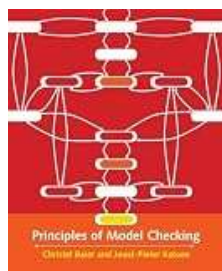


Science Collection



Principles of Model Checking

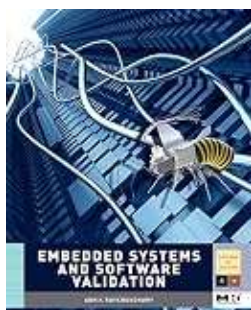
Author: Christel Baier and Joost-Pieter Katoen

Publisher: The MIT Press

Overview: This book offers a comprehensive introduction to model checking, an automated technique that systematically verifies whether a model of a computer or software system satisfies desired properties such as deadlock freedom, invariants, and request-response properties. It serves as both a classroom text and a valuable reference for researchers and practitioners in verification and debugging.

Acc. No: 103589

Call No: 004.24 BAI-P



Embedded Systems and Software Validation

Author: Abhik Roychoudhury

Publisher: Morgan Kaufmann Publishers

Overview: Abhik Roychoudhury presents formal methods, debugging techniques, and testing frameworks designed for complex, heterogeneous embedded hardware and software architectures. Focusing on safety-critical applications in avionics, automotive electronics, and biomedical devices, Roychoudhury addresses performance verification, hardware/software co-design validation, mapping, and software reliability.

Acc. No: 103530

Call No: 004.1 ROY-E



Everything About Artificial Intelligence for Anyone

Author: Mark Teleki

Publisher: InkSpire Books

Overview: Mark Teleki offers an accessible, non-technical introduction to artificial intelligence and its practical applications across modern industries. The work explores foundational concepts, real-world industry transformations, and practical AI tools to help general readers, students, and professionals integrate automated technologies into daily workflows.

Acc. No: 103494

Call No: 006.3 TEL-E



Bharat Ka Vanyajeevan Itihas

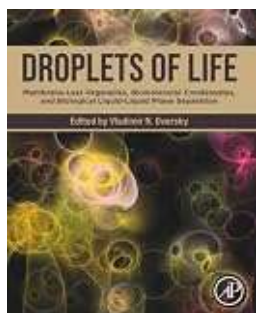
Author: Mahesh Rangarajan and Naved Akber

Publisher: Vani Prakashan

Overview: The book examines the historical and cultural intersection of wildlife, forests, and human society across the Indian subcontinent. The monograph analyses the ecological, socio-economic, and policy transformations in wildlife conservation and forestry management from ancient ecological practices through colonial exploitation to post-independence environmental protection.

Acc. No: 103714 - 103715

Call No: 508.5 RAN-B



Droplets of Life: Membrane-Less Organelles, Biomolecular Condensates, and Biological Liquid-Liquid Phase Separation

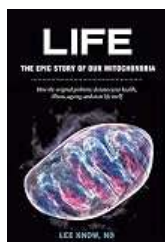
Editor: Vladimir N Uversky

Publisher: Academic Press

Overview: This book provides foundational information on the biophysics, biogenesis, structure, functions, and roles of membrane-less organelles and biomolecular condensates. It brings together international experts to examine liquid-liquid phase separation across cell biology, biochemistry, and biophysics, including its implications for health and disease.

Acc. No: 103551

Call No: [571.65 DRO-D](#)



Ecology: The Economy of Nature

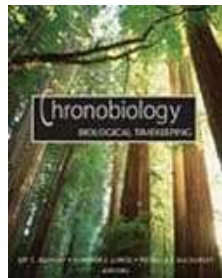
Author: Rick Relyea and Robert Ricklefs

Publisher: Macmillan Learning

Overview: Lee Know examines the evolutionary origins, cellular bioenergetics, and metabolic significance of mitochondria. Know links mitochondrial dysfunction to chronic diseases, aging, and degenerative conditions while presenting science-based nutritional and lifestyle strategies to optimize cellular energy production.

Acc. No: 103517

Call No: [571.657 KNO-L](#)



Chronobiology: Biological Timekeeping

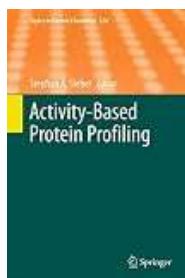
Editor: Jay C. Dunlap, Jennifer J. Loros and Patricia J. DeCoursey

Publisher: Sinauer Associates

Overview: It provides an interdisciplinary overview of the cellular, genetic, physiological, and behavioural mechanisms behind biological clocks. The text explores circadian and circannual rhythmicity across plants, microbes, animals, and humans, detailing how living organisms adapt to Earth's regular geophysical cycles and how biological timekeeping impacts ecology, medicine, and human welfare.

Acc. No: 103518

Call No: [571.77 CHR-C](#)



Activity-Based Protein Profiling

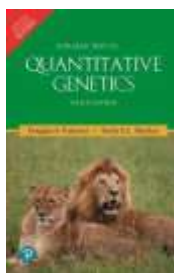
Author: Stephan A. Sieber

Publisher: Springer Heidelberg

Overview: The book presents a comprehensive overview of chemical biology methodologies designed to monitor functional protein states within complex biological systems. The volume examines key techniques including photoaffinity labeling, natural product target identification, metabolomic integration, and the application of chemical probes to microbial pathogenesis.

