ecology, University of Madrid Rey Juan Carlos, Spain), Thesis Examining Committee Member.

MEMBER OF WORKING GROUPS

1. 2017: Member of the Groundwater Ecology Group of IMEDEA Water, Spain (<https://groundwaterecology.wordpress.com/groundwater-ecology-group/>).
2. 2014: Member of the Working Group Groundwater for the Common Implementation Strategy for the Water Framework Directive (Hyporheic Sampling Protocols).

PATENT

1. 2008: Author of a copyright of the expert system HYES /GEcoR@ approved by the Italian Society of Authors and Editors, section OLAF unpublished works. HYES /GEcoR@ is aimed at evaluating and scoring the functionality, vulnerability and risk in the hyporheic zone and assessing the ecological risk faced by groundwater environment due to anthropic contamination.

HONORS AND AWARD

1. August 2016, Certificate of Appreciation awarded in recognition of notable and invaluable contribution to the 33^o Congress of the International Society of Limnology, SIL, Turin, 31 July – 5 August, 2016.
2. July 2014, Certificate of Appreciation awarded in recognition of notable dedications and contributions to the 12th International conference on Copepoda at Hanyang University, Korea, July 2014.

JOURNAL REFEREEING

Hydrobiologia, Environmental Science & Technology, Toxicology Research, Tropical Zoology, Invertebrate Reproduction and Development, African Journal of Environmental Science and Technology, Science of the Total Environment, Scientific Reports, Ecotoxicology, Journal of the Arkansas Academy of Science, Environmental Earth Sciences.

SCIENTIFIC FOCUS AREAS

- 1) Ecology of freshwater Copepoda Cyclopoida and Harpacticoida (Crustacea).
- 2) Fine-scale and meso-scale ecology with a special focus on meiofauna patterns in groundwater and ecosystems associated to groundwater.
- 3) Meso-scale and large-scale ecology with a special focus on contamination patterns.
- 4) Groundwater risk assessment.
- 5) Ecotoxicology.
- 6) Genotoxicity.
- 7) Bioenergetics.