

## Stefano Allesina

Department of Ecology & Evolution and Computation Institute  
University of Chicago, 1101 E. 57th st. Chicago, IL 60637

☎ +1 (872) 226 3429 • ☎ +1 (773) 702 7825 • ✉ sallesina@uchicago.edu  
📧 allesinalab.uchicago.edu

### Academic Appointments

---

<b>Northwestern Institute on Complex Systems</b> <i>Northwestern University</i>	<b>External Faculty</b> 2016–
<b>Dept. Ecology &amp; Evolution and Computation Institute</b> <i>University of Chicago</i>	<b>Professor</b> 2014–
<b>Dept. Ecology &amp; Evolution and Computation Institute</b> <i>University of Chicago</i>	<b>Assistant Professor</b> 2009–2014
<b>NCEAS</b> <i>University of California Santa Barbara</i>	<b>Postdoctoral Associate</b> 2007–2009
<b>Mercedes Pascual Laboratory</b> <i>University of Michigan</i>	<b>Postdoctoral Fellow</b> 2005–2007
<b>Scott Peacor Laboratory</b> <i>Michigan State University and NOAA</i>	<b>Postdoctoral Fellow</b> 2004–2005

### Education

---

<b>Ph.D.</b> <i>Università di Parma, Italy</i> Advisor: Antonio Bodini	<b>Ecology</b> 2002–2005
<b>Laurea</b> <i>Università di Parma, Italy</i> Advisor: Alessandro Zaccagnini	<b>Environmental Sciences</b> 1995–2001

### Publications

---

Member and Undergraduate Member of the Allesina Lab. † Equal contribution.

Published papers.....

[1] Sander, E.L., Wootton, J. & **Allesina, S.** Predicting Ecological Interactions and Dynamics using Machine Learning. *Scientific reports, (in press)* (2017).

[2] Grilli, J., Barabás, G., Michalska-Smith, M.J. & **Allesina, S.** Higher-order interactions stabilize dynamics in competitive network models. *Nature, (in press)* (2017).

[3] Grilli, J.† & **Allesina, S.†**. Last name analysis of mobility, gender imbalance, and nepotism across academic systems. *Proceedings of the National Academy of Sciences of the United States of America, (in press)* (2017).

- [4] Levine, J., Bascompte, J., Adler, P. & **Allesina, S.** Beyond pairwise coexistence: biodiversity maintenance in complex ecological communities. *Nature*, 546:3376–3386 (2017).
- [5] *Michalska-Smith, M.J. & Allesina, S.* And, not Or: Quality, Quantity in Scientific Publishing. *PLoS One*, 12(6):e0178074 (2017).
- [6] *Grilli, J., Adoriso, M., Suweis, S., Barabás, G., Banavar, J.R., Allesina, S. & Maritan, A.* Feasibility and coexistence of large ecological communities. *Nature Communications*, 8:14389 (2017).
- [7] Dee, L.E., **Allesina, S.**, Bonn, A., Eklöf, A., Gaines, S.D., Hines, J., Jacob, U., McDonald-Madden, E., Possingham, H., Schröter, M. et al. Operationalizing Network Theory for Ecosystem Service Assessments. *Trends in Ecology & Evolution*, 32:118–130 (2017).
- [8] *Barabás, G., Smith, M.J. & Allesina, S.* The effect of intra- and interspecific competition on coexistence in multispecies communities. *American Naturalist*, 188:E1–E12 (2016).
- [9] *Grilli, J., Rogers, T. & Allesina, S.* Modularity and stability in ecological communities. *Nature Communications*, 7:12031+ (2016).
- [10] McCoy, S., Pfister, C. & **Allesina, S.** Ocean acidification affects competition for space: projections of community structure using cellular automata. *Proceedings of the Royal Society B: Biological Sciences*, 283:20152561 (2016).
- [11] Masco, C., **Allesina, S.**, Mennill, D.J. & Pruett-Jones, S. Song overlapping: Distinguishing between intention and chance. *Bioacoustics*, 25:29–40 (2016).
- [12] Suweis, S., *Grilli, J., Banavar, J., Allesina, S. & Maritan, A.* Effect of Localization on the Stability of Mutualistic Ecological Networks. *Nature Communications*, 6:10179+ (2015).
- [13] **Allesina, S., Grilli, J., Barabás, G., Tang, S., Aljadeff, J. & Maritan, A.** Predicting the stability of large structured food webs. *Nature Communications*, 6:7842 (2015).
- [14] *Barabás, G. & Allesina, S.* Predicting global community properties from uncertain estimates of interaction strengths. *Journal of the Royal Society Interface*, 12:20150218 (2015).
- [15] *Sander, S., Wootton, J. & Allesina, S.* What can Interaction Webs Tell Us About Species Roles? *PLoS Computational Biology*, 11:e10043330 (2015).
- [16] *Grilli, J., Barabás, G. & Allesina, S.* Metapopulation persistence in random fragmented landscapes. *PLoS Computational Biology*, 11:e1004251 (2015).
- [17] *Weinberger, C.J., Evans, J. & Allesina, S.* Ten Simple (Empirical) Rules for Writing Science. *PLoS Computational Biology*, 11:e1004205 (2015).  
*Covered in The Chronicle of Higher Education.*
- [18] Borrelli, J., **Allesina, S.**, Amarasekare, P., Arditi, R., Chase, I., Damuth, J., Ginzburg, L., Holt, R., Logofet, D., Novak, M., Rohr, R., Rossberg, A., Spencer, M. & Tran, J. Selection on stability across ecological scales. *Trends in Ecology & Evolution*, 30:417–425 (2015).
- [19] *Smith, M.J., Sander, S., Barabás, G. & Allesina, S.* Stability and feedback levels in food web models. *Ecology Letters*, 18(6):593–595 (2015).