Acc. No: 103529

Call No: [572.6 ACT-A](#)



Introduction to Quantitative Genetics

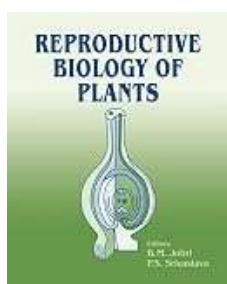
Author: Douglas S. Falconer and Trudy F.C. Mackay

Publisher: Pearson India Education

Overview: Introduction to Quantitative Genetics by D.S. Falconer provides a foundational overview of the genetic principles governing continuous phenotypic variation in populations. The text systematically examines heritability, genetic variance components, selection responses, and the segregation of genes driving quantitative trait dynamics in biological and breeding contexts.

Acc. No: 103693

Call No: [575.1 FAL-I](#)



Reproductive Biology of Plants

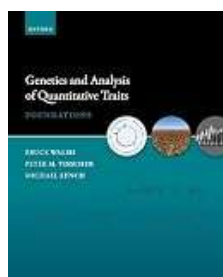
Editor: B. M. Johri and P. S. Srivastava

Publisher: Springer-Verlag and Narosa Publishing House

Overview: This book provides a comparative account of reproduction across all major plant and plant-like groups from viruses, bacteria, and algae to bryophytes, gymnosperms, and angiosperms with each chapter written by a specialist. It emphasizes the vast range from simplicity to complexity in reproductive structure and function across organisms.

Acc. No: 103595

Call No: [575.6 REP-R](#)



Genetics and Analysis of Quantitative Traits: Foundations

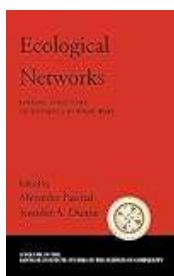
Editor: Bruce Walsh, Peter M. Visscher and Michael Lynch

Publisher: Oxford University Press

Overview: Bruce Walsh offers a comprehensive mathematical and statistical foundation for quantitative genetics and genomics. The volume covers Fisher's variance decomposition, lineage- and marker-based relatedness, line-cross analysis, QTL mapping, GWAS, and quantitative genomics while integrating linear mixed models, Bayesian inference, and false discovery rate methods.

Acc. No: 103515

Call No: [576.5 WAL-G](#)



Ecological Networks: Linking Structure to Dynamics in Food Webs

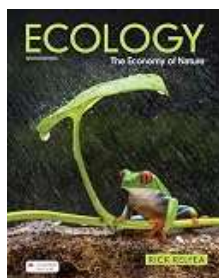
Editor: Mercedes Pascual and Jennifer A Dunne

Publisher: Oxford University Press

Overview: It explores the architectural patterns and dynamic behaviour of complex ecological networks. Based on a Santa Fe Institute workshop, the volume integrates empirical food web data with non-linear complex systems theory to examine how network topology influences ecological stability, biodiversity persistence, and system resilience. [Read more.](#)

Acc. No: 103514

Call No: [577.16 ECO-E](#)



Ecology: The Economy of Nature

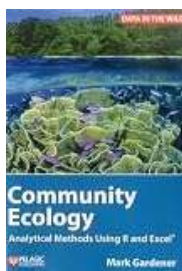
Author: Rick Relyea and Robert Ricklefs

Publisher: Macmillan Learning

Overview: Rick Relyea provides a quantitative and evolutionary introduction to ecological principles, organisms, and ecosystem dynamics. The textbook integrates mathematical problem-solving tools, empirical data analysis, and conceptual frameworks to explore population dynamics, community interactions, evolutionary adaptation, and broad biospheric processes.

Acc. No: 103516

Call No: [577 REL-E](#)



Community Ecology: Analytical Methods Using R and Excel

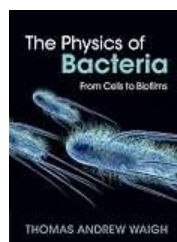
Author: Mark Gardener

Publisher: Pelagic Publishing

Overview: This practical guide provides a step-by-step methodology for analysing plant and animal communities using R and Excel, covering essential techniques such as diversity indices, similarity and cluster analysis, ordination, and multivariate methods. It is designed for undergraduate and postgraduate students and researchers seeking to master community ecology data analysis with accessible, open-source tools.

Acc. No: 103657

Call No: [577.820285 GAR-C](#)



The Physics of Bacteria: From Cells to Biofilms

Author: Thomas Andrew Waigh

Publisher: Cambridge University Press

Overview: This book provides a modern introduction to bacterial biophysics, applying the tools of physics to investigate the quantitative principles underlying bacterial cellular systems. It covers key physical techniques, single-cell phenomena, and the physical perspectives on interacting bacteria and biofilms, slimes, and capsules.

