

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Record Nr.           | UNINA9910144696103321                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Autore                  | Hogg Robert V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Titolo                  | Loss distributions [[electronic resource] /] / Robert V. Hogg, Stuart A. Klugman, with the assistance of Charles C. Hewitt and Gary Patrik                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Pubbl/distr/stampa      | New York, : Wiley, c1984                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| ISBN                    | 1-282-30796-7<br>9786612307966<br>0-470-31663-2<br>0-470-31730-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Descrizione fisica      | 1 online resource (254 p.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Collana                 | Wiley series in probability and mathematical statistics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Altri autori (Persone)  | KlugmanStuart A. <1949->                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Disciplina              | 368<br>368.0101519532<br>368.015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Soggetti                | Insurance - Mathematical models<br>Insurance - Statistical methods<br>Electronic books.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Lingua di pubblicazione | Inglese                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Formato                 | Materiale a stampa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Livello bibliografico   | Monografia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Note generali           | Description based upon print version of record.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Nota di bibliografia    | Includes bibliography and index.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Nota di contenuto       | LOSS DISTRIBUTIONS; Contents; 1. Introduction; 1.1. Basic Terminology; 1.2. Coverage Limitations; 1.3. Evaluation of Coverage Limitations; 1.4. Data Collection and Modeling; 2. Models for Random Variables; 2.1. Models; 2.2. The Poisson Process and Related Models; 2.3. Models for Joint Random Variables; 2.4. Normal Models; 2.5. Linear Functions of Random Variables; 2.6. Functions of Random Variables; 2.7. The Mixture of Models; 3. Statistical Inference; 3.1. Model-Free Estimation of Distributions; 3.2. Estimating Distributions by Simulation; 3.3. Point Estimation; 3.4. Interval Estimation<br>3.5. Tests of Statistical Hypotheses3.6. Testing the Fit of Models; 3.7. Applications and Associated Algorithms; 4. Modeling Loss Distributions; 4.1. Introduction; 4.2. Ungrouped Data, Truncation from Below; 4.3. Grouped Data, Mixture of Models; 4.4. Truncated and Shifted Data, Mixture of Models; 4.5. Clustering, Truncation from Above, Combining Samples; 4.6. A Bivariate Model; 4.7. A Review of the Modeling Process; 5. Applications of Distributional Models; 5.1. |

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | Introduction; 5.2. Inflation, Percentile Estimation; 5.3. Deductibles, Leveraging<br>5.4. Other Deductibles, Comparisons of Distributions5.5. Limits, Comparisons of Distributions; 5.6. Limits, Layers, Allocated Loss Adjustment Expenses; References; Appendix Characteristics of Selected Distributions; Index                                                                                                 |
| Sommario/riassunto | Devoted to the problem of fitting parametric probability distributions to data, this treatment uniquely unifies loss modeling in one book. Data sets used are related to the insurance industry, but can be applied to other distributions. Emphasis is on the distribution of single losses related to claims made against various types of insurance policies. Includes five sets of insurance data as examples. |

|                         |                                                                                                                                                                                                                                                     |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2. Record Nr.           | UNINA9910483824003321                                                                                                                                                                                                                               |
| Titolo                  | Information Processing in Cells and Tissues : 10th International Conference, IPCAT 2015, San Diego, CA, USA, September 14-16, 2015, Proceedings / / edited by Michael Lones, Andy Tyrrell, Stephen Smith, Gary Fogel                                |
| Pubbl/distr/stampa      | Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015                                                                                                                                                                       |
| ISBN                    | 3-319-23108-1                                                                                                                                                                                                                                       |
| Edizione                | [1st ed. 2015.]                                                                                                                                                                                                                                     |
| Descrizione fisica      | 1 online resource (VIII, 233 p. 94 illus.)                                                                                                                                                                                                          |
| Collana                 | Theoretical Computer Science and General Issues, , 2512-2029 ; ; 9303                                                                                                                                                                               |
| Disciplina              | 574.875                                                                                                                                                                                                                                             |
| Soggetti                | Bioinformatics<br>Computer science<br>Computer science - Mathematics<br>Pattern recognition systems<br>Computational and Systems Biology<br>Theory of Computation<br>Mathematical Applications in Computer Science<br>Automated Pattern Recognition |
| Lingua di pubblicazione | Inglese                                                                                                                                                                                                                                             |
| Formato                 | Materiale a stampa                                                                                                                                                                                                                                  |
| Livello bibliografico   | Monografia                                                                                                                                                                                                                                          |
| Note generali           | Bibliographic Level Mode of Issuance: Monograph                                                                                                                                                                                                     |

