

Dr. Juan E. Keymer, Ph.D.
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Date and place of birth	September 29, 1973 - Santiago, Chile
Citizenship	Chilean
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CURRENT POSITION

Research Associate. Department of Physics Princeton University.

ACADEMIC DEGREES

Ph.D. (Ecology and Evolutionary Biology), Princeton University (USA), 2003.
Master of Arts (Ecology and Evolutionary Biology), Princeton University (USA), 2000.
Licenciatura (Biological Sciences/Mathematics), P. Universidad Catollica de Chile (Chile), 1997.

MEMBERSHIPS

AAAS
Sociedad de Biologia de Chile
Society for Mathematical Biology
American Society for Microbiology
Ecological Society of America
American Physical Society

AWARDS

2001's Outstanding Paper of the Year in the Discipline of Landscape Ecology.
Award given by the U.S. Chapter of the international Association for Landscape Ecology
The American Naturalist (November) 2001, 156:478-494.

EDUCATION

Postdoc in Molecular Biology 2004-2005
Postdoc in Biological Physics 2003-2004
Ph.D & M.A. in Ecology & Evolutionary Biology 1998-2003
Licenciatura en Matematicas 1993-1997
Licenciatura en Ciencias Biologicas 1991-1996

LANGUAGE SKILLS

HUMAN: english, spanish (fluent); french, portugese (not-fluent)
MACHINE: C, C++, Java, UNIX, LINUX, Octave.

PREVIOUS POSITIONS

2004-2005 Molecular Biology, Princeton University
2003-2004 Bioinformatics, NEC laboratories
1998-2003 Ecology & Evolutionary Biology, Princeton University
1995-1997 Ecology, P. Universidad Catolica de Chile
1993-1995 Molecular & Celular Biology, P. Universidad Catvolica de Chile

INTERNATIONAL CONGRESSES, WORKSHOP, SUMMER SCHOOLS & SYMPOSIA

2005 (U.S.A) Technology & characterization at the nanoscale CNF, Cornell U.
2005 (U.S.A) Cells, circuits & logic Computational Biology Initiative, MIT.
2004 (U.S.A) Managing for resilience in costal marine ecosystems Friday Harbor Laboratories.
2000 (Austria) Young Scientist Summer Program IIASA .
1999 (Canada) NATO ASI Mathematical problems arising from biology Fields Institute.
1997 (U.S.A.) 10th Complex system Summer school Santa Fe Institute.
1996 (Chile) 5th Summer school on complex systems Universidad de Chile.
1996 (Italy) Third Autumn workshop on mathematical ecology I.C.T.P.
1996 (Chile) Physiology of sensorial systems C.E.C.S.
1994 (Chile) Mechanisms of signal transduction on eucariotic cells Universidad de Chile.

TEACHING ACTIVITIES

2002 Theoretical Biology at Princeton University
2000 Introductory Biology at Princeton University
1996 Introductory Biology at P. Universidad Catolica de Chile
1995 Introductory Biology at P. Universidad Catolica de Chile

REFEREE ACTIVITIES

The American Naturalist, Journal Theoretical Biology, Theoretical Population Biology, Ecology, Mathematical Biosciences, Ecological Modelling.

INVITED SPEAKER

2006 Experimental & Theoretical Foundations of Evolution.
Session R7. APS March meeting, Baltimore, MD.

LIST OF PUBLICATIONS

1. Keymer JE , Galajda P, Muldoon C, Austin R (2006)
Experiments with nanofabricated 1D fitness landscapes.
PNAS (to be submitted)
2. Keymer JE , Endres RG, Skoge M, Meir Y, Wingreen N (2006)
Chemosensing in Escherichia coli: two regimes of two-state receptors.
PNAS 103 (6): 1786-1791.
3. Marquet PA, Abades S, Keymer JE & Zeballos H (2006)
Discontinuities in body size distributions: a view from the top.
In: C.RAllen & C.S. Holling (eds).
Cross-scale structure & discontinuities in ecosystems & other complex systems.
University of Chicago Press (in press).
4. Dobson A, Lodge D, Alder J, Cumming G, Keymer JE, McGlade J,
Mooney H, Rusak JA, Sala O, Wolters V, Wall D,
Winfrey R & Xenopoulos MA (2006)
Habitat loss, trophic collapse and the decline of ecosystem services.
ECOLOGY(in Press).
5. Kareiva P, Agard JBR, Alder J, Bennett E, Butler C, Carpenter S,
Cheung WWL, Cumming GS, Defries R, de Vries B, Dickinson,
RE Dobson A, Foley JA, Geoghegan J, Holland B, Kabat P,
Keymer JE, Kleidon A, Lodge D, Manson SM, McGlade J, Mooney H,
Parma AM, Pascual MA, Pereira HM, Rosegrant M, Ringler C,
Sala OE, Turner BL, van Vuuren D, Wall DH, Wilkinson P, & Wolters V. (2006)
State of the Art in Simulating Future Changes in Ecosystem Services.
In: Reid R, Scheffer M, & Alonso A (rev. eds.),
Millennium Ecosystem Assessment Chapter 4, Vol. 2.

6. Marquet PA, Keymer JE, Cofre H (2004) Breaking the stick in space: niche models, metacommunities, and patterns in the relative abundance of species.
In: T.M. Blackburn & K.J. Gaston (eds). *Macroecology: concepts and consequences*. Blackwell. pp. 64-84
7. Muller-Landau HC, Levin SA, Keymer JE (2003) Theoretical perspectives on evolution of long-distance dispersal and the example of specialized pests.
ECOLOGY 84 (8): 1957-1967.
8. Marquet PA, Velasco-Hernandez JX, Keymer JE (2003) Patch dynamics, habitat fragmentation and space in metapopulations.
In: Bradshaw, GA, Marquet PA (eds) *How Landscapes Change: Human Disturbance and Ecosystem Fragmentation in the Americas*. Springer.
9. Dushoff J, Worden L, Keymer J, Levin SA. (2002) Metapopulations, community assembly, and scale invariance in aspect space.
THEORETICAL POPULATION BIOLOGY 62 (4): 329-338.
10. Levin SA, Dushoff J, Keymer JE (2001) Community assembly and the emergence of ecosystem pattern.
SCIENTIA MARINA 65: 171-179 Suppl. 2.
11. Keymer JE, Marquet PA, Velasco-Hernandez JX, Levin SA. (2000) Extinction thresholds and metapopulation persistence in dynamic landscapes.
AMERICAN NATURALIST 156 (5): 478-494.
12. Lima M, Keymer JE, Jaksic FM (1999) El Nino-southern oscillation-driven rainfall variability and delayed density dependence cause rodent outbreaks in western South America: Linking demography and population dynamics.
AMERICAN NATURALIST 153 (5): 476-491.
13. Keymer JE, Gaete J, Kameid G, Alvarez J (1999).
Acetylcholinesterase and inhibitors: effects upon normal and regenerating nerves of the rat.
EUROPEAN JOURNAL OF NEUROSCIENCE 11 (3): 1049-1057.
14. Keymer JE, Marquet PA, Johnson AR (1998) Pattern formation in a patch occupancy metapopulation model: A cellular automata approach.
JOURNAL OF THEORETICAL BIOLOGY 194 (1): 79-90.