- [20] **Allesina, S.** & *Tang, S.* The stability-complexity relationship at age 40: a random matrix perspective. *Population Ecology*, 57(1):63–75 (2015).
- [21] *Smith, M.J., Weinberger, C., Bruna, E. & Allesina, S.* The Scientific Impact of Nations: Journal Placement and Citation Performance. *PLoS ONE*, 9(10):e109195 (2014).  
*Covered in NPR Morning Edition.*
- [22] Wolkovich, E., **Allesina, S.**, Cottingham, K., Moore, J., Sandin, S. & de Mazancourt, C. Linking the green and brown worlds: The prevalence and effect of multi-channel feeding in food webs. *Ecology*, 95(12):3376–3386 (2014).
- [23] *Tang, S., Pawar, S. & Allesina, S.* Correlation between interaction strengths drives stability in large ecological networks. *Ecology Letters*, 17:1094–1100 (2014).
- [24] *Staniczenko, P.P.A., Smith, M.J. & Allesina, S.* Selecting Food Web Models using Normalised Maximum Likelihood. *Methods in Ecology and Evolution*, 5(6):551–562 (2014).
- [25] *Tang, S. & Allesina, S.* Reactivity and Stability of Large Ecosystems. *Frontiers in Ecology and Evolution*, 2:art no. 21 (2014).
- [26] Lortie, C., **Allesina, S.**, Aarssen, L., Grod, O. & Budden, A. With great power comes great responsibility: the importance of rejection, power, and editors in the practice of scientific publishing. *PLoS One*, 8(12):e85382 (2013).
- [27] *Eklöf, A., Tang, S. & Allesina, S.* Secondary Extinctions in Food Webs: a Bayesian Network Approach. *Methods in Ecology and Evolution*, 4(8):760–770 (2013).
- [28] *Eklöf, A., Jacob, U., Kopp, J.C., Bosch, J., Castro-Urgal, R., Chacoff, N., Dalsgaard, B., de Sassi, C., Galetti, M., Guimãraes Jr., P., Lomáscolo, S., Martín González, A., Pizo, M., Rader, R., Rodrigo, A., Tylianakis, J., Vázquez, D. & Allesina, S.* The Dimensionality of Ecological Networks. *Ecology Letters*, 16(5):577–583 (2013).
- [29] Parker, J., Lortie, C. & **Allesina, S.** Characterizing a Scientific Elite (B): Publication and Citation Patterns of the Most Highly Cited Scientists in Environmental Science and Ecology. *Scientometrics*, 94(2):469–480 (2013).
- [30] *Staniczenko, P.P.A., Kopp, J.C. & Allesina, S.* The Ghost of Nestedness in Ecological Networks. *Nature Communications*, 4(4):1391 (2013).
- [31] Acuna, D., **Allesina, S.** & Kording, K. Future impact: Predicting scientific success. *Nature*, 489:201–202 (2012).  
*Media Coverage includes: Nature, The Chronicle of Higher Education, The Scientist, NPR.*
- [32] **Allesina, S.** Ecology: The more the merrier – News & Views. *Nature*, 487:175–176 (2012).
- [33] **Allesina<sup>†</sup>, S.** & *Tang<sup>†</sup>, S.* Stability Criteria for Complex Ecosystems. *Nature*, 483:205–208 (2012).  
*Reviewed for F1000 by L. Forney & Z. Ma.*
- [34] **Allesina, S.** Modeling peer review: an agent-based approach. *Ideas in Ecology and Evolution*, 5:27–35 (2012).

