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Born: March 15, 1969 – Milan, Italy
Nationality: Italian
Married with Claudia Pavesi
Two children: Emma (2003) and Riccardo (2007)

Research interests

Ecology, epidemiology and dynamics of complex systems.
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Appointments held

- 2016 - now Professor of Ecology, DEIB, PoliMi
- 2006 - now Associate Professor of Ecology, PoliMi
- 2002-2006 Assistant Professor, DEI, PoliMi
- 2000-2002 Postdoctoral Fellow and Lecturer, PoliMi
- 2000 Postdoctoral Fellow (Advisor [Simon A. Levin](#)), Department of Ecology and Evolutionary Biology (EEB), Princeton University (NJ, USA).

Education

- 1999 PhD in Ecology, Università degli Studi di Parma, Italy
Advisor: [Marino Gatto](#), PoliMI
Thesis: *Mesoscale models for metapopulation dynamics*.
In a nutshell, the thesis has been published as *Letter* in *Nature*.
- 1996 M.Sc. (Laurea) in Electronic Engineering, PoliMI.
Advisor: [Sergio Rinaldi](#), PoliMI
Thesis: *Fires in the Mediterranean forest: Proposal and analysis of a model*.
The thesis was awarded the *Eni Award* (*Ideas for a brighter future*, see below) and published in *The American Naturalist*.

Visiting

- 2010 *Visiting Scientist* at MIT in a Seed Funding **Roberto Rocca Project** (CO-PI with M. Gatto and R. Stocker)
- 2009 *Visiting Scientist* at the Department of Ecology and Evolutionary Biology at Princeton *Visiting Scholar* at the **Movement Ecology Group, Institute for Advanced Study**, Hebrew University of Jerusalem, Israel
- 1999 *Visiting graduate student* at the Dept of EEB, Princeton University (NJ, USA)
- 1997 & 1993 *Visiting graduate student and undergraduate student* at the Adaptive Dynamics Network group (now **EEP**), **International Institute for Applied Systems Analysis**, Laxenburg, Austria.

Awards and honors

- 2016 **Polisocial Award** for the project **MASTR-SLS** (MApping Schistosomiasis Transmission Risk in Saint Louis region, Sénégal (**MASTR-SLS**))
- 2015 D4D Health Prize, **Data for Development Challenge – Orange**
- 2008 Personally **acknowledged** as a special contributor (together with Roger A. Powell only) to the development of the Movement Ecology paradigm that deserved a Special Feature in PNAS (see the leading article by **Nathan et al. 2008**)
- 2004 Invited lecture at the **Gordon Research Conference** on Theoretical Biology and Biomathematics, Tilton (NH, USA).
- 2001 **Commentary article** in PNAS by **David Tilman** on the work made during the PostDoc at Princeton and resulting in a companion PNAS paper (**Norberg et al. 2001**)
- 1998 **Eni Award Fellowship “Ideas for a brighter future”** (formerly *Italgas Prize*) for the best master thesis discussed in Italy on *Energy and the Environment* during the period 1996-98.

Participation in scientific projects

- 2017-now PI of the Polisocial project **MASTR-SLS** (MApping Schistosomiasis Transmission Risk in the Saint Louis region, Senegal).
- 2016-now Member of the Working Group on **Optimal Control of NTDs** (Neglected Tropical Diseases) at **NIM-BioS** (National Institute for Mathematical and Biological Synthesis), a **National Science Foundation** Synthesis Center at the **University of Tennessee**, Knoxville (USA).
- 2016-now PI at PoliMI (with Marino Gatto) of the **H2020** project **Ecopotential: Improving future ecosystem benefits through earth observation** (EU PI: **Antonello Provenzale**)
- 2010-2014 PI of the project “Climate Change Assessment in Small Pacific Islands States”, involving **MOX** (**Luca Bonaventura**), **IUSS** (**Franco Brezzi**) & **CMCC** (**Simona Masina**)
- 2012-2016 **CoCoNet** - Towards COast to COast NETworks of marine protected areas (from the shore to the high and deep sea), coupled with sea-based wind energy potential, 7th EU Framework Programme (PI: Nando Boero)
- 2012-2016 **ECO2Clouds: Experimental Awareness of CO2 in Federated Cloud Sourcing**, 7th EU Framework Programme (PI at PoliMI: **Barbara Pernici**)
- 2011-2012 Project **Fondazione Cariplo “Sulla strada della sostenibilità”** (PI: **Giorgio Guariso**)
- 2010-2011 Seed project **MISTI, Progetto Rocca at MIT**, “Movement ecology at the microscale: experiments and models with predator-prey bacteria” (PI: **Roman Stocker**, Marino Gatto; CO-PI: Renato Casagrandi)
- 2010-2013 Research group “Alpine galliformes” within the **INTERREG-ALCOTRA** (PI: Antonello Provenzale, ISAC-CNR)
- 2008-2011 Project **Interlink** (Italian Ministry of University & Research, MIUR #II04CE49G8) “Impacts of global climate change and consequences on management and conservation of natural resources” (PI: Marino Gatto, PoliMI)
- 2007 Research group at the **Institute for Advanced Studies**, “**Movement Ecology: Establishing a novel**

interdisciplinary field of research to explore the causes, patterns, mechanisms and consequences of organism movements” (PI: Ran Nathan, HUJI). A **Special Issue** of PNAS has been devoted to the outcomes of our work

- 2007 Project **WING (Environment)** aimed at evaluating research programs in *Information Society and Technology* funded by European Community (Local PI: William Fornaciari)
- 2006-2008 Project **PRIN #2006054928**: “An integrated approach to conservation and management of European eel in the Mediterranean” (PI: Giulio De Leo, Università di Parma)
- 2002-2005 Project **FIRB #RBNE01CW3M**: “Self-organized cellular networks and nonlinear chaotic dynamics to model and control complex systems” (PI: Luigi Fortuna, Università di Catania)
- 2001-2002 Project **NIH-#R01GM060729**: “Population biology and evolution of influenza A”, (PI: Simon A. Levin; Co-PI: Viggo Andreasen, Freddy B. Christiansen).
- 2001 Project **NSF-IBN 9981620**: “Long distance dispersal of tree seeds by wind: underlying mechanisms, mathematical prediction and field quantification” (PI: Simon A. Levin; CO-PIs: Henry S. Horn, Stephen W. Pacala).
- 2000-2001 Project **CNR**, “Biodiversity and ecosystems functioning” (PI: Fausto Manes, Università di Roma).
- 1999-2000 Project **CNR**, “Mathematical methods and models to study biological phenomena” (PI: Mimmo Iannelli, Università di Trento).
- 2000 PI of the project for young researchers “Analysis and management of ecological systems” (**Politecnico di Milano**).

Service to the profession

International level

- 2015 Invited editor for the **Proceedings of the National Academy of Sciences of the United States of America**
- 2015 Reviewer of research projects submitted to eligibility for **NSF** (Mountains as sentinels of change, **Belmont Forum**)
- 2014 & 2015 Reviewer of research projects submitted to eligibility for *Starting or Consolidator grants* of the European Research Council (**ERC**)
- 2005 & 2006 Reviewer of research projects in *Ecology* submitted to the **Netherlands Organisations for Scientific Research**
- 2000-now Reviewer for the following major international journals: **Advances in Water Resources**, **Annales Zoologici Fennici**, **BMC Ecology**, **BMC Infectious Diseases**, **Chaos, Solitons & Fractals**, **Conservation Biology**, **Control Engineering Practice**, **Ecological Modelling**, **Ecography**, **Ecology**, **Ecology Letters**, **Environmental Modelling & Software**, **Evolution**, **Hydrobiologia**, **Journal of Ecology**, **Journal of Mathematical Biology**, **Journal of Theoretical Biology**, **Mathematical and Computer Modelling of Dynamical Systems**, **Mathematical Biosciences**, **Mathematical Medicine and Biology**, **Nonlinear Analysis: Hybrid Systems**, **Natural Resource Modelling**, **Plos ONE**, **Rendiconti Lincei (Scienze Fisiche e Naturali)**, **Science of the Total Environment**, **The American Naturalist**, **Theoretical Population Biology**, **Theoretical Ecology**, **Wildlife Biology**,

