Stanford



Joan Roughgarden

Professor of Biology and of Geophysics, Emerita

Curriculum Vitae available Online

Bio

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Biology
- Professor, Biology

Publications

PUBLICATIONS

- **Evolutionarily Optimal Phage Life-History Traits: Burst Size vs. Lysis Time.** *Viruses*
  Roughgarden, J.
  2026; 18 (8)
- **Explaining sex: contrast between social and sexual selection.** *Biology of sex differences*
  Roughgarden, J.
  2025
- **Ideological Transparency and Scientific Rigor (Book Review)** *BIOSCIENCE*
  Book Review Authored by: Roughgarden, J.
  2025
- **Theory of host-microbe symbioses: Challenges and opportunities.** *Cell host & microbe*
  Ferretti, P., Martignoni, M. M., McManus, L. C., Sakal, T., Liaghat, A., Stevens, B., Dahlin, K. J., Souza, L. S., Cardon, Z. G., Silveira, C. B., Bordenstein, S. R., Roughgarden, J.
  2025; 33 (7): 1052-1056
- **Lytic/Lysogenic Transition as a Life-History Switch.** *Virus evolution*
  Roughgarden, J.
  2024; 10 (1): veae028
- **Holobiont Evolution: Population Theory for the Hologenome** *AMERICAN NATURALIST*
  Roughgarden, J.
  2023
- **The social selection alternative to sexual selection** *PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES*
  Roughgarden, J.
  2012; 367 (1600): 2294-2303
- **Teamwork, pleasure and bargaining in animal social behaviour** *JOURNAL OF EVOLUTIONARY BIOLOGY*
  Roughgarden, J.
  2012; 25 (7): 1454-1462

- **DIRECT BENEFITS OF GENETIC MOSAICISM AND INTRAORGANISMAL SELECTION: MODELING COEVOLUTION BETWEEN A LONG-LIVED TREE AND A SHORT-LIVED HERBIVORE** *EVOLUTION*
  Folse, H. J., Roughgarden, J.
  2012; 66 (4): 1091-1113

- **The role of discounting and dynamics in determining the economic efficiency of time-area closures for managing fishery bycatch** *THEORETICAL ECOLOGY*
  Armsworth, P. R., Block, B. A., Eagle, J., Roughgarden, J. E.
  2011; 4 (4): 513-526

- **The evolution of payoff matrices: providing incentives to cooperate** *PROCEEDINGS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES*
  Akcay, E., Roughgarden, J.
  2011; 278 (1715): 2198-2206

- **WHAT IS AN INDIVIDUAL ORGANISM? A MULTILEVEL SELECTION PERSPECTIVE** *QUARTERLY REVIEW OF BIOLOGY*
  Folse, H. J., Roughgarden, J.
  2010; 85 (4): 447-472

- **The economic efficiency of a time-area closure to protect spawning bluefin tuna** *JOURNAL OF APPLIED ECOLOGY*
  Armsworth, P. R., Block, B. A., Eagle, J., Roughgarden, J. E.
  2010; 47 (1): 36-46

- **A theory for the evolution of other-regard integrating proximate and ultimate perspectives** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Akcay, E., Van Cleve, J., Feldman, M. W., Roughgarden, J.
  2009; 106 (45): 19061-19066

- **The Perfect Family: Decision Making in Biparental Care** *PLOS ONE*
  Akcay, E., Roughgarden, J.
  2009; 4 (10)

- **Is there a general theory of community ecology?** *BIOLOGY & PHILOSOPHY*
  Roughgarden, J.
  2009; 24 (4): 521-529

- **Alternation of haploid and diploid generations: evolution by gamete amplification** *EVOLUTIONARY ECOLOGY RESEARCH*
  Iyer, P., Roughgarden, J.
  2009; 11 (1): 57-77

- **The Structure of Clines with Fitness-Dependent Dispersal** *AMERICAN NATURALIST*
  Armsworth, P. R., Roughgarden, J. E.
  2008; 172 (5): 648-657