- [35] Bodini, A., Bondavalli, C. & **Allesina, S.** Cities as ecosystems: Functional similarities and the quest for sustainability. *Developments in Environmental Modelling*, 25:297–318 (2012).
- [36] Bodini, A., Bondavalli, C. & **Allesina, S.** Cities as ecosystems: Growth, development and implications for sustainability. *Ecological Modelling*, 245:185–198 (2012).
- [37] *Eklöf, A.*, Helmus, M., *Moore, M* & **Allesina, S.** Relevance of Evolutionary History For Food Web Structure. *Proceedings of the Royal Society B: Biological Sciences*, 279(1733):1588–1596 (2012).
- [38] Lortie, C., Aarssen, L., Parker, J. & **Allesina, S.** Good news for the people who love bad news: an analysis of the funding of the top 1% most highly cited ecologists. *Oikos*, 121:1005–1008 (2012).
- [39] Martin-González, A., **Allesina, S.**, Rodrigo, A. & Bosch, J. Drivers of compartmentalization in a Mediterranean pollination network. *Oikos*, 121:2001–2013 (2012).
- [40] Melián, C., Alonso, D., **Allesina, S.**, Condit, R. & Etienne, R. Does sex speed up evolutionary rate and increase biodiversity? *PLoS Computational Biology*, 8(3):e1002414 (2012).
- [41] **Allesina, S.** Predicting trophic relations in ecological networks: A test of the Allometric Diet Breadth Model. *Journal of Theoretical Biology*, 279(1):161–168 (2011).
- [42] **Allesina, S.** Measuring nepotism through shared last names: The case of Italian academia. *PLoS ONE*, 6(8):e21160 (2011).  
*Media Coverage includes: Chicago Tribune, Science, Nature, Corriere della Sera, La Stampa, Radio24, Radio Rai, Rai 1 TV, . . .*  
*Reviewed for F1000 by A. Di Franco & J. Claudet.*
- [43] **Allesina, S.** & Levine, J. Reply to Ferrarini: Strengths and weaknesses of simple competition models. *Proceedings of the National Academy of Sciences of the United States of America*, 108(31):E346 (2011).
- [44] **Allesina, S.** & Levine, J. A competitive network theory of species diversity. *Proceedings of the National Academy of Sciences of the United States of America*, 108(14):5638–5642 (2011).  
*Media Coverage includes: NPR, Cosmos Magazine, Clever Apes, . . .*  
*Reviewed for F1000 by H. Muller-Landau and by A. Gonzales.*
- [45] Baskerville, E., Dobson, A., Bedford, T., **Allesina, S.**, Anderson, T. & Pascual, M. Spatial guilds in the Serengeti food web revealed by a Bayesian group model. *PLoS Computational Biology*, 7(12):e1002321 (2011).
- [46] *Rojas-Echenique, J.* & **Allesina, S.** Interaction rules affect species coexistence in intransitive networks. *Ecology*, 92(5):1174–1180 (2011).
- [47] *Zook, A.E.*, *Eklöf, A.*, Jacob, U. & **Allesina, S.** Food webs: Ordering species according to body size yields high degree of intervality. *Journal of Theoretical Biology*, 271(1):106–113 (2011).
- [48] **Allesina, S.**, Azzi, A., Battini, D. & Regattieri, A. Performance measurement in supply chains: New network analysis and entropic indexes. *International Journal of Production Research*, 48(8):2297–2321 (2010).

[49] Melián, C., Alonso, D., Vázquez, D., Regetz, J. & **Allesina, S.** Frequency-dependent selection predicts patterns of radiations and biodiversity. *PLoS Computational Biology*, 6(8):e1000892 (2010).  
*Reviewed for F1000 by B. Bolker.*

[50] Parker, J., Lortie, C. & **Allesina, S.** Characterizing a scientific elite: The social characteristics of the most highly cited scientists in environmental science and ecology. *Scientometrics*, 85(1):129–143 (2010).  
*Covered in nature.com.*

PRIOR TO UNIVERSITY OF CHICAGO.

[51] **Allesina, S.**, Bodini, A. & Pascual, M. Functional links and robustness in food webs. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1524):1701–1709 (2009).