National level

- 2007-now Responsible of the web services for the **Italian Society of Ecology (SiTE)**
- 2006-2010 Founder and webmaster of the domain <http://www.ecologia.it> (hosted at PoliMI)
- 2005 Founder (with Marino Gatto) and editor (2005-2010, with Marco Abbiati and Gianmarco Giordani) of the *Italian Newsletter of Ecology*
- 2003 Organizer (with Roberta Bettinetti, Paco Melià, Marino Gatto e Silvana Galassi) of the **XIII National**

Meeting of the Italian Society of Ecology (Como, Italy)

PoliMI level

- 2015 Participation to the **European Researchers' Night** in Milan (Sept 30). See part of the **talk** at the **MEETmeTONIGHT** website.
- 2015 – now Design and webmastering of the portal of Environmental Engineering <http://www.iat.polimi.it> (*Teaching for the Environment Lab*)
- 2014 – now Founder and responsible of the interdepartmental teaching laboratory activity **EnvLAB: Laboratorio di Didattica per l'Ambiente** (*Teaching for the Environment Lab*)
- 2010 – now Elected (2010-2012) and nominated (2013-now) member of the *Giunta della Scuola di Ingegneria Civile, Ambientale e Territoriale (ICAT, Dean committee)*
- 2000 – now Yearly presentation of the PoliMI Environmental Engineering Program in various contexts, such as the **OpenDay**, the *Summer schools* (organized by **Fds**) and many high schools

Teaching

Graduate and undergraduate courses

- 2016/17 *Industrial Ecology*, 8 CFU for the *Laurea Magistrale* in Energy Engineering for an Environmentally Sustainable World at PoliMI (Piacenza campus)
- 2016/17 *Ecologia Urbana*, 4 CFU for the *Laurea* in Urban Planning: Cities, Environment & Landscapes at PoliMI (Milano campus)
- 2016/17 *Ecologia*, 8 CFU for the *Laurea* in Environmental Engineering at PoliMI (Milano campus)
- 2015/16 *Ecologia*, 8 CFU for the *Laurea* in Environmental Engineering at PoliMI (Milano campus)
- 2015/16 *Ecologia*, 4 CFU for the *Laurea* in Architecture at PoliMI (Milano campus)
- 2014/15 *Prova Finale (Amb - BIO/07)*, 1 CFU for the *Laurea* in Environmental Engineering at PoliMI (Milano campus)
- 2014/15 *Ecologia*, 7 CFU for the *Laurea* in Environmental Engineering at PoliMI (Milano campus)
- 2014/15 *Ecologia*, 4 CFU for the *Laurea* in Architecture at PoliMI (Milano campus)
- 2013/14 *Prova Finale (Amb - BIO/07)*, 1 CFU for the *Laurea* in Environmental Engineering at PoliMI (Milano campus)
- 2013/14 *Ecologia*, 7 CFU for the *Laurea* in Environmental Engineering at PoliMI (Milano campus)
- 2012/13 *Prova Finale (Amb - BIO/07)*, 1 CFU for the *Laurea* in Environmental Engineering at PoliMI (Milano campus)
- 2012/13 *Ecologia*, 7 CFU for the *Laurea* in Environmental Engineering at PoliMI (Milano campus)
- 2011/12 *Prova Finale (Amb - BIO/07)*, 1 CFU for the *Laurea* in Environmental Engineering at PoliMI (Milano campus)
- 2011/12 *Ecologia*, 7 CFU for the *Laurea* in Environmental Engineering at PoliMI (Milano campus)
- 2010/11 *Prova Finale (Amb - BIO/07)*, 1 CFU for the *Laurea* in Environmental Engineering at PoliMI (Milano campus)
- 2010/11 *Ecologia*, 7 CFU for the *Laurea* in Environmental Engineering at PoliMI (Milano campus)
- 2010/11 *Ecologia*, 7 CFU for the *Laurea* in Environmental Engineering at PoliMI (Milano campus)
- 2010/11 *Conservation Ecology and Sustainability*, 6 CFU for the *Laurea Specialistica* in Environmental Engineering at PoliMI (Como campus)
- 2009/10 *Ecological Systems*, 6 CFU for the *Laurea Specialistica* in Environmental Engineering at PoliMI (Como campus)
- 2009/10 *Ecologia 1*, 5 CFU for the *Laurea* in Environmental Engineering at PoliMI (Como campus)
- 2008/09 *Ecologia 2*, 5 CFU for the *Laurea Specialistica* in Environmental Engineering at PoliMI (Como campus)
- 2008/09 *Ecologia 1*, 5 CFU for the *Laurea* in Environmental Engineering at PoliMI (Como campus)

- 2007/08 *Ecology 2*, 5 CFU for the *Laurea Specialistica* in Environmental Engineering at PoliMI (Como campus)
- 2007/08 *Analisi dei sistemi ambientali*, 5 CFU for the *Laurea* in Environmental Engineering at PoliMI (CR campus)
- 2006/07 *Elementi di Ecologia ed Analisi dei sistemi ambientali*, 10 CFU for the *Laurea* in Environmental Engineering at PoliMI (CR campus)
- 2006/07 *Ecologia 2 (IAT Como)*, 5 CFU for the *Laurea Specialistica* in Environmental Engineering at PoliMI (Como campus)
- 2006/07 *Ecologia 1*, 5 CFU for the *Laurea Specialistica* in Environmental Engineering at PoliMI (Como campus)
- 2005/06 *Elementi di Ecologia ed Analisi dei sistemi ambientali*, 10 CFU for the *Laurea* in Environmental Engineering at PoliMI (CR campus)
- 2005/06 *Ecologia 2 (IAT Como)*, 5 CFU for the *Laurea Specialistica* in Environmental Engineering at PoliMI (Como campus)
- 2005/06 *Ecologia 1*, 5 CFU for the *Laurea* in Environmental Engineering at PoliMI (Como campus)
- 2004/2005 *Modellistica e Simulazione 1*, 5 CFU for the *Laurea* in Environmental Engineering at PoliMI (CR campus)
- 2004/2005 *Ecologia Applicata (V.I.A.)*, 5 CFU for the *Laurea* in Environmental Engineering at PoliMI (Como campus)
- 2004/05 *Ecologia 2 (IAT Como)*, 5 CFU for the *Laurea Specialistica* in Environmental Engineering at PoliMI (Como campus)
- 2003/2004 *Modellistica e Simulazione 1*, 5 CFU for the *Laurea* in Environmental Engineering at PoliMI (CR campus)
- 2003/2004 *Ecologia Applicata (IAT Como)*, 5 CFU for the *Laurea* in Environmental Engineering at PoliMI (Como campus)
- 2002/2003 *Fondamenti di Automatica (per il Settore dell'Informazione)*, 10 CFU for the *Laurea* in Engineering for Computing Systems at PoliMI (Como campus)
- 2002/2003 *Ecologia Applicata (IAT Como)*, 5 CFU for the *Laurea* in Environmental Engineering at PoliMI (Como campus)
- 2001/2002 *Ecologia Applicata (IAT Como)*, 5 CFU for the *Laurea* in Environmental Engineering at PoliMI (Como campus)
- 2000/2001 *Teoria dei Sistemi*, 10 CFU for the *Laurea* in Electronic Engineering at the [Università degli Studi di Parma](#)

PhD and other academic advanced courses

- 2010 - now Lecturer in the biannual course [Analysis of Complex Networks: Structure and Dynamics](#) at DEIB, PoliMI
- 2006 - 2010 Lecturer and coordinator (with Sergio Rinaldi) of the annual course *The Art of Modelling* at the [Alta Scuola Politecnica](#), PoliMI & PoliTO
- 2009 - now Lecturer in the annual courses "Global Change and Sustainability" at the [Alta Scuola Politecnica](#), PoliMI & PoliTO
- 2002/03 - now Lecturer and coordinator (with Marino Gatto) of the bi(-tri)annual PhD course [Spatial dynamics in Biology](#), Doctoral Program at PoliMI
- 2000/01 - 10/11 Lecturer in the biannual PhD course "Elements of Nonlinear Dynamics: Stability, Bifurcations and Chaos" organized by the [Italian Society of Chaos & Complexity](#) and offered to PhD students, Doctoral Program at PoliMI
- 2002/03 - now Lecturer in the triannual PhD course [Analysis of Paradigmatic Models in Social Sciences](#), Doctoral Program at PoliMI
- 2002/03 & 04/05 Lecturer and organizer of the course "Introduction to population ecology" (16h) in a Master on Ecopathology of Wildlife (coordinator: Paolo Lanfranchi), Faculty of Veterinary Science, Università degli Studi di Milano.