- **Dioecy as a specialization promoting sperm delivery** *EVOLUTIONARY ECOLOGY RESEARCH*
  Iyer, P., Roughgarden, J.
  2008; 10 (6): 867-892

- **Gametic conflict versus contact in the evolution of anisogamy** *THEORETICAL POPULATION BIOLOGY*
  Iyer, P., Roughgarden, J.
  2008; 73 (4): 461-472

- **Extra-pair parentage: a new theory based on transactions in a cooperative game** *EVOLUTIONARY ECOLOGY RESEARCH*
  Akcay, E., Roughgarden, J.
  2007; 9 (8): 1223-1243

- **Extra-pair paternity in birds: review of the genetic benefits** *EVOLUTIONARY ECOLOGY RESEARCH*
  Akcay, E., Roughgarden, J.
  2007; 9 (5): 855-868

- **Challenging Darwin's theory of sexual selection** *DAEDALUS*

Roughgarden, J.
2007; 136 (2): 23-36

- **Negotiation of mutualism: rhizobia and legumes** *PROCEEDINGS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES*
  Akcay, E., Roughgarden, J.
  2007; 274 (1606): 25-32
- **Neither should competition be assumed** *TRENDS IN ECOLOGY & EVOLUTION*
  Akcay, E., Roughgarden, J.
  2007; 22 (1): 4-4
- **A hump-shaped density-area relationship for island lizards** *OIKOS*
  Buckley, L. B., Roughgarden, J.
  2006; 113 (2): 243-250
- **Climate, competition, and the coexistence of island lizards** *FUNCTIONAL ECOLOGY*
  Buckley, L. B., Roughgarden, J.
  2006; 20 (2): 315-322
- **Reproductive social behavior: Cooperative games to replace sexual selection** *SCIENCE*
  Roughgarden, J., Oishi, M., Akcay, E.
  2006; 311 (5763): 965-969
- **Lizard habitat partitioning on islands: the interaction of local and landscape scales** *JOURNAL OF BIOGEOGRAPHY*
  Buckley, L. B., Roughgarden, J.
  2005; 32 (12): 2113-2121
- **Effect of species interactions on landscape abundance patterns** *JOURNAL OF ANIMAL ECOLOGY*
  Buckley, L. B., Roughgarden, J.
  2005; 74 (6): 1182-1194
- **Disturbance induces the contrasting evolution of reinforcement and dispersiveness in directed and random movers** *EVOLUTION*
  Armsworth, P. R., Roughgarden, J. E.
  2005; 59 (10): 2083-2096
- **The impact of directed versus random movement on population dynamics and biodiversity patterns** *AMERICAN NATURALIST*
  Armsworth, P. R., Roughgarden, J. E.
  2005; 165 (4): 449-465
- **Biodiversity conservation - Effects of changes in climate and land use** *NATURE*
  Buckley, L. B., Roughgarden, J.
  2004; 430 (6995)
- **Food hoarding: future value in optimal foraging decisions** *ECOLOGICAL MODELLING*
  Gerber, L. R., Reichman, O. J., Roughgarden, J.
  2004; 175 (1): 77-85
- **A framework for assessing the relative vulnerability of species to land-use change** *ECOLOGICAL APPLICATIONS*
  Pereira, H. M., Daily, G. C., Roughgarden, J.
  2004; 14 (3): 730-742
- **Causes of coral reef degradation - Response** *SCIENCE*
  Hughes, T. P., Baird, A. H., Bellwood, D. R., Connolly, S. R., Folke, C., Grosberg, R., Hoegh-Guldberg, O., Jackson, J. B., Kleypas, J., Lough, J. M., Marshall, P., Nystrom, M., Palumbi, et al
  2003; 302 (5650): 1503-1504
- **Climate change, human impacts, and the resilience of coral reefs** *SCIENCE*
  Hughes, T. P., Baird, A. H., Bellwood, D. R., Card, M., Connolly, S. R., Folke, C., Grosberg, R., Hoegh-Guldberg, O., Jackson, J. B., Kleypas, J., Lough, J. M., Marshall, P., Nystrom, et al
  2003; 301 (5635): 929-933

