



**PERSONAL INFORMATION**

Nome, Cognome/Name, Surname  
Indirizzo/Address  
Telefono/Telephone  
Fax  
E-mail  
Sito web/Website  
Nazionalità/Nationality  
Luogo e data di nascita/ Place and  
Date of birth

**WORK EXPERIENCE**

October 2019 – on going  
  
Name and address of employer  
Type of business or sector  
Occupation or position held  
Main activities and responsibilities

June 2014 – September 2019  
  
Name and address of employer  
Type of business or sector  
Occupation or position held  
Main activities and responsibilities

November 2011 – June 2014  
  
Name and address of employer  
Type of business or sector  
Occupation or position held  
Main activities and responsibilities

**EDUCATION AND TRAINING**

January 2006 – March 2009  
(13/03/2009)

**PINARDI MONICA**

Works as Researcher at **Istituto per il Rilevamento Elettromagnetico dell'Ambiente of Consiglio Nazionale delle Ricerche (CNR-IREA)** - Institute for Electromagnetic Sensing of the Environment of National Research Council

CNR-IREA, Milano, Italy

Research

Researcher

The main activities are related to the Lakes CCI Project.

Works as post doc researcher at **Istituto per il Rilevamento Elettromagnetico dell'Ambiente of Consiglio Nazionale delle Ricerche (CNR-IREA)** - Institute for Electromagnetic Sensing of the Environment of National Research Council –under the supervision of Dott. C. Giardino. Selezione n. IREA-AR002/2014-MI- Atto di conferimento ricevuto in data 06/06/2014 (protocollo n. 1249).

CNR-IREA, Milano, Italy

Research

Post doc researcher

Research activities on the topic "Integration of limnological and biogeochemical techniques with remote sensing techniques to analyze primary producers in aquatic environments" within the FP-7 Project INFORM, ISEO Project, and Tessere per la Natura Project. The activities focused on the integration of in situ measurements and satellite images for the study of primary producers (phytoplankton and macrophytes) and water quality.

Works as post doc researcher at **Department of Life Sciences of the University of Parma** under the supervision of Prof. P. Viaroli.

Bando Università degli Studi di Parma con D.R. n.1295 del 01.09.2011 - Atto di conferimento assegno di ricerca approvato con D.R. n. 1537 in data 25/10/2011

Department of Life Sciences, University of Parma, Parma, Italy

University, Research

Post doc researcher

Research activities on the topic "Metabolism in river ecosystems and in their marginal strips in relation to hydrological factors". The research activities were performed in the Mincio River Basin and in Mantua Lakes system. The study focused on the effects of hydrological regime on river metabolism (autotrophy and heterotrophy processes), on concentrations and loads of nutrients and the role of wetlands on nutrients removal and control.

**PhD in Ecology, XXI cycle**, achieved at University of Parma (PhD coordinator: G. De Leo). PhD Thesis (advisor prof P. Viaroli, co-advisor M. Bartoli, D. Longhi): "Autotrophy and heterotrophy in an eutrophic fluvial-lake system: gas and nutrient mass balances, role of submerged and

	helophytic macrophyte vegetation, of phytoplankton, and of water residence time".
Name and type of organisation providing education and training	University of Parma, Italy
Principal subjects covered	Study of river and lake metabolism; environmental assessment of river ecosystems; relationships between river metabolism, primary producers (pelagic and benthonic) and hydrodynamism; experimental activities in situ and laboratory; hydro-chemical analysis (i.e., dissolved and particulate nitrogen and phosphorous, COD, total suspended matter, chlorophyll-a etc.); nutrient mass budgets; denitrification; gas and nutrients fluxes; use of geographical information systems (GIS – ArcView); use of water quality models (es. QUAL2K, AQUATOX); participation to river restoration projects. <i>Ecology, Biogeochemistry, Water quality, Primary producers, GIS</i>
Title of qualification awarded	Dottore di Ricerca in Ecologia, PhD
Level in National classification	PhD
01/05/2005-31/07/2005	<b>Internship</b>
Name and type of organisation providing education and training	Rappresentanza permanente d'Italia presso le Organizzazioni Internazionali ONU - GINEVRA
Principal subjects covered	MAE-CRUI internship at Rappresentanza Permanente d'Italia presso le Nazioni Unite e le altre Organizzazioni Internazionali - Ginevra. Collaboration with the scientific attaché, Prof. Ferrini and participation at environmental meeting (es. ONU - sezione UNECE e UNEP; CITES; WTO).
Title of qualification awarded	Internship
01/10/1999-24/11/2004	<b>Environmental Science degree</b> (laurea), achieved at University of Parma, 110/110 Lode. Thesis (advisor P. Viaroli): Analyses of agriculture and livestock in the Parco Oglio Sud for the optimization of the animal waste spreading and the protection of groundwater.
Name and type of organisation providing education and training	University of Parma, Italy
Principal subjects covered	Biogeochemistry, hydro-chemical analyses, geographical information systems (GIS)
Title of qualification awarded	Laurea in Scienze Ambientali (Degree in Environmental Science),
Level in National classification	Laurea quinquennale in Scienze Ambientali