Acc. No: 103658

Call No: [579.3 WAI-P](#)



Plant Evolution: An Introduction to the History of Life

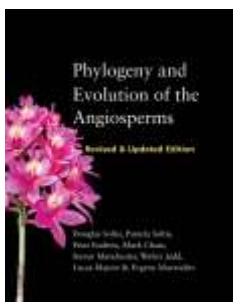
Author: Karl J. Niklas

Publisher: The University of Chicago Press

Overview: The book examines the evolutionary mechanisms unique to plants, addressing the organismal biases prevalent in zoocentric evolutionary biology. Synthesizing molecular genetics, developmental morphology, paleobotany, and biomechanics, Niklas provides a comprehensive framework for understanding plant diversification and its foundational role in earth's evolutionary history. [Read more.](#)

Acc. No: 103691

Call No: [581.38 NIK-P](#)



Phylogeny and Evolution of the Angiosperms: Revised and Updated Edition

Author: Douglas Soltis, Pamela Soltis et al.

Publisher: The University of Chicago Press

Overview: Phylogeny and Evolution of the Angiosperms by Douglas E. Soltis et al. provides a comprehensive synthesis of flowering plant diversification, integrating molecular phylogenetics with morphological, chemical, and paleobotanical evidence. The volume presents a modern phylogenetic framework that reevaluates long-standing evolutionary hypotheses regarding the origin, lineage relationships, and ecological dominance of angiosperms. [Read more.](#)

Acc. No: 103692

Call No: 581.3 SOL-P



The Butterfly Season: On Beginnings, Endings and the Life in Between

Author: Lea Korsgaard

Publisher: Academic Press

Overview: The Butterfly Season: On Beginnings, Endings and the Life in Between by Lea Korsgaard chronologically details a year-long quest to locate and observe all sixty-four species of butterfly's native to Denmark. Interweaving field observations and hand-drawn illustrations with existential reflections on mythology and science, the memoir explores themes of transformation, ecological wonder, and personal renewal.

Acc. No: 103581

Call No: 595.789 KOR-B



Where have the birds gone? Empty nests. Quiet skies. One question.

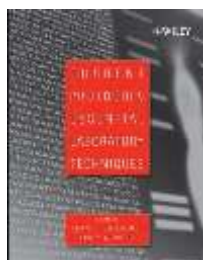
Author: Asad Rahmani

Publisher: Juggernaut Books

Overview: Veteran Indian ornithologist Asad Rahmani documents the alarming decline of avian populations and diversity across India. Through detailed case studies of endangered species like the Great Indian Bustard alongside formerly common farmland and urban birds, Rahmani examines how habitat fragmentation, power grid infrastructure, and agrochemicals threaten India's ecological balance.

Acc. No: 103743

Call No: 598.0954 RAH-W



Current Protocols Essential Laboratory Techniques

Editor: Sean R. Gallagher and Emily A. Wiley

Publisher: John Wiley and Sons

Overview: This book is an invaluable resource for researchers in all areas of the life sciences, especially molecular biology, biotechnology, genetics, and immunology. It is essential reading for undergraduate and graduate students alike and is also of interest for investigators new to life science research. [Read more.](#)

Acc. No: 103592

Call No: 610.284 CUR-C



Progress in Molecular Biology and Translational Science: Chronobiology: Biological Timing in Health and Disease

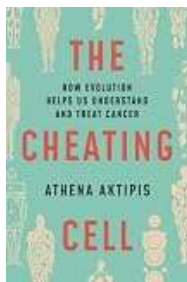
Author: Martha Gillette

Publisher: Academic Press

Overview: This special volume of *Progress in Molecular Biology and Translational Science* focuses on chronobiology, examining the molecular and translational aspects of biological timing in health and disease. Contributions from leading authorities cover topics ranging from the suprachiasmatic nucleus and circadian clock genes to sleep, metabolism, cancer, and mental illness.

Acc. No: 103550

Call No: [612.022 PRO-P](#)



The Cheating Cell: How Evolution Helps Us Understand and Treat Cancer

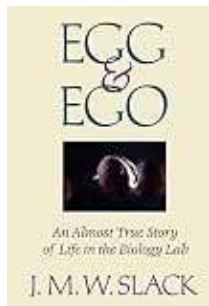
Author: Athena Aktipis

Publisher: Princeton University Press

Overview: This book presents a groundbreaking evolutionary framework for understanding cancer as a breakdown in cellular cooperation, showing how cheating cells arise and proliferate within multicellular organisms. By examining cancer across the tree of life, it argues that evolutionary approaches offer more effective, strategic treatments focused on long-term management rather than eradication.

Acc. No: 103659

Call No: [616.994 AKT-C](#)



Egg & Ego: An Almost True Story of Life in the Biology Lab

Author: J. M. W. Slack

Publisher: John Wiley and Sons

Overview: This light-hearted insider's account of academic science combines an account of a developmental biology experiment with a candid look at the everyday realities of laboratory life that philosophers of science ignore from cleaning up radioactive contamination to how professors' bargain for funding. The "Egg" refers to developmental biology, the "Ego" to the vanity of scientists competing for grants, publications, and prestige. [Read more.](#)

Acc. No: 103594

Call No: [818.5407 SLA-E](#)