Publications

Books

- [L1] **Casagrandi, R.**, De Leo G. A., and Gatto M. (2002). **101 Problemi di Ecologia**, con CDROM. McGrawHill. ISBN: 88 386 6041-7.

Edited volumes

- [L2] **Casagrandi, R.** and Melià P. eds. (2004). **Ecologia. Atti del XIII Congresso Nazionale della Società Italiana di Ecologia (Como, 8-10 Settembre 2003)**, con CDROM. Aracne Editrice. ISBN: 88-7999-767-X, ISSN: 1127-5006.

Journal articles

- [A55] Jahnke M., Casagrandi R., Melià P., Schiavina M., Schultz S. T., Zane L., Procaccini G. (2017) Potential and realized connectivity of the seagrass *Posidonia oceanica* and their implication for conservation (2017) *Diversity and Distributions*, **23**: 1423. doi: [10.1111/ddi.12633](https://doi.org/10.1111/ddi.12633)
- [A54] Mari L., Casagrandi R., Rinaldo A., Gatto M. (2017) A generalized definition of reactivity for ecological systems and the problem of transient species dynamics. *Methods in Ecology and Evolution*, **8**: 1574. doi: [10.1111/2041-210X.12805](https://doi.org/10.1111/2041-210X.12805)
- [A53] Ciddio M., Mari L., Sokolow S. H., De Leo G. A., Casagrandi R., Gatto M. (2017) The spatial spread of schistosomiasis: A multidimensional network model applied to Saint-Louis region, Senegal. *Advances in Water Resources*, **108**: 406. doi: [10.1016/j.advwatres.2016.10.012](https://doi.org/10.1016/j.advwatres.2016.10.012)
- [A52] Mari L., Ciddio M., Casagrandi R., Perez-Saez J., Bertuzzo E., Rinaldo A., Sokolow S. H., De Leo G. A., Gatto M. (2017) Heterogeneity in schistosomiasis transmission dynamics. *Journal of Theoretical Biology*, **432**: 87. doi: [10.1016/j.jtbi.2017.08.015](https://doi.org/10.1016/j.jtbi.2017.08.015)
- [A51] Mari L., Bonaventura L., Storto A., Melià P., Gatto M., Masina S. and Casagrandi R. (2017) Understanding large-scale, long-term larval connectivity patterns: The case of the Northern Line Islands in the Central Pacific Ocean. *PLoS ONE*, **12**: e0182681. doi: [10.1371/journal.pone.0182681](https://doi.org/10.1371/journal.pone.0182681).
- [A50] Mari L., Gatto M., Ciddio M., Dia E. D., Sokolow S. H., De Leo, G. A. and Casagrandi R. (2017) Big-data-driven modeling unveils country-wide drivers of endemic schistosomiasis. *Scientific Reports*, **7**: 489. doi: [10.1038/s41598-017-00493-1](https://doi.org/10.1038/s41598-017-00493-1).
- [A49] Paterno M., Schiavina M., Aglieri G., Ben Souissi J., Boscari E., Casagrandi R., Chassanite A., Chiantore M., Congiu L., Guarnieri G., Kruschel C., Macic V., and Marino I. A. M., Papetti C., Patarnello T., Zane L. and Melià P. (2017) Population genomics meet Lagrangian simulations: Oceanographic patterns and long larval duration ensure connectivity among *Paracentrotus lividus* populations in the Adriatic and Ionian seas. *Ecology and Evolution*, **7**: 2463. doi: [10.1002/ece3.2844](https://doi.org/10.1002/ece3.2844).
- [A48] White T. D., Carlisle A. B., Kroodsma D. A., Block B. A., Casagrandi R., De Leo G. A., Gatto M., Micheli F., and McCauley D. J. (2017) Assessing the effectiveness of a large marine protected area for reef shark conservation. *Biological Conservation*, **207**: 64. doi: [10.1016/j.biocon.2017.01.009](https://doi.org/10.1016/j.biocon.2017.01.009)
- [A47] Melià P., Schiavina M., Rossetto M., Gatto M., Frascchetti S. and Casagrandi R. (2016) Looking for hotspots of marine metacommunity connectivity: a methodological framework. *Scientific Reports*,

6: 23705. doi: [10.1038/srep23705](https://doi.org/10.1038/srep23705)

- [A46] Perez-Saez J., Mari L., Bertuzzo E., Casagrandi R., Sokolow S.H., De Leo G.A., Mande T., Ceperley N., Froehlich J.-M., Sou M., Karambiri H., Yacouba H., Maiga A., Gatto M., Rinaldo A. (2015) A Theoretical Analysis of the Geography of Schistosomiasis in Burkina Faso Highlights the Roles of Human Mobility and Water Resources Development in Disease Transmission. *PLoS Neglected Tropical Diseases*, **9**: e0004127. doi: [10.1371/journal.pntd.0004127](https://doi.org/10.1371/journal.pntd.0004127).
- [A45] Ciddio M., Mari L., Gatto M., Rinaldo A., Casagrandi R. (2015) The temporal patterns of disease severity and prevalence in schistosomiasis. *Chaos*, **25**: 36405. doi: [10.1063/1.4908202](https://doi.org/10.1063/1.4908202).
- [A44] Piccardi C., Colombo A., Casagrandi R. (2015) Connectivity interplays with age in shaping contagion over networks with vital dynamics. *Physical Review E - Statistical, Nonlinear, and Soft Matter Physics*, **91**:022809. doi: [10.1103/PhysRevE.91.022809](https://doi.org/10.1103/PhysRevE.91.022809).
- [A43] Mari L., Bertuzzo E., Finger F., Casagrandi R., Gatto M., Rinaldo A. (2015) On the predictive ability of mechanistic models for the Haitian cholera epidemic. *Journal of the Royal Society Interface*, **12**:20140840. doi: [10.1098/rsif.2014.0840](https://doi.org/10.1098/rsif.2014.0840).
- [A42] Righetto L., Zaman R.U., Mahmud Z.H., Bertuzzo E., Mari L., Casagrandi R., Gatto M., Islam S., Rinaldo A. (2015) Detection of *Vibrio cholerae* O1 and O139 in environmental waters of rural Bangladesh: A flow-cytometry-based field trial. *Epidemiology and Infection*, **143**: 2330-2342. doi: [10.1017/S0950268814003252](https://doi.org/10.1017/S0950268814003252).
- [A41] Mari L., Casagrandi R., Bertuzzo E., Rinaldo A., Gatto M. (2014) Metapopulation persistence and species spread in river networks. *Ecology Letters*, **17**: 426-434. doi: [10.1111/ele.12242](https://doi.org/10.1111/ele.12242).
- [A40] Mari L., Casagrandi R., Bertuzzo E., Rinaldo A., Gatto M. (2014) Floquet theory for seasonal environmental forcing of spatially explicit waterborne epidemics. *Theoretical Ecology*, **7**: 351-365. doi: [10.1007/s12080-014-0223-y](https://doi.org/10.1007/s12080-014-0223-y).
- [A39] Gatto M., Mari L., Bertuzzo E., Casagrandi R., Righetto L., Rodriguez-Iturbe I., Rinaldo A. (2013) Spatially explicit conditions for waterborne pathogen invasion. *American Naturalist*, **182**: 328-346. doi: [10.1086/671258](https://doi.org/10.1086/671258).
- [A38] Righetto L., Bertuzzo E., Mari L., Schild E., Casagrandi R., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2013) Rainfall mediations in the spreading of epidemic cholera. *Advances in Water Resources*, **60**: 34-46. doi: [10.1016/j.advwatres.2013.07.006](https://doi.org/10.1016/j.advwatres.2013.07.006).
- [A37] Melià P., Schiavina M., Gatto M., Bonaventura L., Masina S., Casagrandi R. (2013) Integrating field data into individual-based models of the migration of European eel larvae. *Marine Ecology Progress Series*, **487**: 135-149. doi: [10.3354/meps10368](https://doi.org/10.3354/meps10368).
- [A36] Gatto M., Mari L., Bertuzzo E., Casagrandi R., Righetto L., Rodriguez-Iturbe I., Rinaldo A. (2012) Generalized reproduction numbers and the prediction of patterns in waterborne disease. *Proceedings of the National Academy of Sciences of the United States of America*, **109**: 19703-19708. doi: [10.1073/pnas.1217567109](https://doi.org/10.1073/pnas.1217567109).