#### RESEARCH ACTIVITIES

During my doctorate I studied how river damming affects gas (O<sub>2</sub>, CO<sub>2</sub>) and nutrients (N, P) cycles in homogeneous segments of the Mincio River. I verified that water velocity is a key factor in a dammed eutrophic river segment. Reducing water velocity can switch the system from net heterotrophy to net autotrophy.

My recent studies focused on the interaction between different groups of macrophytes and phytoplankton in shallow eutrophic aquatic environments, and the role of primary producers in regulate water metabolism. I integrated limnological and ecological techniques with remote sensing ones. Moreover, the research activities focus on water quality monitoring assessment by means of remote sensing data at different spatial-temporal scales.

#### ON GOING AND RECENT PROJECTS

**2019-on going:** Project "**Lakes CCI**" funded by the European Space Agency.

**2017-2018:** Project "**Tessere per la natura**" funded by Cariplo Foundation. Coordinator: Mincio Regional Park. Monitoring of ante and post-operam ecological restoration actions.

**2016-2019:** Project "**ISEO: Improving the lake Status from Eutrophy towards Oligotrophy**". In situ measurements campaigns; bio-optical model development for primary producer maps; production of macrophyte cover maps.

**2014-2017: INFORM** - Improved monitoring and forecasting of ecological status of European INland waters by combining Future earth ObseRvation data and Models (EU FP7)

**2011-2013:** Project for the determination of **the minimal vital flow in the Mincio River** - Progetto di sperimentazione sul deflusso minimo vitale nel fiume Mincio (Parco del Mincio)

#### Referred Publications

1. Racchetti E., Salmaso F., **Pinardi M.**, Quadroni S., Soana E., Sacchi E., ... & Bartoli M. (2019). Is Flood Irrigation a Potential Driver of River-Groundwater Interactions and Diffuse Nitrate Pollution in Agricultural Watersheds?. *Water*, 11(11), 2304.
2. Tóth V.R., Villa P., *Pinardi M.*, Bresciani M., 2019. Aspects of invasiveness of Ludwigia and Nelumbo in shallow temperate fluvial lakes. *Frontiers in plant science*, 10, 647.
3. **Pinardi M.**, Bresciani M., Villa P., Cazzaniga I., Laini A., Tóth V. R., Fadel A., Austoni M., Lami A., Giardino C., 2018. Spatial and

temporal dynamics of primary producers in shallow lakes as seen from space: intra-annual observations from Sentinel-2A. *Limnologica*, 72: 32-43.