- **The economic value of ecological stability** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Armsworth, P. R., Roughgarden, J. E.
  2003; 100 (12): 7147-7151
- **Socially stable territories: The negotiation of space by interacting foragers** *AMERICAN NATURALIST*
  Pereira, H. M., Bergman, A., Roughgarden, J.
  2003; 161 (1): 143-152
- **Ecology - Economic reasons for conserving wild nature** *SCIENCE*
  Balmford, A., Bruner, A., Cooper, P., Costanza, R., Farber, S., Green, R. E., Jenkins, M., Jefferiss, P., Jessamy, V., Madden, J., Munro, K., Myers, N., Naeem, et al
  2002; 297 (5583): 950-953
- **Patchy populations in stochastic environments: Critical number of patches for persistence** *AMERICAN NATURALIST*
  Bascompte, J., Possingham, H., Roughgarden, J.
  2002; 159 (2): 128-137
- **Monogamy, polygyny and interspecific interactions in the lizards Anolis pogus and Anolis gingivinus** *CARIBBEAN JOURNAL OF SCIENCE*
  Pereira, H. M., Loarie, S. R., Roughgarden, J.
  2002; 38 (1-2): 132-136
- **Distributions of larval rockfishes Sebastes spp. across nearshore fronts in a coastal upwelling region** *MARINE ECOLOGY PROGRESS SERIES*
  Bjorkstedt, E. P., Rosenfeld, L. K., Grantham, B. A., Shkedy, Y., Roughgarden, J.
  2002; 242: 215-228
- **A latitudinal gradient in recruitment of intertidal invertebrates in the northeast Pacific Ocean** *ECOLOGY*
  Connolly, S. R., Menge, B. A., Roughgarden, J.
  2001; 82 (7): 1799-1813
- **An invitation to ecological economics.** *Trends in ecology & evolution*
  Armsworth, P. R., Roughgarden, J. E.
  2001; 16 (5): 229-234
- **Ecological economic theory for managing ecosystem services** *41st Symposium of the British-Ecological-Society*
  Roughgarden, J., Armsworth, R. R.
  BLACKWELL SCIENCE PUBL.2001: 337–356
- **Species diversity and biomass stability** *AMERICAN NATURALIST*
  Hughes, J. B., Roughgarden, J.
  2000; 155 (5): 618-627
- **Theory of marine communities: Competition, predation, and recruitment-dependent interaction strength** *ECOLOGICAL MONOGRAPHS*
  Connolly, S. R., Roughgarden, J.
  1999; 69 (3): 277-296
- **Increased recruitment of northeast Pacific barnacles during the 1997 El Nino** *LIMNOLOGY AND OCEANOGRAPHY*
  Connolly, S. R., Roughgarden, J.
  1999; 44 (2): 466-469
- **Ecological science and the human predicament** *SCIENCE*
  Bazzaz, F., Ceballos, G., Davis, M., Dirzo, R., Ehrlich, P. R., Eisner, T., Levin, S., Lawton, J. H., Lubchenco, J., Matson, P. A., Mooney, H. A., Raven, P. H., Roughgarden, et al
  1998; 282 (5390): 879-879
- **A range extension for the volcano barnacle, Tetraclita rubescens** *CALIFORNIA FISH AND GAME*
  Connolly, S. R., Roughgarden, J.
  1998; 84 (4): 182-183