[52] **Allesina, S.** & Pascual, M. Googling food webs: Can an eigenvector measure species' importance for coextinctions? *PLoS Computational Biology*, 5(9):e1000494 (2009).  
*Media Coverage includes: NY Times Magazine "The 9th annual year in ideas", NY Times, Der Spiegel, BBC Worldservice "Science in Action", Wired, Slashdot, Radio24, . . .*

[53] **Allesina, S.** & Pascual, M. Food web models: A plea for groups. *Ecology Letters*, 12(7):652–662 (2009).

[54] Scotti, M., Bondavalli, C., Bodini, A. & **Allesina, S.** Using trophic hierarchy to understand food web structure. *Oikos*, 118(11):1695–1702 (2009).

[55] Bodini, A., Bellingeri, M., **Allesina, S.** & Bondavalli, C. Using food web dominator trees to catch secondary extinctions in action. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1524):1725–1731 (2009).

[56] Dobson, A., **Allesina, S.**, Lafferty, K. & Pascual, M. The assembly, collapse and restoration of food webs. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1524):1803–1806 (2009).

[57] **Allesina, S.**, Alonso, D. & Pascual, M. A general model for food web structure. *Science*, 320(5876):658–661 (2008).  
*Reviewed for F1000 by J. Bascompte and by C. Bang & J. Sabo.*

[58] **Allesina, S.** & Pascual, M. Network structure, predator-prey modules, and stability in large food webs. *Theoretical Ecology*, 1(1):55–64 (2008).  
*Reviewed for F1000 by M. Holyoak.*

[59] Lafferty, K., **Allesina, S.**, Arim, M., Briggs, C., De Leo, G., Dobson, A., Dunne, J., Johnson, P., Kuris, A., Marcogliese, D., Martinez, N., Memmott, J., Marquet, P., McLaughlin, J., Mordecai, E., Pascual, M., Poulin, R. & Thielges, D. Parasites in food webs: The ultimate missing links. *Ecology Letters*, 11(6):533–546 (2008).

[60] Peacor, S., **Allesina, S.**, Riolo, R. & Hunter, T. A new computational system, DOVE (Digital Organisms in a Virtual Ecosystem), to study phenotypic plasticity and its effects in food webs. *Ecological Modelling*, 205(1-2):13–28 (2007).

- [61] **Allesina, S.**, Bodini, A. & Bondavalli, C. Secondary extinctions in ecological networks: Bottlenecks unveiled. *Ecological Modelling*, 194(1-3 SPEC. ISS.):150–161 (2006).
- [62] 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*, 9(5):768–787 (2006).
- [63] Peacor, S., **Allesina, S.**, Riolo, R. & Pascual, M. Phenotypic plasticity opposes species invasions by altering fitness surface. *PLoS Biology*, 4(11):2112–2120 (2006).
- [64] Scotti, M., **Allesina, S.**, Bondavalli, C., Bodini, A. & Abarca-Arenas, L. Effective trophic positions in ecological acyclic networks. *Ecological Modelling*, 198(3-4):495–505 (2006).
- [65] **Allesina, S.** & Bodini, A. Food web networks: Scaling relation revisited. *Ecological Complexity*, 2(4):323–338 (2005).
- [66] **Allesina, S.**, Bodini, A. & Bondavalli, C. Ecological subsystems via graph theory: The role of strongly connected components. *Oikos*, 110(1):164–176 (2005).
- [67] **Allesina, S.**, Bondavalli, C. & Scharler, U. The consequences of the aggregation of detritus pools in ecological networks. *Ecological Modelling*, 189(1-2):221–232 (2005).
- [68] **Allesina, S.** & Bodini, A. Who dominates whom in the ecosystem? Energy flow bottlenecks and cascading extinctions. *Journal of Theoretical Biology*, 230(3):351–358 (2004).
- [69] **Allesina, S.** & Bondavalli, C. WAND: An ecological network analysis user-friendly tool. *Environmental Modelling and Software*, 19(4):337–340 (2004).
- [70] **Allesina, S.** & Ulanowicz, R. Cycling in ecological networks: Finn's index revisited. *Computational Biology and Chemistry*, 28(3):227–233 (2004).
- [71] **Allesina, S.** & Bondavalli, C. Steady state of ecosystem flow networks: A comparison between balancing procedures. *Ecological Modelling*, 165(2-3):221–229 (2003).
- Unpublished papers**.....
- [72] Barabás, G.<sup>†</sup>, Michalska-Smith, M.J.<sup>†</sup> & **Allesina, S.** Self-regulation and the stability of large ecological networks. *Nature Ecology & Evolution*, (in review, 3rd round) (2017).
- [73] Sander, E.L.<sup>†</sup>, Michalska-Smith, M.J.<sup>†</sup>, Pascual, M. & **Allesina, S.** Understanding the role of parasites in food webs using the group model. *Journal of Animal Ecology*, (in revision, 3rd round) (2017).
- Other publications**.....
- [74] **Allesina, S.** Food web stability, unapologetically – Book Review. *Ecology*, 94:2114–2115 (2013).
- [75] Eklöf, A. & **Allesina, S.** Ecological Networks. In A. Hastings & L. Gross, editors, *Encyclopedia of Theoretical Ecology*, pages 470–478. U. California Press, Berkeley, CA (2012).
- [76] **Allesina, S.** Learning R the Practical Way – Book Review. *Ecology*, 90:2335–2336 (2009).
- [77] **Allesina, S.** Cycling and Cycling Indices. In S.E. Jorgensen & B. Fath, editors, *Encyclopedia of Ecology*, pages 812 – 819. Academic Press, Oxford (2008).

