

Stefano Allesina

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University of Michigan,
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<http://www.dsa.unipr.it/netanalysis>

Personal Data

- Date of Birth: June 8, 1976
- Place of Birth: Carpi - Italy
- Citizenship: Italian
- Civil Status: Married

Professional Experiences

- **University of Michigan**
PostDoc (Oct 2005 -)
Department of Ecology and Evolutionary Biology
Mentor: Dr. Mercedes Pascual
- **Michigan State University**
Research Associate (Oct 2004 - Sept 2005)
Department of Fisheries & Wildlife
Mentor: Dr. Scott Peacor
- **University of Michigan**
Visiting Scholar (Oct 2004 - Sept 2005)
Dr. Mercedes Pascual's Lab.
CSCS - Center for the Study of Complex Systems
- **NOAA Great Lakes Environmental Research Lab.**
Visiting Scholar (Oct 2004 - Sept 2005)
- **University of Maryland System - Chesapeake Biological Laboratory**
Visiting Scholar (Feb 2004 - May 2004)
Mentor: Dr. Robert E. Ulanowicz

Academic Training

- **University of Parma - Ph.D. in Ecology
2001 - 2004**
Dissertation: *Ecological Flow Networks: Topological and Functional Features*
Major Advisor: Dr. Antonio Bodini
Committee: Dr. Luis G. Abarca-Arenas, Prof. Giulio De Leo, Dr. Stefano Leonardi.
- **University of Parma Bachelor Degree in Environmental Sciences (5 years)
1996 - 2001**
Dissertation: *Sviluppo di un modello di simulazione abbinato a un algoritmo qualitativo per lo studio dei sistemi ambientali complessi*
- Extension of Loop Analysis via computer simulations, in Italian -
Advisors: Dr. Antonio Bodini, Dr. Alessandro Zaccagnini

Manuscripts in Preparation

- Allesina, S.
Cycling and Cycling indices
For: S.E. Jørgensen (Editor), Encyclopedia of Ecology - Elsevier.
in preparation
- Allesina, S., Bodini, A.
Ascendency
For: S.E. Jørgensen (Editor), Encyclopedia of Ecology - Elsevier.
in preparation
- Peacor, S.D., Allesina, S., Riolo, R.L., Hunter, T.
A computational system, DOVE (Digital Organisms in a Virtual Ecosystem), to study phenotypic plasticity in ecosystems
in preparation
- Allesina, S., Bodini, A., Dunne, J.A.
Patterns of indirect connectance in food webs
in preparation
- Scotti, M., Allesina, S., Bodini, A., Bondavalli, C.
Effective trophic positions in simple networks
Ecological Modelling, *in review*
- Peacor, S.D., Allesina, S., Pascual, M., Riolo, R.L.
Phenotypic plasticity increases species coexistence by altering fitness surface
PLOS Biology, *in review*
- Clerici, N., Allesina, S.
Landscapes as graphs: evaluating the importance of connections between habitat patches
Environmental Impact Assessment Review, *in review*