- **Aggregate community properties and the strength of species' interactions** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Hughes, J. B., Roughgarden, J.
  1998; 95 (12): 6837-6842
- **Theory of marine communities: The intermediate disturbance hypothesis** *ECOLOGY*
  Dial, R., Roughgarden, J.
  1998; 79 (4): 1412-1424
- **A latitudinal gradient in northeast Pacific intertidal community structure: Evidence for an oceanographically based synthesis of marine community theory** *AMERICAN NATURALIST*
  Connolly, S. R., Roughgarden, J.
  1998; 151 (4): 311-326
- **How to manage fisheries** *International Meeting on the State of Fisheries*
  Roughgarden, J.
  ECOLOGICAL SOC AMER.1998: S160–S164
- **Testing predictions of foraging theory for a sit-and-wait forager, Anolis gingivinus** *BEHAVIORAL ECOLOGY*
  Shafir, S., Roughgarden, J.
  1998; 9 (1): 74-84
- **Barnacle recruitment and population dynamics predicted from coastal upwelling** *OIKOS*
  Shkedy, Y., Roughgarden, J.
  1997; 80 (3): 487-498
- **A metapopulation model with private property and a common pool** *ECOLOGICAL ECONOMICS*
  Brown, G., Roughgarden, J.
  1997; 22 (1): 65-71
- **Sampling effects and the estimation of food-web properties** *ECOLOGY*
  Goldwasser, L., Roughgarden, J.
  1997; 78 (1): 41-54
- **Natural history observations of Anolisomyia rufianalis (Diptera: Sarcophagidae) infesting Anolis lizards in a rain forest canopy.** *ENVIRONMENTAL ENTOMOLOGY*
  Dial, R., Roughgarden, J.
  1996; 25 (6): 1325-1328
- **Larval transport and population dynamics of intertidal barnacles: A coupled benthic/oceanic model** *ECOLOGICAL MONOGRAPHS*
  Alexander, S. E., Roughgarden, J.
  1996; 66 (3): 259-275
- **Why fisheries collapse and what to do about it** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Roughgarden, J., Smith, F.
  1996; 93 (10): 5078-5083
- **EXPERIMENTAL REMOVAL OF INSECTIVORES FROM RAIN-FOREST CANOPY - DIRECT AND INDIRECT EFFECTS** *ECOLOGY*
  Dial, R., Roughgarden, J.
  1995; 76 (6): 1821-1834
- **DETECTING UPWELLING ALONG THE CENTRAL COAST OF CALIFORNIA DURING AN EL-NINO YEAR USING HF-RADAR** *CONTINENTAL SHELF RESEARCH*
  Shkedy, Y., Fernandez, D., Teague, C., VESECKY, J., Roughgarden, J.
  1995; 15 (7): 803-814
- **DESCRIPTIONS OF THE LARVAE OF TETRACLITA-RUBESCENS AND MEGABALANUS-CALIFORNICUS WITH A COMPARISON OF THE COMMON BARNACLE LARVAE OF THE CENTRAL CALIFORNIA COAST** *JOURNAL OF CRUSTACEAN BIOLOGY*
  Miller, K. M., Roughgarden, J.

1994; 14 (3): 579-600

- **POPULATION CYCLING IN SPACE-LIMITED ORGANISMS SUBJECT TO DENSITY-DEPENDENT PREDATION** *AMERICAN NATURALIST*
  Possingham, H. P., Tuljapurkar, S., Roughgarden, J., Wilks, M.
  1994; 143 (4): 563-582

- **DYNAMICS OF THE ROCKY INTERTIDAL ZONE WITH REMARKS ON GENERALIZATION IN ECOLOGY** *Royal-Soc Discussion Meeting: Generalizing Across Marine and Terrestrial Ecology*
  Roughgarden, J., Pennington, T., Alexander, S.
  ROYAL SOC LONDON.1994: 79–85

- **THE EFFECT OF MEMORY LENGTH ON THE FORAGING BEHAVIOR OF A LIZARD** *3rd International Conference on Simulation of Adaptive Behavior: From Animals to Animats 3 (SAB94)*
  Shafir, S., Roughgarden, J.
  MIT PRESS.1994: 221–225

- **CONSTRUCTION AND ANALYSIS OF A LARGE CARIBBEAN FOOD WEB** *ECOLOGY*
  Goldwasser, L., Roughgarden, J.
  1993; 74 (4): 1216-1233

- **UPWELLING AND RELAXATION EVENTS INFERRED FROM HIGH-FREQUENCY RADAR MEASUREMENTS OF COASTAL OCEAN SURFACE CURRENTS** *13th Annual International Geoscience and Remote Sensing Symposium (IGARSS 93)*
  Fernandez, D. M., Teague, C. C., Vesecky, J. F., ROUGHGARDEN, J. D.
  IEEE.1993: 1931–1933