- [A35] Mari L., Bertuzzo E., Righetto L., Casagrandi R., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2012) On the role of human mobility in the spread of cholera epidemics: Towards an epidemiological movement ecology. *Ecohydrology*, **5**: 531-540. doi: [10.1002/eco.262](https://doi.org/10.1002/eco.262).
- [A34] Mignatti A., Casagrandi R., Provenzale A., Von Hardenberg A., Gatto M. (2012) Sex- and age-structured models for Alpine ibex *Capra ibex ibex* population dynamics. *Wildlife Biology*, **18**: 318-332. doi: [10.2981/11-084](https://doi.org/10.2981/11-084).
- [A33] Rinaldo A., Bertuzzo E., Mari L., Righetto L., Blokesch M., Gatto M., Casagrandi R., Murray M., Vesenbeckh S.M., Rodriguez-Iturbe I. (2012) Reassessment of the 2010-2011 Haiti cholera outbreak and rainfall-driven multiseason projections. *Proceedings of the National Academy of Sciences of the United States of America*, **109**: 6602-6607. doi: [10.1073/pnas.1203333109](https://doi.org/10.1073/pnas.1203333109).
- [A32] Bertuzzo E., Mari L., Righetto L., Gatto M., Casagrandi R., Rodriguez-Iturbe I., Rinaldo A. (2012) Hydroclimatology of dual-peak annual cholera incidence: Insights from a spatially explicit model. *Geophysical Research Letters*, **39**:2011GL050723. doi: [10.1029/2011GL050723](https://doi.org/10.1029/2011GL050723).
- [A31] Righetto L., Casagrandi R., Bertuzzo E., Mari L., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2012) The role of aquatic reservoir fluctuations in long-term cholera patterns. *Epidemics*, **4**: 33-42. doi: [10.1016/j.epidem.2011.11.002](https://doi.org/10.1016/j.epidem.2011.11.002).
- [A30] Mari L., Bertuzzo E., Righetto L., Casagrandi R., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2012) Modelling cholera epidemics: The role of waterways, human mobility and sanitation. *Journal of the Royal Society Interface*, **9**: 376-388. doi: [10.1098/rsif.2011.0304](https://doi.org/10.1098/rsif.2011.0304).
- [A29] Rinaldo A., Blokesch M., Bertuzzo E., Mari L., Righetto L., Murray M., Gatto M., Casagrandi R., Rodriguez-Iturbe I. (2011) A transmission model of the 2010 cholera epidemic in Haiti. *Annals of Internal Medicine*, **155**: 403-404. doi: [10.7326/0003-4819-155-6-201109200-00018](https://doi.org/10.7326/0003-4819-155-6-201109200-00018).
- [A28] Mari L., Bertuzzo E., Casagrandi R., Gatto M., Levin S.A., Rodriguez-Iturbe I., Rinaldo A. (2011) Hydrologic controls and anthropogenic drivers of the zebra mussel invasion of the Mississippi-Missouri river system. *Water Resources Research*, **47**:W03523. doi: [10.1029/2010WR009920](https://doi.org/10.1029/2010WR009920).
- [A27] Bertuzzo E., Mari L., Righetto L., Gatto M., Casagrandi R., Blokesch M., Rodriguez-Iturbe I., Rinaldo A. (2011) Prediction of the spatial evolution and effects of control measures for the unfolding Haiti cholera outbreak. *Geophysical Research Letters*, **38**: -. doi: [10.1029/2011GL046823](https://doi.org/10.1029/2011GL046823).
- [A26] Righetto L., Bertuzzo E., Casagrandi R., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2011) Modelling human movement in cholera spreading along fluvial systems. *Ecohydrology*, **4**: 49-55. doi: [10.1002/eco.122](https://doi.org/10.1002/eco.122).
- [A25] Bertuzzo E., Casagrandi R., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2010) On spatially explicit models of cholera epidemics. *Journal of the Royal Society Interface*, **7**: 321-333. doi: [10.1098/rsif.2009.0204](https://doi.org/10.1098/rsif.2009.0204).
- [A24] Mari L., Gatto M., Casagrandi R. (2009) Central-place seed foraging and vegetation patterns. *Theoretical Population Biology*, **76**: 229-240. doi: [10.1016/j.tpb.2009.08.001](https://doi.org/10.1016/j.tpb.2009.08.001).
- [A23] Mari L., Casagrandi R., Pisani M.T., Pucci E., Gatto M. (2009) When will the zebra mussel reach Florence? A model for the spread of *Dreissena polymorpha* in the Arno water system (Italy). *Eco-*

- hydrology, **2**: 428-439. doi: [10.1002/eco.71](https://doi.org/10.1002/eco.71).
- [A22] Piccardi C., Casagrandi R. (2009) Remarks on epidemic spreading in scale-free networks. *Understanding Complex Systems*, **2009**: 77-89. doi: [10.1007/978-3-642-03199-1_5](https://doi.org/10.1007/978-3-642-03199-1_5).
- [A21] Casagrandi R., Guariso G. (2009) Impact of ICT in Environmental Sciences: A citation analysis 1990-2007. *Environmental Modelling and Software*, **24**: 865-871. doi: [10.1016/j.envsoft.2008.11.013](https://doi.org/10.1016/j.envsoft.2008.11.013).
- [A20] Holyoak M., Casagrandi R., Nathan R., Revilla E., Spiegel O. (2008) Trends and missing parts in the study of movement ecology. *Proceedings of the National Academy of Sciences of the United States of America*, **105**: 19060-19065. doi: [10.1073/pnas.0800483105](https://doi.org/10.1073/pnas.0800483105).
- [A19] Mari L., Casagrandi R., Gatto M., Avgar T., Nathan R. (2008) Movement strategies of seed predators as determinants of plant recruitment patterns. *American Naturalist*, **172**: 694-711. doi: [10.1086/591687](https://doi.org/10.1086/591687).
- [A18] Mari L., Gatto M., Casagrandi R. (2008) Local resource competition and the skewness of the sex ratio: A demographic model. *Mathematical Biosciences and Engineering*, **5**: 813-830. doi: [10.3934/mbe.2008.5.813](https://doi.org/10.3934/mbe.2008.5.813).
- [A17] Piccardi C., Casagrandi R. (2008) Inefficient epidemic spreading in scale-free networks. *Physical Review E - Statistical, Nonlinear, and Soft Matter Physics*, **77**: 026113. doi: [10.1103/PhysRevE.77.026113](https://doi.org/10.1103/PhysRevE.77.026113).
- [A16] Casagrandi R., Mari L., Gatto M. (2007) Modelling the local dynamics of the zebra mussel (*Dreissena polymorpha*). *Freshwater Biology*, **52**: 1223-1238. doi: [10.1111/j.1365-2427.2007.01761.x](https://doi.org/10.1111/j.1365-2427.2007.01761.x).
- [A15] Casagrandi R., Bolzoni L., Levin S.A., Andreasen V. (2006) The SIRC model and influenza A. *Mathematical Biosciences*, **200**: 152-169. doi: [10.1016/j.mbs.2005.12.029](https://doi.org/10.1016/j.mbs.2005.12.029).
- [A14] Casagrandi R. and S. Rinaldi (2005). Sustainability and bifurcations of positive attractors. *Chaos and Complexity Letters* **1**: 117-128.
- [A13] Casagrandi R., Gatto M. (2006) The intermediate dispersal principle in spatially explicit metapopulations. *Journal of Theoretical Biology*, **239**: 22-32. doi: [10.1016/j.jtbi.2005.07.009](https://doi.org/10.1016/j.jtbi.2005.07.009).
- [A12] Nathan R., Casagrandi R. (2004) A simple mechanistic model of seed dispersal, predation and plant establishment: Janzen-Connell and beyond. *Journal of Ecology*, **92**: 733-746. doi: [10.1111/j.0022-0477.2004.00914.x](https://doi.org/10.1111/j.0022-0477.2004.00914.x).
- [A11] Lin J., Andreasen V., Casagrandi R., Levin S.A. (2003) Traveling waves in a model of influenza A drift. *Journal of Theoretical Biology*, **222**: 437-445. doi: [10.1016/S0022-5193\(03\)00056-0](https://doi.org/10.1016/S0022-5193(03)00056-0).
- [A10] Casagrandi R., Rinaldi S. (2002) A theoretical approach to tourism sustainability. *Ecology and Society*, **6**: art13. doi: [10.5751/ES-00384-060113](https://doi.org/10.5751/ES-00384-060113).