Intro -- Preface -- Organization -- Contents -- Biochemical Information Processing -- Surface-Immobilised DNA Molecular Machines for Information Processing -- 1 Information Processing with Bioelectronic Systems -- 2 Experimental Studies of DNA Machines on Surfaces -- 2.1 Materials and Methods -- 2.2 Experimental Results -- 3 Conclusion -- References -- Scalable Design of Logic Circuits Using an Active Molecular Spider System -- 1 Introduction -- 2 Model Description -- 3 Logic Circuit Construction -- 3.1 Normal Sites and Functional Sites -- 3.2 Designs of the AND and OR Gates -- 3.3 Design of the NOT Gate -- 3.4 Gate Cascades -- 3.5 Complexity Analysis -- 4 Formal Definition of the Model -- 4.1 Site Types and Transition Rules -- 4.2 Model Definition -- 5 Conclusions and Discussions -- References -- Organic Mathematics: On the Extension of Logics from Physical Atoms to Cellular Information Processes -- Abstract -- 1 Introduction -- 1.1 The Symbolic Gap -- 1.2 The Logical Gap -- 2 A Novel Electrical Notation for the Bio-chemical Sciences -- 2.1 Origins of Atomic Numbers -- 2.2 Extensions of the Atomic Numbers -- 3 Perplex Notation and Physical Dependence of Organic Operands and Operations -- 3.1 Physically Independent and Interdependent Electrical Particles -- 3.2 Constraints on Formal Electrical Logics -- 4 Mereology and Electrically Labeled Bipartite Graphs -- 4.1 Ratiocinations -- 4.2 Mereology -- 5 Conclusions -- 5.1 The Role of Hybridizations of Logics in Organic Mathematics -- 5.2 Future Work and International Collaboration -- 6 Summary -- References -- Collective and Distributed Behaviour -- An Ecosystem Algorithm for the Dynamic Redistribution of Bicycles in London -- 1 Introduction -- 2 Background -- 3 Problem Description -- 3.1 Problem Overview -- 3.2 Performance Indicators -- 3.3 Datasets -- 4 Method -- 4.1 Assumptions and Restrictions. 4.2 Bicycle Distribution Simulator -- 4.3 Truck Scheduling Algorithms -- 5 Experiments -- 6 Results and Analysis -- 7 Conclusion and Future Work -- 7.1 Conclusion -- 7.2 Future Work -- References -- Evolving Ensembles: What Can We Learn from Biological Mutualisms? -- 1 Introduction -- 2 Evolving Ensembles -- 3 Biological Mutualism -- 4 Mutualistic Evolutionary Algorithms -- 5 Evolving Mutualistic Ensembles -- 5.1 Promoting Mutuality -- 5.2 Identifying Partners -- 6 Conclusions -- References -- An Artificial Immune System for Self-Healing in Swarm Robotic Systems -- 1 Introduction -- 2 Robotic Swarm Taxis -- 2.1 Anchoring of the Swarm -- 3 Initial Investigations into the -algorithm -- 3.1 Experimental Protocol -- 4 Immune Inspiration: Granuloma Formation -- 4.1 Granuloma Formation Algorithm -- 5 Experimental Investigation: Granuloma Formation Algorithm -- 5.1 Results -- 5.2 Maintaining Energy Across the Swarm -- 6 Conclusion -- References -- Team Search Tactics Through Multi-Agent HyperNEAT -- 1 Introduction -- 2 Background -- 2.1 NeuroEvolution of Augmenting Topologies (NEAT) -- 2.2 CPPNs and HyperNEAT -- 2.3 Multi-Agent HyperNEAT -- 3 Experimental Method -- 3.1 Search Task -- 3.2 Agent Simulator -- 3.3 Sensing Tactical Environments -- 3.4 MA-HyperNEAT Agents -- 3.5 Scripted Agents -- 3.6 Evolution and Evaluation -- 4 Results -- 5 Conclusion -- References -- Patterning and Rhythm Generation -- miRNA Regulation of Human Embryonic Stem Cell Differentiation -- Abstract -- 1 Introduction -- 1.1 miRNA Dynamics and During hESC Differentiation -- 1.2 Chemical Regulators of Pluripotency -- 2 Methods -- 2.1 Stem Cell Culture and Differentiation -- 2.2 RNA Preparation -- 2.3 Network Analysis -- 3 Results -- 3.1 Correlated Expression of miRNAs During hESC Differentiation -- 3.2 Global Network Analysis. 3.3 Effect of Go6976 on miRNA Expression During DE Formation -- 4