[78] **Allesina, S.** & Bodini, A. Ascendancy. In S.E. Jorgensen & B. Fath, editors, *Encyclopedia of Ecology*, pages 254–263. Academic Press, Oxford (2008).

[79] Bodini, A., Bondavalli, C. & **Allesina, S.** *L'ecosistema e le sue relazioni. Idee e strumenti per la valutazione di impatto e ambientale e di incidenza*. Franco Angeli, Milan (2007). (The ecosystem and its relations. Ideas and tools for environmental impact assessment.) Textbook - In Italian.

## Support

---

<b>\$750,000 Human Science Frontier Program, PI: J. Kammenga &amp; S. Allesina</b> <i>Crossing the ultimate tipping point: predicting death in C. elegans</i>	12/14 – 12/16
<b>\$8,000 FACCTS, PI: S. Allesina &amp; E. Thébault.</b> <i>Spectral Characterization of Ecological Networks</i>	2/14 – 2/15
<b>\$599,244 NSF DEB #1148867, PI: S. Allesina</b> <i>CAREER: Scientific Computing for a New Generation of Ecologists</i>	9/12 – 8/17
<b>\$449,817 James S. McDonnell Foundation, PI: S. Allesina Co-PI: J. Bergelson</b> <i>Bacteria test biodiversity theories</i>	8/10 – 7/14
<b>\$240,073 NSF SMA SBE EAGER #1042164, PI: S. Allesina</b> <i>Accelerating the pace of discovery by changing the peer review algorithm</i>	8/10 – 7/14
<b>\$636,000 NSF EF #0827493, PI: M. Pascual Co-PI: S. Allesina</b> <i>The Spider and the Web: inference in ecological networks</i>	9/08 – 8/14

## Service

---

University of Chicago.....

**Director of Graduate Studies:** Dept. Ecology & Evolution.

**Faculty committee on graduate program:** Computation Institute.

**Faculty committee on graduate program:** Dept. Ecology & Evolution.

**Board of Computing Activities and Services:** University of Chicago.

**Faculty committee on computing services:** Dept. Ecology & Evolution.

**Faculty search committee:** Dept. Ecology & Evolution (2009, 2012).

**Faculty Review Board:** The Triple Helix (undergrad. publication).

Editorial Board.....