- [A09] Casagrandi R., Rinaldi S. (2002) On the aperiodic locomotor behavior of *Halobacterium salinarium* under periodic light stimuli. *Journal of Theoretical Biology*, **214**: 647-656. doi: 10.1006/jtbi.2001.2482.
- [A08] Casagrandi R., Gatto M. (2002) Habitat Destruction, Environmental Catastrophes, and Metapopulation Extinction. *Theoretical Population Biology*, **61**: 127-140. doi: 10.1006/tpbi.2001.1559.
- [A07] Casagrandi R., Gatto M. (2002) A Persistence Criterion for Metapopulations. *Theoretical Population Biology*, **61**: 115-125. doi: 10.1006/tpbi.2001.1558.
- [A06] Rinaldi S., Candaten M., Casagrandi R. (2001) Evidence of peak-to-peak dynamics in ecology. *Ecology Letters*, **4**: 610-617. doi: 10.1046/j.1461-0248.2001.00273.x.
- [A05] Norberg J., Swaney D.P., Dushoff J., Lin J., Casagrandi R., Levin S.A. (2001) Phenotypic diversity and ecosystem functioning in changing environments: A theoretical framework. *Proceedings of the National Academy of Sciences of the United States of America*, **98**: 11376-11381. doi: 10.1073/pnas.171315998.
- [A04] Rinaldi S., Casagrandi R., Gragnani A. (2001) Reduced order models for the prediction of the time of occurrence of extreme episodes. *Chaos, solitons and fractals*, **12**: 313-320. doi: 10.1016/S0960-0779(00)00067-9.
- [A03] Rinaldi S., Cordone R., and **R. Casagrandi** (2000). Instabilities in creative professions: a minimal model. *Nonlinear Dynamics, Psychology, and Life Sciences* **4**: 255-273.
- [A02] Casagrandi R., Gatto M. (1999) A mesoscale approach to extinction risk in fragmented habitats. *Nature*, **400**: 560-562. doi: 10.1038/23020.
- [A01] Casagrandi R., Rinaldi S. (1999) A minimal model for forest fire regimes. *American Naturalist*, **153**: 527-539. doi: 10.1086/303194.

Book chapters

- [K7] **Casagrandi R.** (2015) A cartogram is worth a thousand maps: The multi-faced image of our Earth. In *The Visual Language of Technique*. Cocchiarella L. Ed. Springer-Verlag: Berlin, 2015. pp. 115-118.
- [K6] **Casagrandi R.** (2015) Nuove forme di Ecologia. In *Il futuro ci insegue. 3: Prospettive*. Fondazione Castellani Ed., Edizioni di Maeutica. p. 61-73. ISBN:978-88-98918-09-6.
- [K5] **Casagrandi R.**, Manfredini G. (2015) Semi. In *Fuori. Suggestioni nell'incontro tra educazione e natura*. Guerra M. Ed. Franco Angeli. pp.92-101. ISBN:978-88-917-2666-7.
- [K4] Piccardi C., Casagrandi R. (2009) Influence of network heterogeneity on chaotic dynamics of infectious diseases. *IFAC Proceedings Volumes (IFAC-Papers Online)*, **2**: 267-272.
- [K3] Gatto M., **Casagrandi R.** (2009) Capire e proteggere la biodiversità e gli ecosistemi. In *Conoscere la complessità*. Spaziante A. Ed. Bruno Mondadori, Torino. pp. 59-82.
- [K2] Piccardi C. and **Casagrandi, R.** (2009). Chapter 5, *Remarks on epidemic spreading in scale-free networks* In **Modelling, Estimation and Control of Networked Complex Systems**. Chiuso A. et al. Eds. Springer-Verlag: Berlin. pp. 77-89.
- [K1] Gatto M. and Casagrandi R. (2007). *Threatened Biodiversity: Understanding, Predicting, Taking Action In Water & the Environment*. Rodriguez-Iturbe I. and Sanchez Sorondo M. Eds. Pontificia Academia

Scientiarium: Vatican City. pp. 17-37.

Conferences

- [*] Ciddio M., Mari L., Casagrandi R., Sokolow S.H., De Leo G. A., Gatto M. (2015) Human population movement and schistosomiasis transmission risk: the case study of Senegal. *Epidemics* 5, Clearwater Beach (FL), USA, December 1–4.
- [*] Schiavina M., Storto A., Casagrandi R., Masina S., Gatto M., Melià P. (2015) Multidecadal North Atlantic circulation patterns and impacts on European eel larval migration. *Rome 2015 Science Symposium on Climate*, Roma, Italy, 19-20 November.
- [*] Mari L., Casagrandi R., Bertuzzo E., Finger F., Rinaldo A., Gatto M. (2015) Assessing the predictive ability of mechanistic models for the Haitian cholera epidemic. *XIII European Ecological Federation Conference (EEF) and XXV SitE Joint Conference*, Rome, Italy, September 21–25.
- [*] Righetto L., Melià P., Gatto M., Casagrandi R., (2015) Trophic changes and food web dynamics in Lake Maggiore (Italy). *XIII European Ecological Federation Conference (EEF) and XXV SitE Joint Conference*, Rome, Italy, 21-25 September.
- [*] Mari L., Casagrandi R., Ciddio M., Gatto M. (2015) Floquet theory for seasonally forced models of waterborne pathogen transmission. *XIII European Ecological Federation Conference (EEF) and XXV SitE Joint Conference*, Rome, Italy, 21-25 September.
- [*] Melià P., Schiavina M., Rossetto M., Frascchetti S., Gatto M., Casagrandi R. (2015) Measuring community connectivity in the Adriatic and Ionian seas. *XIII European Ecological Federation Conference (EEF) and XXV SitE Joint Conference*, Rome, Italy, 21-25 September.
- [*] Ciddio M., Mari L., Casagrandi R., Sokolow S.H., De Leo G. A., Gatto M. (2015) The impact of human mobility on schistosomiasis in Senegal: an analysis via mobile phone data. *9th European Congress on Tropical Medicine and International Health*, Basel, Switzerland, September 6–10.
- [*] Perez-Saez J., Mari L., Bertuzzo E., Mande T., Ceperley N., Sokolow S. H., De Leo G. A., Casagrandi R., Gatto M., Rinaldo A. (2015) Spatial patterns of schistosomiasis in Burkina Faso: relevance of human mobility and water resources development. *9th European Congress on Tropical Medicine and International Health*, Basel, Switzerland, September 6–10.
- [*] Perez-Saez J., Bertuzzo E., Frohelich J. M., Mande T., Ceperley N., Sou M., Yacouba H., Maiga H., Sokolow S. H., De Leo G. A., Casagrandi R., Gatto M., Mari L., Rinaldo A. (2015) Spatial patterns of schistosomiasis in Burkina Faso: relevance of human mobility and water resources development. *EGU General Assembly*, Vienna, Austria, April 12–17.
- [*] Mari L., Casagrandi R., Ciddio M., Sokolow S.H., De Leo G. A., Gatto M. (2015) Uncovering the impact of human mobility on schistosomiasis via mobile phone data. *NetMob 2015*, Cambridge (MA), USA, April 8–10.
- [*] Ciddio M., Mari L., Gatto M., Rinaldo A., Casagrandi R. (2015) Impact of environmental conditions on snails dynamics and schistosomiasis transmission. *IECID 2015*, Sitges, Spain, March 23–25.

