

## SIMON A. LEVIN

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### EDUCATION

Johns Hopkins University, Baltimore, MD	Mathematics B.A.	1961
University of Maryland, College Park	Mathematics Ph.D.	1964
University of California, Berkeley	Mathematics NSF postdoc	1964-65

### POSITIONS & EMPLOYMENT

#### Cornell University

1965-77	Assistant Professor to Associate Professor
1974-79	Chair, Section of Ecology and Systematics, Division of Biological Sciences
1977-92	Professor of Applied Mathematics and Ecology
1980-87	Director, Ecosystems Research Center
1987-90	Director, Center for Environmental Research
1990-92	Director, Program on Theoretical and Computational Biology
1985-92	Charles A. Alexander Professor of Biological Sciences
1992-	Adjunct Professor, Ecology and Evolutionary Biology; Center for Applied Mathematics

#### Princeton University

1992-	George Moffett Professor of Biology, Department of Ecology and Evolutionary Biology; Affiliated Faculty, Program in Applied and Computational Mathematics
1993-8	Founding Director, Princeton Environmental Institute
1994-	Affiliated Faculty, Princeton Environmental Institute Affiliated Faculty, Program in Applied and Computational Mathematics
2001-	Director, The Center for BioComplexity
2009-	Faculty, Quantitative and Computational Biology Program, Princeton University
2012-	Faculty Associate, Princeton Institute for International and Regional Studies (PIIRS)
2012-	Faculty Associate, Graduate Certificate in Computational and Information Science (PICSciE)
2014-	Affiliated Faculty, Science, Technology and Environmental Policy (STEP) Program

### SELECT OTHER EXPERIENCE & PROFESSIONAL MEMBERSHIPS

#### Major Honorary Societies

1992	Fellow, American Academy of Arts and Sciences
2000	Member, National Academy of Sciences
2003	Member, American Philosophical Society
2008	Foreign Member, Istituto Veneto di Scienze, Lettere ed Arti, Venice, Italy
2014	Foreign Member, Istituto Lombardo, Milan, Italy

#### Board of Directors

1979-	The Committee of Concerned Scientists, Vice-Chair (Mathematics)
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#### Science Boards

2009-	Advisory Board, International Network of Research on Coupled Human and Natural Systems (CHANS-Net)
2011-	Advisory Board, Santa Fe Institute, New Mexico (also: 1991-99; 2001-05; Co-Chair 2007-10)

2013- Advisory Panel (Mathematics and Complex Systems Approaches to Brain Cancer Program),  
McDonnell Foundation

## HONORS & AWARDS

### Major International Prizes

2004 A.H. Heineken Prize for Environmental Sciences, Royal Netherlands Academy of Arts and Sciences  
2005 Kyoto Prize in Basic Sciences, Inamori Foundation, Japan  
2010 Margalef Prize, Government of Catalonia  
2014 Tyler Prize for Environmental Achievement  
2014 Luca Pacioli Prize, Ca'Foscari University of Venice, Italy

### Major Society Awards

1998 MacArthur Award, Ecological Society of America  
1992 Fellow, American Association for the Advancement of Science (AAAS)  
1994 Distinguished Statistical Ecologist Award, International Association for Ecology (INTECOL)  
1998 Distinguished Service Citation of the Ecological Society of America  
2001 The First Okubo Lifetime Achievement Award, Society for Mathematical Biology and Japanese Society for Theoretical Biology  
2003 Distinguished Landscape Ecologist Award, U.S. Regional Association of the International Association for Landscape Ecology  
2006 I.E. Block Community Lecture Award, Society for Industrial and Applied Mathematics  
2007 Distinguished Scientist Award, American Institute of Biological Sciences  
2009 Fellow, Society for Industrial and Applied Mathematics  
2010 Eminent Ecologist Award, Ecological Society of America  
2011 National Associate, National Research Council of the National Academies  
2012 Fellow, Ecological Society of America

### Honorary Degrees

1990 Honorary Doctor of Sciences, Eastern Michigan University  
2004 Honorary Doctor of Humane Letters Honoris Causa, Whittier College  
2009 Honorary Doctor of Science, Michigan State University

### Fellowships

1962-64 NSF Predoctoral Fellow, University of Maryland, College Park  
1979-80 Guggenheim Fellow  
1983-84 Japan Society for the Promotion of Science Fellowship, Kyoto, Japan

### Publication Awards

1990 Best Publication Award in Landscape Ecology for 1990 (with D. Andow, P. Kareiva, A. Okubo), U.S. Chapter, International Association for Landscape Ecology  
2001 Outstanding Paper in the Discipline of Landscape Ecology Award for 2001 (with J. Keymer, P.A. Marquet, J.X. Velasco-Hernandez), U.S. Chapter, International Association for Landscape Ecology  
2001 Most Cited Paper in the Field of Ecology and Environment for the 1990s, Institute for Scientific Information  
2010 A Most Cited Paper 2005-2009 (with R. Durrett), Elsevier's Economics and Finance Journals  
2012 Co-author of Mercer Award-winning paper (with C. Staver and S. Archibald), published in *Ecology* (2011)  
2014 Co-author of President's Award for best paper in *The American Naturalist* (with C. Farrior et al. 2013)