### Oikos

*Subject Editor* 2009 –

### Journal of Complex Networks

*Associate Editor* 2012 –

### Frontiers in Population Dynamics

*Associate Editor* 2013 –

### Frontiers in Computational Physics

*Editor Reviewer* 2013 –

### PLoS Computational Biology

*Associate Editor* 2015 –

## Scientific Reports

Editor

2015 –

## eLife

Guest Editor

2015

## PLoS Computational Biology

Guest Editor

2012-2015

## Faculty of 1000

Population Ecology

2011-2016

## Reviewer.....

American Naturalist; Basic and Applied Ecology; Behavioral Ecology; Biological Reviews; Biology Letters; BioScience; Branco Weiss Fellowship; Briefings in Bioinformatics; Chaos; Ecography; Ecological Complexity; Ecological Engineering; Ecological Indicators; Ecological Modelling; Ecological Monographs; Ecology; Ecology Letters; Environmental Modelling & Assessment; Environmental Modelling & Software; Estuarine, Coastal and Shelf Science; European Physical Journal B; European Research Council; Fisheries Research; Journal of Animal Ecology; Journal of Mathematical Biology; Journal of Robust and Nonlinear Control; Journal of the Association for Information Science and Technology; Journal of Theoretical Biology; Journal of the Royal Society Interface; Marine Ecology Progress Series; Marsden Fund – Royal Society of New Zealand; Methods in Ecology & Evolution; Microsoft Research; National Science Foundation; Nature; Nature Communications; Nature Ecology & Evolution; Nature Methods; NERC; Oikos; Philosophical Transactions of the Royal Society Series B; Physical Reviews E; Physical Reviews X; Physics Letters A; PLoS Biology; PLoS One; Proceedings of the National Academy of Sciences USA; Proceedings of the Royal Society Series B; Revue canadienne des sciences de l'information et de bibliothéconomie; Science; Science Advances; Scientometrics; Sinauer Publishing; The Social Science Journal; Theoretical Ecology; Theoretical Population Biology; The Quarterly Review of Biology; Romanian National Council for Scientific Research; Scientific Reports; Trends in Ecology & Evolution; Trends in Parasitology; U. California Press; U. Chicago Press; U. Nebraska Omaha Internal Funding.

## Panelist.....

National Science Foundation - June 2010.

## Panelist.....

National Science Foundation GRFP - January 2016.

## Symposium Organizer.....

**The Assembly and Disassembly of Ecological Networks: Restoration and Conservation at Multiple Trophic Levels:** Organizers: Allesina and Pascual. Ecological Society of America 92<sup>th</sup> annual meeting. San Jose (CA) Aug 2007.

**Ecological Networks: Issues, advances and opportunities:** Organizers: Kazanci and Allesina. Society for Mathematical Biology Annual Meeting. San Jose (CA) Aug 2007.

## Summer School Organizer.....

**Second BSD QBio @ MBL:** MBL, Woods Hole (MA), Sept 6-14, 2016. Bootcamp on Quantitative Biology for all incoming BSD Students. Co-Directors: Palmer & Allesina.

**First BSD QBio @ MBL:** MBL, Woods Hole (MA), Sept 5-11, 2015. Bootcamp on Quantitative Biology for all incoming BSD Students. Co-Directors: Palmer & Allesina.



**A primer in ecological networks: theory & data:** Università di Parma June 15-20 2008. Organizers: Bodini, DeLeo, Allesina & Bondavalli.

## Awards & Membership

---

NSF CAREER Award.

NCEAS postdoctoral associate (2 years).

Italian Ministry of University - PhD Scholarship (3 years).

International Society for Ecological Modeling young researcher bursary.

Member of the Ecological Society of America (2005-).

Member of the British Ecological Society (2010-).

## Mentoring

---

### Graduate Students:

Si Tang (2010-2013), Elizabeth Sander (2012-2017) (with J.T. Wootton), Matthew Michalska-Smith (2013-), Carlos Marcelo Serván (2016-)

### Postdocs:

Anna Eklöf (2010-2012), Phillip Staniczenko (2011-2013), Samraat Pawar (2012-2013), György Barabás (2014-2016), Madlen Wilmes (2015), Jacopo Grilli (2015-), Daniel Maynard (2017-)

### Undergraduates/Predocctoral:

Jose Rojas (2009-2010), Alex Zook (2009-2010), Philip Reinhold (2010-2011), M Moore (2010-2011), Jason Kopp (2011-2012), Matthew Smith (2012-2013), Michael Begun (2012-2013), Cody Weinberger (2013-2015), Theo Gibbs (2016-), Kevin Trickey (2017-)