- [†] Rinaldo A., Bertuzzo E., Mari L., Finger F., Casagrandi R., Gatto M., Rodriguez-Iturbe I. (2014) On spatially explicit models of epidemic and endemic cholera: the Haiti and Lake Kivu case studies. *AGU Fall Meeting*, San Francisco (CA), USA, December 15–19.
- [†] Melià P., Schiavina M., Rossetto M., Gatto M., Frascchetti S., Casagrandi R. (2014) From population-level to community-level connectivity in seascapes: Lagrangian simulations in the Adriatic and Ionian seas. *ECEM 2014*, 8th European Conference on Ecological Modelling, Marrakech, Morocco, 27-30 October.
- [†] Ciddio M., Mari L., Casagrandi R., Gatto M. (2014) A model for schistosomiasis transmission accounting for infection age in snails: sensitivity and bifurcation analyses. *XXIV Congresso SItE*, Ferrara, September 15–17.
- [†] Casagrandi R., Tagliaferro G., Zambrini F., Zaniolo M., Righetto R. (2014) Measuring diversity in the urban environment: the case study of Milan. *XXIV Congresso Nazionale della Società Italiana di Ecologia (SItE)*, Ferrara, Italy, 15-17 September.
- [†] Righetto R., Melià P., Gatto M., Casagrandi (2014) Trophic state change and ecosystem response in Lake Maggiore: a food-web model. *XXIV Congresso Nazionale della Società Italiana di Ecologia (SItE)*, Ferrara, Italy, 15-17 September.
- [†] Mari L., Casagrandi R., Bertuzzo E., Rinaldo A., Gatto M. (2014) A spatially explicit criterion for metapopulation persistence in river ecosystems. *XXIV Congresso SItE*, Ferrara, September 15–17.
- [†] Bevacqua D., Cividini M., Mattioli F., Melià P., Lescourret F., Génard M., Casagrandi R. (2014) Incorporating sap feeders of fruit plants into mathematical models for their growth and production. *XXIV Congresso Nazionale della Società Italiana di Ecologia (SItE)*, Ferrara, Italy, 15-17 September.
- [†] Gatto M., Mignatti A., Casagrandi R., (2013) Effects of Climate on Biodiversity and Faunal Dynamics in the Alps. *International Conference on Mountains and Climate Change “High Summit”*, Lecco, Italy. 23-25 October. pp: 121-131.
- [†] Mari L., Melià P., Gatto M., Storto A., Vichi M., Masina S., Casagrandi R., (2013) Larval connectivity in the central Pacific Ocean: lagrangian simulations in the Northern Line Islands. *Conference of the Italian Society for Climate Sciences (SISC)*, Lecce, Italy, September 23–24. www.sisclima.it/conferenza, pp. 587-598.
- [†] Schiavina M., Casagrandi R., Gatto M., L. Bonaventura, Masina S. and Melià P. (2013) Has the ocean contributed to the decline of European eel recruitment? Results of a 40-year simulation experiment *Conference of the Italian Society for Climate Sciences (SISC)*, Lecce, Italy, September 23-24. www.sisclima.it/conferenza, pp. 566-576.
- [†] A. Mignatti, Casagrandi R., A. Provenzale, Gatto M. Influence of population density and climate on the dynamics of the black grouse (*Tetrao tetrix*) populations in the Piedmont region (Italy). *Conference of the Italian Society for Climate Sciences (SISC)*, Lecce, Italy, September 23-24. pp. 542-554.
- [†] Bertuzzo E., Mari L., Casagrandi R., Righetto L., Rodriguez-Iturbe I., Gatto M., Rinaldo A. (2013) Does space matter in cholera spreading? *XXIII Congresso SItE*, Ancona, September 16–18.
- [†] Mari L., Bertuzzo E., Casagrandi R., Righetto L., Rodriguez-Iturbe I., Rinaldo A., Gatto M. (2013) Spatiotemporal invasion conditions for waterborne pathogens. *XXIII Congresso SItE*, Ancona, September

ber 16–18.

- [†] Melià P., Schiavina M., Casagrandi R., Masina S., Gatto M. (2013) Impacts of long-term changes in oceanic circulation on European eel recruitment *Congresso Nazionale della Società Italiana di Ecologia (SItE)*, Ancona, Italy, 16-18 September.
- [†] Mari L., Melià P., Gatto M., Storto A., Vichi M., Masina S., Casagrandi R., (2013) Assessing larval connectivity patterns in the Northern Line Islands: a long-term analysis with Lagrangian simulations. *XXIII Congresso SItE*, Ancona, September 16–18.
- [†] Righetto L., Bertuzzo E., Mari L., Casagrandi R., Gatto M., Rinaldo A. (2013) *Vibrio cholerae* in the waters of rural Bangladesh: from site-specific detection to population biology. *XXIII Congresso SItE*, Ancona, September 16–18.
- [†] Righetto L., Ciddio M., Bertuzzo E., Mari L., Casagrandi R., Rinaldo A., Gatto M. (2013) A spatially explicit model of cholera spreading in Bangladesh: the role of climate and mobility. *XXIII Congresso SItE*, Ancona, September 16–18.
- [†] Mari L., Bertuzzo E., Righetto L., Casagrandi R., Rodriguez-Iturbe I., Rinaldo A., Gatto M. (2013) Outbreak conditions for waterborne disease epidemics: data and models. *S.Co. 2013 - Complex Data Modeling and Computationally Intensive Statistical Methods for Estimation and Prediction*, Milano, IT, September 9–11.
- [†] Righetto L., Zaman R., Mahmud Z. H., Bertuzzo E., Mari L., Casagrandi R., Gatto M., Islam M. S., Rinaldo A., Blokesch M. (2013) Field study of the ecology of *Vibrio cholerae* in the aquatic environment of rural Bangladesh. *EMBO Conference on Aquatic Microbial Ecology: SAME13*, Stresa, Italy, September 8–13.
- [†] Mari L., Bertuzzo E., Righetto L., Casagrandi R., Rodriguez-Iturbe I., Rinaldo A., Gatto M. (2013) A criterion for waterborne pathogen invasion in spatially explicit and temporally fluctuating environments. *INTECOL Congress*, London, UK, August 18–23.
- [†] Bertuzzo E., Mari L., Righetto L., Knox A., Finger F., Casagrandi R., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2013) Predicting the evolution of large cholera outbreaks: lessons learnt from the Haiti case study. *EGU General Assembly*, Vienna, Austria, April 7–12.
- [†] Bertuzzo E., Mari L., Righetto L., Gatto M., Casagrandi R., Rodriguez-Iturbe I., Rinaldo A. (2012) Hydroclimatology of dual-peak annual cholera incidence: insights from a spatially explicit model. *AGU Fall Meeting*, San Francisco (CA), USA, December 3–7.
- [†] Mari L., Gatto M., Bertuzzo E., Casagrandi R., Righetto L., Rodriguez-Iturbe I., Rinaldo A. (2012) A novel spatially-explicit condition for the onset of waterborne diseases in complex environments. *AGU Fall Meeting*, San Francisco (CA), USA, December 3–7.
- [†] Righetto L., Bertuzzo E., Mari L., Casagrandi R., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2012) Rainfall-driven epidemic cholera: hydrologic controls on water-borne disease and multiseason projections. *AGU Fall Meeting*, San Francisco (CA), USA, December 3–7.
- [†] Rinaldo A., Gatto M., Mari L., Casagrandi R., Righetto L., Bertuzzo E., Rodriguez-Iturbe I. (2012) Spatially explicit models, generalized reproduction numbers and the prediction of patterns of waterborne disease. *AGU Fall Meeting*, San Francisco (CA), USA, December 3–7.