4. **Pinardi M.**, Soana E., Laini A., Bresciani M., Bartoli M., 2018. Soil system budgets of N, Si and P in an agricultural irrigated watershed: surplus, differential export and underlying mechanisms. *Biogeochemistry*, 40:175–197. doi 10.1007/s10533-018-0484-4
5. Villa P., **Pinardi M.**, Bolpagni R., Gillier J. M., Zinke P., Nedelcut F., Bresciani M., 2018. Assessing macrophyte seasonal dynamics using dense time series of medium resolution satellite data. *Remote Sensing of Environment*, 216: 230-244.
6. Villa P., **Pinardi M.**, Tóth V. R., Hunter P. D., Bolpagni R., Bresciani M., 2017. Remote sensing of macrophyte morphological traits: Implications for the management of shallow lakes. *Journal of Limnology*, 76(s1).
7. Bresciani M., Giardino C., Lauceri R., Matta E., Cazzaniga I., **Pinardi M.**, ... Morabito G., 2016. Earth observation for monitoring and mapping of cyanobacteria blooms. Case studies on five Italian lakes. *Journal of Limnology*, 76(s1).
8. Manzo C., Bassani C., **Pinardi M.**, Giardino C., Bresciani M., 2016. Sensitivity in forward modeled hyperspectral reflectance due to phytoplankton groups. *Marine and Freshwater Research*, 64, 1-14.
9. Villa P., Bresciani M., Bolpagni R., **Pinardi M.**, Giardino C., 2015. A rule-based approach for mapping macrophyte communities using multi-temporal aquatic vegetation indices. *Remote Sensing of Environment*, 171, 218-233.
10. **Pinardi M.**, Fenocchi A., Giardino C., Sibilla S., Bartoli M., Bresciani M., 2015. Assessing Potential Algal Blooms in a Shallow Fluvial Lake by Combining Hydrodynamic Modelling and Remote-Sensed Images. *Water*, 7: 1921-1942.
11. Viaroli P., Nizzoli D., **Pinardi M.**, Soana E., Bartoli M., 2015. Eutrophication of the Mediterranean Sea: a watershed—cascading aquatic filter approach. *Rend. Fis. Acc. Lincei (2015)* 26:13-23 DOI 10.1007/s12210-014-0364-3
12. **Pinardi M.**, Rossetto M., Viaroli P., Bartoli M., 2014. Daily and seasonal variability of CO<sub>2</sub> saturation and evasion in a free flowing and in a dammed river reach. *J. Limnol.* 73(3): 468-481. DOI: 10.4081/jlimnol.2014.947
13. Bolpagni R., Bresciani M., Laini A., **Pinardi M.**, Matta E., Ampe E.M., Giardino C., Viaroli P., Bartoli M., 2014. Remote sensing of phytoplankton-macrophyte coexistence in shallow hypereutrophic fluvial lakes. *Hydrobiologia*, 737:67-76. DOI 10.1007/s10750-013-1800-6.
14. Bresciani M., Rossini M., Morabito G., Matta E., **Pinardi M.**, Cogliati S., Julitta T., Colombo R., Braga F., Giardino C., 2013. Analysis of within- and between-day chlorophyll-a dynamics in Mantua Superior Lake, with a continuous spectroradiometric measurement. *Marine and Freshwater Research*, 2013, 64, 303–316 <http://dx.doi.org/10.1071/MF12229>
15. Viaroli P., Nizzoli D., **Pinardi M.**, Rossetti G., Bartoli M., 2013. Factors Affecting Dissolved Silica Concentrations, and DSi and DIN Stoichiometry in a Human Impacted Watershed (Po River, Italy). *Silicon*, DOI 10.1007/s12633-012-9137-8
16. Pinardi M., Bartoli M., Longhi, D., Viaroli P., 2011. Net autotrophy in a fluvial lake: the relative role of phytoplankton and floating-leaved macrophytes. *Aquatic Sciences* DOI 10.1007/s00027-011-0186-7.
17. Racchetti E., Bartoli M., Soana E., Longhi D., Christian R. R., Pinardi M., Viaroli P., 2010. Influence of hydrological connectivity of riverine wetlands on nitrogen removal via denitrification. *Biogeochemistry*, DOI 10.1007/s10533-010-9477-7.
18. Bresciani M., Giardino C., Longhi D., Pinardi M., Bartoli M., Vascellari M., 2009. Imaging spectrometry of productive inland waters. Application to the lakes of Mantua. *Italian Journal of Remote Sensing* , 41 (2): 147-156.
19. Pinardi M., Bartoli M., Longhi D., Marzocchi U., Laini A., Ribaud C. e Viaroli P., 2009. Benthic metabolism and denitrification in a river reach: a comparison between vegetated and bare sediments. *J. Limnol.*, 68(1): 133-145.