Publications

- Bondavalli, C., Bodini, A., Rossetti, G., Allesina, S.
Detecting stress at the whole ecosystem level. The case of a mountain lake: Lake Santo (Italy)
Ecosystems in press
- Allesina, S., Bodini, A., Bondavalli, C.
Secondary Extinctions in Ecological Networks: Bottlenecks Unveiled.
Ecological Modelling in press
- Allesina, S., Bodini, A.
Food web scaling relation: efficiency revisited., 2005
Ecological Complexity, 2(4):323-338.
- Allesina, S., Bondavalli, C., Scharler, U.M., 2005
The consequences of the aggregation of detritus pools in ecological networks.
Ecological Modelling, 189(1-2):221-232.
- Allesina, S., Bodini, A., Bondavalli, C., 2005
Ecological subsystems via graph theory: the role of strongly connected components.
Oikos, 110(1):164-176.
- Allesina, S., Ulanowicz, R.E., 2004.
Cycling in ecological networks: Finn's index revisited.
Computational Biology and Chemistry, 28(3):227-233.
- Allesina, S., Bodini, A., 2004
Who dominates whom in the ecosystem? Energy flow bottlenecks and cascading extinctions.
Journal of Theoretical Biology, 230(3):351-358.
- Allesina, S., Bondavalli, C., 2004.
WAND: an Ecological Network Analysis user-friendly tool.
Environmental Modelling and Software, 19(4):337-340.
- Allesina, S., Bondavalli, C., 2003.
Steady state of ecosystem flow networks: a comparison between balancing procedures.
Ecological Modelling, 165(2-3):231-239.
- Allesina, S., Zaccagnini, A., Bodini, A., 2001.
Un modello di simulazione abbinato ad un algoritmo qualitativo per lo studio dei sistemi ecologici.
In Italian
S.It.E. (Italian Society of Ecology) Atti 2001 CDROM

International Conferences

- **Allesina, S.**, Bodini, A.
Indirect connectance and scaling relations in food webs
The Ecological Society of America 90th Annual Meeting - Aug. 7-14 2005, Montreal, Canada.
- Peacor, S.D., **Allesina, S.**, Pascual, M., Riolo, R.L.
Phenotypic-plasticity increases species coexistence by changing the steepness of an adaptive landscape.
The Ecological Society of America 90th Annual Meeting - Aug 7-14 2005, Montreal, Canada.
- **Allesina, S.**, Bodini, A., Bondavalli, C.
Secondary Extinctions in Ecological Networks: Bottlenecks Unveiled.
Fourth European Conference on Ecological Modelling - Sept 29 - Oct 1 2004, Bled, Slovenia.
- Zickel, M.J., Ulanowicz, R.E., Allesina, S.
Analyzing Fluid Flow Using Ecosystem Network Theory.
European Geosciences Union, 1st General Assembly. - Apr 24-30 2004, Nice, France.
- Allesina, S., Ulanowicz, R.E.
Trophospecies, Trophic Roles and Diet Distances in Ecological Networks.
Peter Yodzis Colloquium - Apr 23-24 2004, University of Guelph, Canada.

Service

Reviewer:

- Ecological Complexity
- Ecological Modelling
- Environmental Modelling & Assessment
- Environmental Modelling & Software
- Fisheries Research
- Physics Letters A

Scholarship

- Italian Ministry of University - PhD Scholarship (3 years)
- International Society for Ecological Modeling young researcher bursary

Membership

- Ecological Society of America (2005-)

Teaching

- June 2005
A gentle introduction to food web modelling
Ecosystem Modelling - Summer School
University of Copenhagen, Denmark.
- Sept 2002 - Jan 2004
IFOA (www.ifo.it)
IT Teacher (Access, Excel, Visual Basic)
- Oct 2001 - Jan 2004
Catal s.r.l. (www.catal.net)
IT Teacher (Access, Excel, Visual Basic, Word, Windows)

Computer Expertise

- *Operating Systems*
Windows (all versions)
Linux (RedHat 9 - Fedora)
MS DOS
- *Programming Languages*
C/C++ (gcc, MS Visual C++)
ObjectiveC
MS Visual Basic
Delphi and Pascal
SQL
SWARM agent based models
ASP - PHP
- *Database*
SQL Server
Oracle
Access
- *Other*
MS Office Suite
Corel Draw/Photopaint

R Statistical Software (Programming)
Macromedia Fireworks, Dreamweaver
L^AT_EX

Languages

- Italian (fluent, native speaker)
- English (proficient)
- French (fair)

Other Positions

- Sept 2001 - Oct 2004
Freelance Software Developer
- Dec 2000 - Aug 2001
FSI srl, Digitel Telephone Company (www.digitel.com)
Software Developer, Analyst, SQL Server Administrator