### Other

2008- University Fellow, Resources for the Future  
2007- Beijer Fellow, Beijer Institute of Ecological Economics, Stockholm, Sweden  
2009 SIAM Fellow

2011	Distinguished Alumnus of the Year Award, University of Maryland, College of Computer, Mathematical, and Natural Sciences
2012	IIASA Honorary Scholar
2014	The Mathematical, Computational and Modeling Sciences Center at Arizona State University relaunched in honor of Simon A. Levin (The Simon A. Levin Mathematical, Computational, and Modeling Sciences Center)
2014	IIASA Distinguished Visiting Fellow

## LIST OF PUBLISHED WORK IN MYBIBLIOGRAPHY

<http://www.ncbi.nlm.nih.gov/pubmed/?term=levin+s+a>

## CURRENT RESEARCH SUPPORT

### National Science Foundation

01/01/2011-12/31/2015

Title: Dimensions: Biological Controls of Ocean C:N:P Ratios

Major Goals: Develop an understanding, through empirical and modeling work, of the control of the ratios of carbon and nitrogen, as well as phosphorus, in the oceans.

Role: Co-PI with Adam Martiny (University of California, Irvine)

### Army Research Office

08/17/2011-05/15/2015

Title: Coordination and Collective Decision Making

Major Goals: Develop an understanding, through empirical and modeling work, of the evolution of collective decision-making, especially collective motion.

Role: Co-PI with Iain D. Couzin (Princeton University) and Naomi E. Leonard (Princeton University)

### National Science Foundation

09/01/2011-08/31/2015

Title: The Evolution of Incentives and Social Structure under Imperfect Information

Major Goals: Develop an integrated approach, drawing on evolutionary theory and the economic theory of mechanism design, to the evolution of incentives and social structure under uncertainty.

Role: Co-PI with Erol Akçay (University of Pennsylvania)

### Arizona State University/NIH

09/15/2011-06/30/2015

Title: Modeling Anthropogenic Effects in the Spread of Infectious Diseases

Major Goals: Extend existing epidemiological models by formally incorporating decisions that people make affecting the introduction and spread of infectious diseases.

Role: Co-PI with Charles Perrings (Arizona State University)

### National Science Foundation

09/01/2012-08/31/2016

Title: CNH: Social-Ecological Complexity and Adaptation in Marine Systems

Major Goals: To understand how the behavior of fishermen is shaped by the ecosystems they harvest from, the technology they use to do so, and the societies they live in, with the overarching goal of using this information to design "bottom up" forms of management such as fishery cooperatives.

Role: Co-PI with James Watson (Stockholm Resilience Centre)

### U.S. Department of Homeland Security

09/24/2012-09/23/2015

04/2015

Title: Disease in Motion: Integrating Epidemic and Social Dynamics in the Control of Infectious Agents  
 Major Goals: An interdisciplinary effort to improve current best practice in Infectious Disease Modeling of Foreign Animal Disease Threats (FADT) and of spatiotemporal disease dynamics in general.  
 Role: Co-PI with Byran Grenfell (Princeton University)

### **Princeton University Grand Challenges**

3/01/13-02/28/15

Title: Informational Structure of Infectious Diseases

Major Goals: Seeks to explore key questions related to the information structure of infectious diseases including information affects disease transmission, how information from public authorities competes with private information and rumors to influence individual behaviors, how public authorities can exploit better understanding of the informational structure of epidemics to better time and target interventions, and how herd behavior influences the transmission of information on diseases.

Role: Co-PI with Ramanan Laxminarayan (Princeton University)

### **Army Research Office**

08/17/14-08/16/17

Title: Robustness and Adaptability in Complex Biological Systems

Major Goals: Continue and deepen research on robustness and adaptability in collective behavior.

Role: PI

### **University of Oslo/NordForsk**

01/01/2014-12/31/2016

Title: Resource-Based Green Growth Under Climate Change: Ecological and Socio-Economic Constraints (ResGreen)

Major Goals: Produce knowledge necessary to achieve green growth.

Role: Co-PI with Nils Stenseth (University of Oslo, Norway)

### **National Science Foundation**

09/01/14-08/31/18

Title: Coastal SEES Collaborative Research: Adaptations of Fish and Fishing Communities to Rapid Climate Velocities

Major Goals: Use dynamic range and statistical models with four decades of geo-referenced data on fisheries catch and fish biogeography to determine how fish populations are affected by the cumulative impacts of fishing, climate, and changing species interactions.

Role: Co-PI with Malin Pinsky (Rutgers University)