- [*] Mari L., Bertuzzo E., Righetto L., Casagrandi R., Rodriguez-Iturbe I., Rinaldo A., Gatto M. (2012) A novel condition for the onset of waterborne diseases in complex environments. *XXII Congresso SItE*, Alessandria, September 10–13.
- [*] Mari L., Bertuzzo E., Righetto L., Casagrandi R., Rodriguez-Iturbe I., Rinaldo A., Gatto M. (2012) An ecohydrological model of cholera dynamics. *SIDISA 2012*, Milan, Italy, June 26–29.
- [*] Bertuzzo E., Mari L., Righetto L., Casagrandi R., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2012) An epidemic model for the future progression of the current Haiti cholera epidemic. *EGU General Assembly*, Vienna, Austria, April 22–27.
- [*] A. Mignatti, Casagrandi R., Pedrotti L., Cannone N., Guglielmin M., Gatto M. (2012) Distribuzione delle tane di marmotta (*Marmota marmota*) in una valle alpina d’alta quota: influenza di permafrost e vegetazione. *Giornata di studi della Società Botanica Italiana su "Cambiamento climatico: analisi ed impatti sugli ecosistemi vegetali"*, Varese, Italy, 18 Aprile.
- [*] Righetto L., Islam S., Mahmud Z. H. , Bertuzzo E., Mari L., Casagrandi R., Gatto M., Rodriguez-Iturbe I., M. Blokesch, Rinaldo A. (2012) Presence and viability of *Vibrio cholerae* in the waters of rural Bangladesh (Matlab area). *EGU General Assembly*, Vienna, Austria, April 22–27.
- [*] Bertuzzo E., Mari L., Righetto L., Gatto M., Casagrandi R., Rodriguez-Iturbe I., Rinaldo A. (2011) A spatially explicit model for the future progression of the current Haiti cholera epidemic. *AGU Fall Meeting*, San Francisco (CA), USA, December 5–9.
- [*] Mari L., Bertuzzo E., Righetto L., Casagrandi R., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2011) Hydrologic transport, human mobility and the spread of cholera epidemics: insights from a spatially explicit model. *XXI Congresso SItE*, Palermo, October 3–6.
- [*] Melià P., Benedetti M., Casagrandi R., Di Franco A., Bussotti S., Guidetti P. and Gatto M. (2011) Dipendenza da densità nella demografia del sarago maggiore dentro e fuori l’area marina protetta di Torre Guaceto. *XXI Congresso SItE*, Palermo, Italy, 3-6 October.
- [*] Righetto L., Casagrandi R., Bertuzzo E., Mari L., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2011) Modeling environmental drivers of cholera seasonality in Bengal endemic areas. *European Conference on Ecological Modeling (ECEM)*, Riva del Garda, Italy, May 30–June 2.
- [*] Schiavina M., Melià P., Casagrandi R., Bonaventura L., Gatto M. (2011). Riding the Gulf Stream: the larval migration of European eel. *ECEM 2011, 7th European Conference on Ecological Modelling*, Riva del Garda, Italy, May 30-June 2.
- [*] Bertuzzo E., Mari L., Righetto L., Casagrandi R., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2011) A spatially distributed model for the future evolution of the current Haiti cholera outbreak. *EGU General Assembly*, Vienna, Austria, April 3–8.
- [*] Mari L., Bertuzzo E., Righetto L., Casagrandi R., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2011) Hydrological transport, human mobility and cholera epidemics: a spatially explicit modeling approach. *EGU General Assembly*, Vienna, Austria, April 3–8.
- [*] Rinaldo A., Bertuzzo E., Mari L., Righetto L., Gatto M., Casagrandi R., Rodriguez-Iturbe I. (2011) Reactive transport on multiscale networks: controls and drivers of large-scale cholera outbreaks.

EGU General Assembly, Vienna, Austria, April 3–8.

- [†] Bertuzzo E., Mari L., Righetto L., Casagrandi R., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2010) Hydroclimatology of dual peak cholera incidence in Bengal region: inferences from a spatial explicit model. *AGU Fall Meeting*, San Francisco (CA), USA, December 13–17.
- [†] Casagrandi R., Mari L., Bertuzzo E., Gatto M., Levin S.A., Rodriguez-Iturbe I., Rinaldo A. (2010) Drivers and controls of the zebra mussel invasion of the Mississippi-Missouri river system. *AGU Fall Meeting*, San Francisco (CA), USA, December 13–17.
- [†] Mari L., Bertuzzo E., Righetto L., Casagrandi R., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2010) Human mobility patterns and cholera epidemics: a spatially explicit modeling approach. *AGU Fall Meeting*, San Francisco (CA), USA, December 13–17.
- [†] Righetto L., Bertuzzo E., Mari L., Casagrandi R., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2010) The role of the aquatic reservoir in long-term cholera dynamics. *AGU Fall Meeting*, San Francisco (CA), USA, December 13–17.
- [†] Rinaldo A., Bertuzzo E., Mari L., Righetto L., Gatto M., Casagrandi R., Rodriguez-Iturbe I. (2010) On spatially explicit models of cholera epidemics: hydrologic controls, environmental drivers, human-mediated transmissions. *AGU Fall Meeting*, San Francisco (CA), USA, December 13–17.
- [†] Righetto L., Bertuzzo E., Mari L., Casagrandi R., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2010) Ecohydrological drivers of cholera spreading along fluvial systems. *Water and Health: where Science meets Policy*, Chapel Hill (NC), USA, October 25–26.
- [†] Bertuzzo E., Mari L., Righetto L., Casagrandi R., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2010) Spreading of cholera through surface water. *LATSIS Symposium 2010*, Lausanne, Switzerland, October 17–20.
- [†] Mari L., Bertuzzo E., Casagrandi R., Gatto M., Levin S. A., Rodriguez-Iturbe I., Rinaldo A. (2010) Drivers and controls of the zebra mussel invasion of the Mississippi-Missouri river system. *LATSIS Symposium 2010*, Lausanne, Switzerland, October 17–20.
- [†] Righetto L., Bertuzzo E., Mari L., Casagrandi R., Gatto M., Rodriguez-Iturbe I., Rinaldo A. (2010) Ecohydrologic drivers and controls for cholera epidemics. *LATSIS Symposium 2010*, Lausanne, Switzerland, October 17–20.
- [†] Schiavina M., Melià P., Casagrandi R., L. Bonaventura and Gatto M. (2010) A coupled physical-biological model of European eel larval migration. *XX Congresso Nazionale della Società Italiana di Ecologia (SItE)*, Roma, Italy, 27-30 September
- [†] Mari L., Bertuzzo E., Casagrandi R., Gatto M., Levin S. A., Rodriguez-Iturbe I., Rinaldo A. (2010) Modeling the spread of the zebra mussel in the Mississippi-Missouri river system: a multi-layer network approach. *XX Congresso SItE*, Roma, September 27–30.
- [†] Mari L., Bertuzzo E., Casagrandi R., Gatto M., Levin S. A., Rodriguez-Iturbe I., Rinaldo A. (2010) A multi-layer network model for the zebra mussel invasion of the Mississippi-Missouri river system. *SIMAI 2010, Joint SIMAI/SEMA Conference on Applied and Industrial Mathematics*, Cagliari, June 21–25.