- **THE PARASITES OF ANOLIS LIZARDS IN THE NORTHERN LESSER ANTILLES .1. PATTERNS OF DISTRIBUTION AND ABUNDANCE** *OECOLOGIA*
  Dobson, A. P., PACALA, S. V., ROUGHGARDEN, J. D., CARPER, E. R., Harris, E. A.
  1992; 91 (1): 110-117

- **PREDATION ACROSS SPATIAL SCALES IN HETEROGENEOUS ENVIRONMENTS** *THEORETICAL POPULATION BIOLOGY*
  McLaughlin, J. F., Roughgarden, J.
  1992; 41 (3): 277-299

- **WHAT DOES REMOTE-SENSING DO FOR ECOLOGY** *ECOLOGY*
  Roughgarden, J., Running, S. W., Matson, P. A.
  1991; 72 (6): 1918-1922

- **PATTERN AND STABILITY IN PREDATOR PREY COMMUNITIES - HOW DIFFUSION IN SPATIALLY-VARIABLE ENVIRONMENTS AFFECTS THE LOTKA-VOLTERRA MODEL** *THEORETICAL POPULATION BIOLOGY*
  McLaughlin, J. F., Roughgarden, J.
  1991; 40 (2): 148-172

- **THE EVOLUTION OF SEX** *AMERICAN NATURALIST*
  Roughgarden, J.
  1991; 138 (4): 934-953

- **RULES OF THUMB** *BEHAVIORAL AND BRAIN SCIENCES*
  Roughgarden, J.
  1991; 14 (1): 104-104

- **CROSS-SHELF TRANSPORT CAUSES RECRUITMENT TO INTERTIDAL POPULATIONS IN CENTRAL CALIFORNIA** *LIMNOLOGY AND OCEANOGRAPHY*
  Farrell, T. M., BRACHER, D., Roughgarden, J.
  1991; 36 (2): 279-288

- **COLLISIONS OF UPWELLING FRONTS WITH THE INTERTIDAL ZONE - THE CAUSE OF RECRUITMENT PULSES IN BARNACLE POPULATIONS OF CENTRAL CALIFORNIA** *ACTA OECOLOGICA-INTERNATIONAL JOURNAL OF ECOLOGY*
  Roughgarden, J., Pennington, J. T., Stoner, D., Alexander, S., Miller, K.
  1991; 12 (1): 35-51