## Teaching

---

### How can we understand the biosphere?

*Undergraduate*

**S. Allesina & M. Kronforst**

*Spring 2016*

### Introduction to Scientific Computing for Biologists

*Graduate*

**S. Allesina**

*Fall 2012, Winter 2013-*

### Mini course BIOS 248 Scientific Computing for Ecologists

*Graduate, Stanford University Hopkins Marine Station*

**S. Allesina, G. DeLeo, F. Ferretti**

*Oct 5-9 2015*

### BSD Summer Research Program

*Graduate*

**K. Gross & S. Allesina**

*Summer 2012*

### Evolution & Ecology

*Undergraduate*

**S. Allesina & J. Coyne (2009 - 2012) & M. Kronforst (2013-2015)**

*Winter 2010-2015*

### Theoretical Ecology

*Graduate*

**S. Allesina & G. Dwyer**

*Fall 2009, Winter 2011*

### Scientific Computing

*Spring College on the Physics of Complex Systems*

**Abdus Salam ICTP, Trieste**

*2014*

### São Paulo School on Ecological Networks

*Summer School*

**São Paulo, Brazil**

*2011*

### Biological Networks

*Summer School*

**University of Fribourg, Switzerland**

*2011*

<b>Theoretical Ecology and Global Change</b> <i>Workshop</i>	<b>Abdus Salam ICTP, Trieste</b> 2009
<b>Population Dynamics and Ecology</b> <i>Guest Lecture</i>	<b>University of Michigan</b> 2006
<b>Ecosystem Networks Modeling</b> <i>Summer School</i>	<b>University of Copenhagen, Denmark</b> 2006
<b>Ecosystem Modeling</b> <i>Summer School</i>	<b>University of Copenhagen, Denmark</b> 2005

## Working Groups

---

<b>Parasites and food webs: the ultimate missing link</b> <i>NCEAS, Organized by K. Lafferty, A. Dobson and M. Pascual.</i>	2008–2009
<b>Ecological Problems Using Binary Matrices</b> <i>NIMBioS, Organized by J. Landau and E. Connor.</i>	2009–2011
<b>The future of publishing in ecology, evolutionary biology, and environmental science</b> <i>NCEAS, Organized by C. Lortie and J. Byrnes.</i>	2012
<b>Advancing theory and research on scientific synthesis</b> <i>NCEAS, Organized by J. Parker and E. Hackett.</i>	2012
<b>Spatio-Temporal Dynamics in Ecology</b> <i>Lorentz Center, NL, Organized by A. Doelman, J. Huisman, J. van de Koppel and A. Zagaris.</i>	2014
<b>sErVICES</b> <i>sDiv, DE, Organized by L. Dee and S. Gaines.</i>	2015
<b>Inference on Networks: Algorithms, Phase Transitions, New Models and New Data</b> <i>Santa Fe Institute, Organized by Cris Moore, Aaron Clauset, and Mark Newman.</i>	2015

## Talks & Seminars

---

- Jul 13, 2017:** *Society for Industrial and Applied Mathematics: Workshop on Network Science*, Pittsburgh, PA. *Plenary Speaker.*
- Apr 1, 2017:** *American Mathematical Society, Spring Central Sectional Meeting*, Bloomington, IN. *Keynote Speaker.*
- Dec 14, 2016:** *British Ecological Society Annual Meeting*, Liverpool UK. *Keynote Speaker.*
- Oct 27, 2016:** *Science at the Edge*, Michigan State University, East Lansing, MI.
- Oct 12, 2016:** *Computation in Science*, University of Chicago, Chicago IL.
- Apr 14, 2016:** *Mathematical Biosciences Institute*, Columbus, OH.
- Feb 29, 2016:** *Statistics Colloquium*, University of Chicago, Chicago, IL.
- Feb 1, 2016:** *Wildlife Ecology and Conservation Seminars*, University of Florida, Gainesville, FL.
- Dec 11, 2015:** *Santa Fe Institute*, Santa Fe, NM.
- Nov 13, 2015:** *DePaul University*, Chicago, IL.
- Oct 8, 2015:** *Stanford University*, Palo Alto, CA.
- Sept 18-19, 2015:** *Living systems: from interactions to critical behavior*, Venezia, Italy.
- Aug 14, 2015:** *Ecological Society of America Annual Meeting*, Baltimore, MD. *Contributed.*