- [†] Righetto L., Bertuzzo E., Mari L., Casagrandi R., Gatto M., Rinaldo A. (2010) Hydroclimatological and anthropogenic drivers for cholera spreading. *EGU Assembly 2010*, Wien, Austria, May 2–7.
- [†] Mari L., Casagrandi R., Gatto M. (2009) Social foraging and the formation of plant recruitment patterns. *White Workshop on Mathematical Biology*, Trento, Italy, December 17–19.
- [†] Mari L., Bonanomi G., Gatto M., Giannino F., Mazzoleni S., Casagrandi R., (2009) Plant-soil negative feedbacks and the formation of Janzen-Connell recruitment patterns. *XIX Congresso SItE*, Bolzano, September 15–18.
- [†] Gatto M., Melià P., Mari L., Casagrandi R., (2008) Movement and life cycles: the paradigmatic cases of European eel and zebra mussel. *69th Congresso Nazionale dell'Unione Zoologica Italiana (UZI)*, Senigallia, September 22–25.
- [†] Pisani M. T., Pucci E., Mari L., Casagrandi R., Gatto M. (2008) Will the zebra mussel (*Dreissena polymorpha*) reach Florence along the Arno River? Results from a mechanistic network model. *XVIII Congresso SItE*, Parma, September 1–3. [Marchetti Prize winner].
- [†] Melià P., Schiavina M., L. Bonaventura, Casagrandi R., and Gatto M. (2008) The long and winding road. Is climate change affecting the migration of European eels? *XVIII Congresso Nazionale della Società Italiana di Ecologia (SItE)*, Parma, Italy, 1-3 September.
- [†] Mari L., Casagrandi R., Gatto M. (2007) A PDE model for central-place foraging of dispersed seeds. *XVII Congresso SItE*, Ancona, September 17–20.
- [†] Melià P., Meroni C., Signorini S., Volta P., Casagrandi R., (2007) Competizione per le risorse nel popolamento ittico pelagico del Lago Maggiore. *XVII Congresso Nazionale della Società Italiana di Ecologia (SItE)*, Ancona, Italy, 17-20 September.
- [†] Casagrandi R., Mari L., Gatto M. (2007) A demographic model for the local dynamics of *Dreissena polymorpha*. *Atti del VI Congresso Nazionale della Società Italiana di Biometria (SIB)*, Pisa, 20–22 giugno. pp. 129-133.
- [†] Mari L., Casagrandi R., Gatto M. (2007) Un modello per la dinamica del mitilo zebra (*Dreissena polymorpha*). *MUA2007, Congresso del Centro Interuniversitario per la Matematica Applicata a Biologia, Medicina, Ambiente (CIMAB)*, Montecatini Terme, March 29–31.
- [†] Mari L., Gatto M., Casagrandi R., (2006) Rapporto sessi sbilanciato e competizione locale per le risorse. *XVI Congresso SItE, Viterbo-Civitavecchia*, September 19–22.
- [†] Casagrandi R., Girola S., Fagnani S., Melià P., Cotrufo M. F., De Leo G. A., Viaroli P., Gatto M. (2006) Green conferencing for the Italian Society of Ecology. *XVI Congresso Nazionale della Società Italiana di Ecologia (SItE)*, Viterbo-Civitavecchia, Italy, 19-22 September.
- [†] Mari L., Avgar T., Casagrandi R., Nathan R., Gatto M. (2006) A spatially explicit approach to seed dispersal and predation. *XVI Congresso SItE, Viterbo-Civitavecchia*, September 19–22.
- [†] Mari L., Casagrandi R., Gatto M. (2006) Predicting and controlling zebra mussels outbreaks in freshwater ecosystems: a nonlinear demographic model. *Modeling Approaches in Biodiversity Research*, Sede Boqer, Israel, March 19–23.

- [†] Mari L., Gatto M., Casagrandi R., (2006) Rapporto sessi sbilanciato e competizione locale per le risorse. *XVI Congresso (SItE)*, Viterbo-Civitavecchia, Italy, September 19-22.
- [†] Casagrandi R., Gatto M. (2004). Stochastic cellular automata with local demography and the intermediate dispersal principle. *Conference on Computational and Mathematical Population Dynamics*, Trento, Italy, June 21-25.
- [†] Casagrandi R. (2004) Persistence-extinction boundaries in single species metapopulations with discrete individuals. Plenary talk at the *Gordon Research Conference on Theoretical Biology and Biomathematics*, Tilton, New Hampshire, USA. June 6-11.
- [†] Casagrandi R., Mari L., Baranzelli C., Caimi A., Gatto M. (2004) A model for the population dynamics and control of zebra mussels (*Dreissena polymorpha*, Pallas) *XIV Congresso SItE*, Siena, October 4-6.
- [†] Bolzoni, L., Defendi R., Casagrandi R., (2003). The SIRC model for influenza A viruses. *XIII Congresso della Società Italiana di Ecologia (SItE)*. Como, Italy, September 8-10.
- [†] Casagrandi R., S. Rinaldi (2002). Sostenibilità economica ed ecologica del turismo. *XII Congresso della Società Italiana di Ecologia (SItE)*. Urbino, Italy, September 16-18.
- [†] Casagrandi R., Gatto M. (2002). Modelli spazialmente espliciti per lo studio di metapopolazioni *XII Congresso della Società Italiana di Ecologia (SItE)*
- [†] Casagrandi R., Gatto M. (2002). Persistence-extinction boundaries for metapopulations in cellular automata. *EMSTB, 5th International Conference on Mathematical Modeling and Computing in Biology and Medicine*, University of Milan, July 2-6.
- [†] Casagrandi R., Nathan R. (2001). Can seed predation alone explain the variety of plant recruitment patterns? *Metodi e Modelli Matematici nello Studio dei Fenomeni Biologici*, Roma, Italy, September 17-20.
- [†] Norberg J., Swaney D., Dushoff J., Lin J., Casagrandi R., and Levin S. A.. (2001). A new modelling approach to biodiversity and ecosystem functioning in changing environments. *XI Congresso della Società Italiana di Ecologia (SItE)*
- [†] Casagrandi R, Rinaldi S. (2000). Turismo e sostenibilità: un approccio modellistico. *Congresso Modelli per uno sviluppo EcoSostenibile* organizzato dalla Provincia di Ascoli Piceno e dal Consorzio Universitario Piceno, 30 settembre.
- [†] Casagrandi R., Nathan R. (2000). Ecological and evolutionary consequences of seed dispersal and predation. *X Congresso della Società Italiana di Ecologia (SItE)*. Pisa, Italy, September 14-16.
- [†] Casagrandi R. (2000) Persistence-extinction boundaries in metapopulations. Invited talk at the *Department of Ecology and Evolutionary Biology*, Princeton University, Feb 25.
- [†] Nathan R., Casagrandi R. (1999). Modelling the effect of predators on dispersed seeds. *EEB Annual Retreat at the Princeton University*, Nov 13.
- [†] Casagrandi R., Gatto M. (1999). Metapopulation persistence: A mesoscale approach. *IX Congresso della Società Italiana di Ecologia (SItE)*. Lecce, Italy, September 13-17.

- [†] Casagrandi R., Gatto M. (1999). A mesoscale model to discuss the effect of habitat loss in metapopulations. *Spatial Ecology Conference on Habitat Loss: Ecological, Evolutionary and Genetic Consequences*, Helsinki, Finland, September 7-12.
- [†] Casagrandi R., Gatto M. (1999). A mesoscale approach for assessing extinction risk in fragmented habitats. *Congresso CNR Metodi e Modelli Matematici nello Studio dei Fenomeni Biologici*, Trento, Italy, May 11-13.
- [†] Casagrandi R., Gatto M. (1998). Metapopulation models of intermediate complexity. *VII International Congress of Ecology (INTECOL)*, Florence, Italy, July 19-25.
- [†] Casagrandi R., Gatto M. (1998). Demographic stochasticity in populations living in fragmented habitats. *III International Congress on Mathematics and Environment*, Naples, Italy, October 20-22. *Proceedings*, edited by Paolo Fergola, pp. 80-85.