- **SPATIAL POPULATION-DYNAMICS OF A MARINE ORGANISM WITH A COMPLEX LIFE-CYCLE** *ECOLOGY*
  Possingham, H. P., Roughgarden, J.
  1990; 71 (3): 973-985
- **OPTIMAL BODY SIZE IN LESSER ANTILLEAN ANOLIS LIZARDS - A MECHANISTIC APPROACH** *ECOLOGICAL MONOGRAPHS*
  NAGANUMA, K. H., ROUGHGARDEN, J. D.
  1990; 60 (2): 239-256
- **USE OF HIGH-FREQUENCY RADAR FOR THE MEASUREMENT OF OCEAN SURFACE CURRENTS** *10TH ANNUAL INTERNATIONAL GEOSCIENCE AND REMOTE SENSING SYMPOSIUM : REMOTE SENSING SCIENCE FOR THE NINETIES*
  Fernandez, D. M., Vesecky, J. F., Roughgarden, J., Teague, C. C., NAPOLITANO, D. J.
  I E E E.1990: 715–717
- **POPULATION-DYNAMICS AND PARASITIC CASTRATION - TEST OF A MODEL** *AMERICAN NATURALIST*
  Blower, S., Roughgarden, J.
  1989; 134 (6): 848-858
- **AVIAN PREDATION ON ANOLIS LIZARDS IN THE NORTHEASTERN CARIBBEAN - AN INTER-ISLAND CONTRAST** *ECOLOGY*
  McLaughlin, J. F., Roughgarden, J.
  1989; 70 (3): 617-628
- **COMPARISON OF LARVAL AND ADULT STAGES OF CHTHAMALUS-DALLI AND CHTHAMALUS-FISSUS (CIRRIPEDIA, THORACICA)** *JOURNAL OF CRUSTACEAN BIOLOGY*
  Miller, K. M., Blower, S. M., Hedgecock, D., Roughgarden, J.
  1989; 9 (2): 242-256
- **PARASITES DETECT HOST SPATIAL PATTERN AND DENSITY - A FIELD EXPERIMENTAL-ANALYSIS** *OECOLOGIA*
  Blower, S. M., Roughgarden, J.
  1989; 78 (1): 138-141
- **RECRUITMENT DYNAMICS IN COMPLEX LIFE-CYCLES** *SCIENCE*
  Roughgarden, J., Gaines, S., Possingham, H.
  1988; 241 (4872): 1460-1466
- **PARASITIC CASTRATION - HOST SPECIES PREFERENCES, SIZE-SELECTIVITY AND SPATIAL HETEROGENEITY** *OECOLOGIA*
  Blower, S. M., Roughgarden, J.
  1988; 75 (4): 512-515
- **POPULATION-DYNAMICS AND PARASITIC CASTRATION - A MATHEMATICAL-MODEL** *AMERICAN NATURALIST*
  Blower, S., Roughgarden, J.
  1987; 129 (5): 730-754
- **FISH IN OFFSHORE KELP FORESTS AFFECT RECRUITMENT TO INTERTIDAL BARNACLE POPULATIONS** *SCIENCE*
  Gaines, S. D., Roughgarden, J.
  1987; 235 (4787): 479-481
- **THE COMPETITIVE-EXCLUSION PRINCIPLE - REPLY** *TRENDS IN ECOLOGY & EVOLUTION*
  Roughgarden, J.
  1986; 1 (5): 132-132
- **INTERSPECIFIC COMPETITION AMONG METAPOPULATIONS WITH SPACE-LIMITED SUBPOPULATIONS** *THEORETICAL POPULATION BIOLOGY*
  Iwasa, Y., Roughgarden, J.
  1986; 30 (2): 194-214
- **DYNAMICS OF A METAPOPULATION WITH SPACE-LIMITED SUBPOPULATIONS** *THEORETICAL POPULATION BIOLOGY*
  Roughgarden, J., Iwasa, Y.
  1986; 29 (2): 235-261
- **LARVAL SETTLEMENT RATE - A LEADING DETERMINANT OF STRUCTURE IN AN ECOLOGICAL COMMUNITY OF THE MARINE INTERTIDAL ZONE** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*