**Mar 12, 2015:** *ETH Zürich, Zurich, Switzerland. E3B seminar series*

**Dec 5, 2014:** *6th Swedish Meeting in Mathematics in Biology, Linköping, Sweden. Keynote Speaker*

**Nov 5, 2014:** *Stony Brook University, Stony Brook, NY. Ginzburg Colloquim*

**Oct 31, 2014:** *University of Chicago, Chicago, IL. Computational Social Science Workshop*

**Sept 19, 2014:** *U. Illinois at Urbana-Champaign, Urbana, IL. Dept. Seminar*

**Aug 10, 2014:** *Sci Foo, Google, Mountain View, CA.*

**July 10, 2014:** *Center Interfacultaire Bernoulli, EPFL, Lausanne, Switzerland. Bernoulli Lecture*

**May 5, 2014:** *Marine Biological Lab, Woods Hole, MA. Dept. Seminar*

**Dec 5, 2013:** *University of California Davis, Davis, CA. Dept. Seminar*

**Nov 13, 2013:** *Food Webs: Science for Impact, Giessen, Germany. Keynote Speaker*

**Oct 12, 2013:** *Society of Population Ecology, Sakai, Japan. Keynote Speaker*

**Apr 22, 2013:** *University of Puerto Rico – Rio Piedras, San Juan, Puerto Rico. Invited*

**Mar 14, 2013:** *iDiv, Leipzig, Germany. Invited*

**Nov 1, 2012:** *University of Oxford, Oxford, UK. Invited*

**Sept 24, 2012:** *University of Umeå, Umeå, Sweden. Dept. Seminar*

**Sept 14, 2012:** *University of Michigan, Ann Arbor, MI. Invited*

**June 23, 2012:** *NetSci 2012, Evanston, IL. Invited*

**June 7, 2012:** *BioM&S Symposium 2012, University of Guelph, CA. Keynote speaker*

**May 14, 2012:** *University of Chicago, Chicago IL. Dept. Seminar*

**Apr 26, 2012:** *University of Amsterdam, Amsterdam, the Netherlands. Keynote speaker*

**Apr 13, 2012:** *University of Toronto - EEB Retreat, Toronto, CA. Keynote speaker*

**Apr 6, 2012:** *Case Western Reserve, Cleveland, OH. Invited*

**Oct 23, 2011:** *Chicago Humanities Festival, Chicago, IL. Invited*

**Sept 15, 2011:** *University of Sao Paulo, Sao Paulo, Brazil. Invited*

**Sept 14, 2011:** *University of Campinas, Brazil, Campinas, Brazil. Invited*

**Sept 2, 2011:** *Iowa State University, Ames, IA. Invited*

**Sept 1, 2011:** *Iowa State University, Ames, IA. Dept. Seminar*

**Aug 8, 2011:** *Ecological Society of America Annual Meeting, Austin, TX. Contributed.*

**July 18, 2011:** *International Environmetrics Society – Regional Meeting, La Crosse, WI. Invited*

**June 2, 2011:** *European Conference on Ecological Modeling, Riva del Garda, Italy. Contributed.*

**Sept 7, 2010:** *British Ecological Society Annual Meeting, Leeds, UK. Invited*

**Jul 7, 2010:** *Università di Parma, Parma, Italy. Invited*

**Apr 29, 2010:** *1st Spark Reception: Agent-based Modeling. University of Chicago, Chicago, IL. Invited*

**Apr 22, 2010:** *University of Michigan CSCS, Ann Arbor, MI. Invited*

**Feb 16, 2010:** *University of California Santa Barbara, Santa Barbara, CA. Dept. Seminar*

**Feb 2, 2010:** *University of Illinois at Chicago, Chicago, IL. Dept. Seminar*

**Dec 9, 2009:** *The Northwestern Institute on Complex Systems (NICO), Evanston, IL. Invited*

**Oct 9, 2009:** *NCEAS Ecolunch, Santa Barbara, CA.*

**Aug 4, 2008:** *Ecological Society of America Annual Meeting, Milwaukee, WI. Contributed.*

**May 5, 2008:** *NCEAS Ecolunch, Santa Barbara, CA.*

**April 16, 2008:** *University of Chicago, Chicago, IL. Invited*

**March 15, 2008:** *Early Career Scientists Symposium, Ann Arbor, MI. Invited*

**Aug 8, 2007:** *Ecological Society of America Annual Meeting, San Jose, CA. Invited*

**Aug 3, 2007:** *Society for Mathematical Biology Annual Meeting, San Jose, CA. Invited*

**Feb 20, 2007:** *Università di Parma, Parma, Italy. Invited*

**Feb 15, 2007:** *Niels Bohr Institute - Center for Models of Life, Copenhagen, Denmark. Invited*

**Aug 9, 2006:** *Ecological Society of America Annual Meeting, Memphis, TN. Contributed.*

**Jun 7, 2006:** *University of Copenhagen, Copenhagen, Denmark. Invited*

**Jun 5, 2006:** *Università di Parma, Parma, Italy. Invited*

**May 26, 2006:** *Collegium Budapest, Institute for Advanced Study, Budapest, Hungary. Invited*

**Nov 28, 2005:** *Chesapeake Biological Laboratory, University of Maryland, Solomons, MD. Invited*

**Aug 9, 2005:** *Ecological Society of America Annual Meeting, Montreal, Canada. Contributed*

**Sept 29, 2004:** *Fourth European Conference on Ecological Modelling, Bled, Slovenia. Contributed*

**Apr 24, 2004:** *Peter Yodzis Colloquium - University of Guelph, Guelph, Canada. Contributed*

## **Skills**

---

**Languages:** Italian, English

**Computer Skills:** C, python, R,  $\LaTeX$ , Linux