#### Other publications

##### Pubblicazioni su riviste nazionali e atti di congresso:

1. Vannuccini M., **Pinardi M.**, Bartoli M., 2011. Valutazione dello stato di qualità ambientale del fiume Mincio con il metodo STRARIFLU modificato. *Biologia Ambientale* 25 (2): 33-46.
2. Bresciani M., Giardino C., Bartoli M., Longhi D., **Pinardi M.**, 2010. Assessment of chlorophyll-a and algal blooms in inland waters from hyperspectral data. *Proceeding del Convegno 'Hyperspectral 2010 Workshop'*, Frascati, Italy, 17–19 March 2010 (ESA SP-683, May 2010).
3. **Pinardi M.**, Longhi D., Marzocchi U., Laini A., Ribaud C., Bartoli M., 2010. Relazione tra processi biogeochimici e vegetazione bentonica in un tratto fluviale colonizzato da praterie sommerse di *Vallisneria spiralis*. *Biologia Ambientale*, 24 (1): 243-252. Atti XVIII congresso S.It.E., Parma 1-3 settembre 2008, sessione speciale “Aggiornamento delle conoscenze sul bacino idrografico Padano”, a cura di P. Viaroli, F. Puma e I. Ferrari.
4. Longhi D., Laini A., Racchetti E., **Pinardi M.**, Bartoli M., 2010. Caratterizzazione integrata della qualità ecologica dei canali di bonifica nella bassa pianura mantovana. *Biologia Ambientale*, 24 (1): 263-271. Atti XVIII congresso S.It.E., Parma 1-3 settembre 2008, sessione speciale “Aggiornamento delle conoscenze sul bacino idrografico Padano”, a cura di P. Viaroli, F. Puma e I. Ferrari.
5. Longhi D., **Pinardi M.**, Bartoli M., 2010. Bilanci di massa di gas disciolti e nutrienti in un lago poco profondo colonizzato da *Trapa natans*. *Biologia Ambientale*, 24 (1): 273-282. Atti XVIII congresso S.It.E., Parma 1-3 settembre 2008, sessione speciale “Aggiornamento delle conoscenze sul bacino idrografico Padano”, a cura di P. Viaroli, F. Puma e I. Ferrari.
6. Soana E., Racchetti E., **Pinardi M.**, Bartoli M., Viaroli P., 2010. Bilanci di massa dell'azoto e importanza del processo di denitrificazione: un'analisi a scala di bacino dei Fiumi Oglio sublacuale e Mincio”. *EURAC book 57 - “Analisi spazio-temporali: dinamiche e processi a confronto” - XIX Congresso della Società Italiana di Ecologia “Dalle vette alpine alle profondità marine” - Bolzano, 15-18 settembre 2009 - Volume 2*, pp. 103-112.
7. Vannuccini M., Bodini A., Cuizzi D., Bartoli M., **Pinardi M.**, 2008. Strumenti di supporto decisionale al processo di riqualificazione fluviale del Mincio: le analisi a criteri multipli nell'ambito del progetto “Da Agenda 21 ad Azione 21 per il Mincio”. *Valutazione Ambientale N. 13*, giugno 2008, pp. 82-89.
8. **Pinardi M.**, Longhi D., Bartoli M., 2008. Dissolved gas and nutrient mass balances in a shallow lake with summer bloom of *Trapa natans*. *Book of Abstract - Incontro dei dottorandi in Scienze dei Sistemi Acquatici – 14/16 Aprile 2008*.

9. Racchetti E., **Pinardi M.**, Soana E., Longhi D., Bartoli M., Viaroli P., 2008. Flussi bentici e rimozione dell'azoto nitrico mediante denitrificazione in aree umide perifluviali. Book of Abstract - Incontro dei dottorandi in Scienze dei Sistemi Acquatici – 14/16 Aprile 2008.
10. **Pinardi M.**, 2008. Bilancio dei nutrienti e della sostanza organica in segmenti fluviali caratterizzati da differente integrità ecologica: apporti esterni, assimilazione macrofittica e processi batterici. Incontro annuale dei Dottorati di Ricerca in Ecologia Acquatica. Università del Salento, 26-27 gennaio 2007. S.It.E. Lettera ai Soci. Anno XIV - Numero 1 - Aprile 2008.
11. **Pinardi M.**, Bartoli M., Viaroli P., 2007. Nutrient and organic matter balances in fluvial segments characterized by different ecological integrity: external supply, macrophytes uptake and bacterial processes. Book of Programme & Abstracts - "SEFS5 – 5th symposium for european freshwater sciences - July 8-13, 2007.
12. **Pinardi M.**, Racchetti E., Laini A., Longhi D., Bartoli M., 2007. Nutrient and organic matter balances in fluvial segments characterized by different ecological integrity: external supply, macrophytes uptake and bacterial processes. Atti del Congresso congiunto AIOL-SItE – Ancona 2007.
13. Racchetti E., **Pinardi M.**, Soana E., Longhi D., Bartoli M., 2007. Regolazione dei tassi di denitrificazione in ambienti umidi perifluviali dei fiumi Oglio e Po. Atti del Congresso congiunto AIOL-SItE – Ancona 2007.

### Books

Contribution to Galassi S., Ferrari I., Viaroli P., 2014. "Introduzione all'Ecologia Applicata- Dalla teoria alla pratica della sostenibilità". Città Studi Edizioni.

Revision of the chapter 5 and authors of the paragraphs 6.1, 6.3, 7.3 and 7.4.2.

### ADDITIONAL INFORMATION

Ten oral communications as first author in Scientific Conferences.

Participation at 14 Scientific Conferences as co-authors of poster or oral communications.

Reviewer of Journal of Limnology, Water, Great Lakes Research, Science of the Total Environment, Environmental Engineering and Management Journal, Remote Sensing Application: Society and Environment, Environmental Science and Pollution Research.

I can perform physico-chemical analyses of water and sediments (gas, nutrients, organic matter), mass balances, biomass estimation, gas exchange between air-water interface, gas and nutrients fluxes at sediment-water interfaces, and statistical analyses. Knowledge of QGIS and ENVI software. Analysis of environmental

During my work experience I acquired good organizational skills (i.e. daily work; field campaigns; responsible for projects) and aptitude to write projects, reports and papers. I developed capacity to work in group and to relate with local administrations.

Data (Date), **13/12/2019**

Firma (Signature)