Gaines, S., Roughgarden, J.
1985; 82 (11): 3707-3711

- **DEMOGRAPHIC-THEORY FOR AN OPEN MARINE POPULATION WITH SPACE-LIMITED RECRUITMENT** *ECOLOGY*
  Roughgarden, J., Iwasa, Y., Baxter, C.
  1985; 66 (1): 54-67
- **A MODEL FOR THE DYNAMICS OF AN ANNUAL PLANT-POPULATION** *THEORETICAL POPULATION BIOLOGY*
  Holsinger, K. E., Roughgarden, J.
  1985; 28 (3): 288-313
- **POPULATION EXPERIMENTS WITH THE ANOLIS LIZARDS OF ST-MAARTEN AND ST-EUSTATIUS** *ECOLOGY*
  Pacala, S. W., Roughgarden, J.
  1985; 66 (1): 129-141
- **A THEORY OF FAUNAL BUILDUP FOR COMPETITION COMMUNITIES** *EVOLUTION*
  Rummel, J. D., Roughgarden, J.
  1985; 39 (5): 1009-1033
- **EFFECTS OF REDUCED PERCH-HEIGHT SEPARATION ON COMPETITION BETWEEN 2 ANOLIS LIZARDS** *ECOLOGY*
  Rummel, J. D., Roughgarden, J.
  1985; 66 (2): 430-444
- **GROWTH, MORPHOLOGY, AND LABORATORY CULTURE OF LARVAE OF BALANUS-GLANDULA (CIRRIPEDIA, THORACICA)** *JOURNAL OF CRUSTACEAN BIOLOGY*
  Brown, S. K., Roughgarden, J.
  1985; 5 (4): 574-590
- **SPATIAL VARIATION IN LARVAL CONCENTRATIONS AS A CAUSE OF SPATIAL VARIATION IN SETTLEMENT FOR THE BARNACLE, BALANUS-GLANDULA** *OECOLOGIA*
  Gaines, S., Brown, S., Roughgarden, J.
  1985; 67 (2): 267-272
- **STORAGE-ALLOCATION IN SEASONAL RACES OF AN ANNUAL PLANT - OPTIMAL VERSUS ACTUAL ALLOCATION** *ECOLOGY*
  Chiariello, N., Roughgarden, J.
  1984; 65 (4): 1290-1301
- **SHOOT ROOT BALANCE OF PLANTS - OPTIMAL-GROWTH OF A SYSTEM WITH MANY VEGETATIVE ORGANS** *THEORETICAL POPULATION BIOLOGY*
  Iwasa, Y., Roughgarden, J.
  1984; 25 (1): 78-105
- **CONTROL OF ARTHROPOD ABUNDANCE BY ANOLIS LIZARDS ON ST-EUSTATIUS (NETH ANTILLES)** *OECOLOGIA*
  Pacala, S., Roughgarden, J.
  1984; 64 (2): 160-162
- **ENERGY ALLOCATION PATTERNS OF THE CALIFORNIA GRASSLAND ANNUALS PLANTAGO-ERECTA AND CLARKIA-RUBICUNDA** *ECOLOGY*
  King, D., Roughgarden, J.
  1983; 64 (1): 16-24
- **COMPETITION AND THEORY IN COMMUNITY ECOLOGY** *AMERICAN NATURALIST*
  Roughgarden, J.
  1983; 122 (5): 583-601
- **FORAGING BY PASSERINE BIRDS AND ANOLIS LIZARDS ON ST-EUSTATIUS (NETH ANTILLES) - IMPLICATIONS FOR INTERCLASS COMPETITION, AND PREDATION** *OECOLOGIA*
  Adolph, S. C., Roughgarden, J.
  1983; 56 (2-3): 313-317

- **SOME DIFFERENCES BETWEEN INVASION-STRUCTURED AND COEVOLUTION-STRUCTURED COMPETITIVE COMMUNITIES - A PRELIMINARY THEORETICAL-ANALYSIS** *OIKOS*
  Rummel, J. D., Roughgarden, J.
  1983; 41 (3): 477-486
- **MULTIPLE SWITCHES BETWEEN VEGETATIVE AND REPRODUCTIVE GROWTH IN ANNUAL PLANTS** *THEORETICAL POPULATION BIOLOGY*
  King, D., Roughgarden, J.
  1982; 21 (2): 194-204
- **RESOURCE PARTITIONING AND INTERSPECIFIC COMPETITION IN 2 2-SPECIES INSULAR ANOLIS LIZARD COMMUNITIES** *SCIENCE*
  Pacala, S., Roughgarden, J.
  1982; 217 (4558): 444-446
- **THE EVOLUTION OF RESOURCE PARTITIONING IN A MULTIDIMENSIONAL RESOURCE SPACE** *THEORETICAL POPULATION BIOLOGY*
  Pacala, S. W., Roughgarden, J.
  1982; 22 (1): 127-145
- **THE ROLE OF RAPID DISPERSAL IN THE POPULATION-DYNAMICS OF COMPETITION** *THEORETICAL POPULATION BIOLOGY*
  Shigesada, N., Roughgarden, J.
  1982; 21 (3): 353-372
- **GRADED ALLOCATION BETWEEN VEGETATIVE AND REPRODUCTIVE GROWTH FOR ANNUAL PLANTS IN GROWING SEASONS OF RANDOM LENGTH** *THEORETICAL POPULATION BIOLOGY*
  King, D., Roughgarden, J.
  1982; 22 (1): 1-16
- **SPATIAL HETEROGENEITY AND INTERSPECIFIC COMPETITION** *THEORETICAL POPULATION BIOLOGY*
  Pacala, S. W., Roughgarden, J.
  1982; 21 (1): 92-113
- **THE COMMUNITY STRUCTURE OF CORAL-REEF FISHES** *AMERICAN NATURALIST*
  ANDERSON, G. R., EHRLICH, A. H., Ehrlich, P. R., ROUGHGARDEN, J. D., Russell, B. C., TALBOT, F. H.
  1981; 117 (4): 476-495
- **RESOURCE PARTITIONING OF SPACE AND ITS RELATIONSHIP TO BODY-TEMPERATURE IN ANOLIS LIZARD POPULATIONS** *OECOLOGIA*
  Roughgarden, J., Porter, W., Heckel, D.
  1981; 50 (2): 256-264
- **A SPECIES NEAR ITS EQUILIBRIUM SIZE IN A FLUCTUATING ENVIRONMENT CAN EVOLVE A LOWER INTRINSIC RATE OF INCREASE** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA-BIOLOGICAL SCIENCES*
  Heckel, D. G., Roughgarden, J.
  1980; 77 (12): 7497-7500
- **LOCAL CONCEPT OF STRUCTURAL HOMOLOGY FOR ECOLOGICAL COMMUNITIES WITH EXAMPLES FROM SIMPLE COMMUNITIES OF WEST-INDIAN ANOLIS LIZARDS** *FORTSCHRITTE DER ZOOLOGIE*
  Roughgarden, J.
  1979; 25 (2-3): 149-157
- **TECHNIQUE FOR ESTIMATING THE SIZE OF LIZARD POPULATIONS** *ECOLOGY*
  Heckel, D. G., Roughgarden, J.
  1979; 60 (5): 966-975
- **INFLUENCE OF COMPETITION ON PATCHINESS IN A RANDOM ENVIRONMENT** *THEORETICAL POPULATION BIOLOGY*
  Roughgarden, J.
  1978; 14 (2): 185-203
- **ENVIRONMENTAL DETERMINANTS OF SIZE IN SOLITARY POPULATIONS OF WEST-INDIAN ANOLIS LIZARDS** *OIKOS*
  ROUGHGARDEN, J. D., Fuentes, E.
  1977; 29 (1): 44-51

- **SPECIES PACKING IN 2 DIMENSIONS** *AMERICAN NATURALIST*
  Yoshiyama, R. M., Roughgarden, J.
  1977; 111 (977): 107-121
- **RESOURCE PARTITIONING AMONG COMPETING SPECIES - CO-EVOLUTIONARY APPROACH** *THEORETICAL POPULATION BIOLOGY*
  Roughgarden, J.
  1976; 9 (3): 388-424
- **SPECIES PACKING AND PREDATION PRESSURE** *ECOLOGY*
  Roughgarden, J., Feldman, M.
  1975; 56 (2): 489-492
- **POPULATIONS STATIONARY DISTRIBUTION AND CHANCE OF EXTINCTION IN A STOCHASTIC ENVIRONMENT WITH REMARKS ON THEORY OF SPECIES PACKING** *THEORETICAL POPULATION BIOLOGY*
  Feldman, M. W., Roughgarden, J.
  1975; 7 (2): 197-207
- **SIMPLE MODEL FOR POPULATION-DYNAMICS IN STOCHASTIC ENVIRONMENTS** *AMERICAN NATURALIST*
  Roughgarden, J.
  1975; 109 (970): 713-736
- **EVOLUTION OF MARINE SYMBIOSIS - SIMPLE COST-BENEFIT MODEL** *ECOLOGY*
  Roughgarden, J.
  1975; 56 (5): 1201-1208
- **POPULATION-DYNAMICS IN A STOCHASTIC ENVIRONMENT - SPECTRAL THEORY FOR LINEARIZED N-SPECIES LOTKA-VOLTERRA COMPETITION EQUATIONS** *THEORETICAL POPULATION BIOLOGY*
  Roughgarden, J.
  1975; 7 (1): 1-12