Discussion -- Acknowledgements -- Motifs Within Genetic Regulatory Networks Increase Organization During Pattern Formation -- 1  
 Introduction -- 2 Motifs Within Gene Regulatory Networks -- 3  
 Multicellular Model and Implementation -- 4 Methodology -- 4.1  
 Information Complexity -- 5 Results -- 6 Discussion -- References --  
 Harmonic Versus Chaos Controlled Oscillators in Hexapedal Locomotion -- 1 Introduction -- 2 Central Pattern Generators -- 2.1  
 Hopf Oscillator -- 2.2 Wu Oscillator -- 3 Interlimb Coordination -- 3.1  
 Hopf Oscillator -- 3.2 Chaos Controlled Wu Oscillator -- 4 Coupled Artificial Signalling Network -- 5 Controlling Legged Robot Locomotion -- 5.1 Gait Generation -- 5.2 Evolving Coupled Artificial Signalling Networks -- 6 Results -- 7 Conclusions -- References -- Biochemical Regulatory Networks -- Switching Gene Regulatory Networks -- 1  
 Introduction -- 2 Background -- 3 Switching Gene Regulatory Networks -- 4 SGRN Model Synthesis -- 5 Experimental Results -- 5.1  
 Benchmark Design -- 5.2 Results -- 6 Related Work -- 7 Conclusion -- References -- The Role of Ago2 in microRNA Biogenesis: An Investigation of miR-21 -- Abstract -- 1 Introduction -- 1.1 Ago2 -- 1.2 miR-21 -- 1.3 Summary -- 2 Methods -- 3 Results -- 4 Discussion -- Acknowledgements -- Evolving Efficient Solutions to Complex Problems Using the Artificial Epigenetic Network -- 1 Introduction -- 2 Background -- 3 The Artificial Epigenetic Network -- 3.1 Artificial Genes -- 3.2 Artificial Epigenetics -- 3.3 Adaptations -- 4 Methodology -- 4.1 Coupled Inverted Pendulums -- 4.2 Processor Scheduling -- 4.3 Towers of Hanoi -- 5 Results -- 5.1 Coupled Inverted Pendulums -- 5.2 Processor Scheduling -- 5.3 Towers of Hanoi -- 6 Conclusions -- References -- Metabolomics and Phenotypes.  
 Sensitivity of Contending Cellular Objectives in the Central Carbon Metabolism of Escherichia Coli -- 1 Introduction -- 2 Materials and Methods -- 3 Results -- References -- Towards a Graph-Theoretic Approach to Hybrid Performance Prediction from Large-Scale Phenotypic Data -- 1 Introduction -- 2 Dataset -- 3 Method -- 3.1 Problem Definition -- 3.2 Data Normalization -- 3.3 A Graph-Theoretic Approach for Predictive Breeding -- 4 Results -- 4.1 Biomass Performance Prediction -- 5 Conclusion and Future Work -- References -- Automated Motion Analysis of Adherent Cells in Monolayer Culture -- Abstract -- 1 Introduction -- 2 Methods -- 2.1 Cell Culture and Videomicroscopy -- 2.2 Cell Tracking -- 2.3 Feature Extraction -- 2.4 Choice of Features -- 2.4.1 Cell Migration Speed -- 2.4.2 Cell Migration Persistence -- 3 Results -- 4 Conclusion and Discussion -- References -- Neural Modelling and Neural Networks -- Community Detection as Pattern Restoration by Attractor Neural-Network Dynamics -- Abstract -- 1 Introduction -- 2 Methods -- 2.1 Neural-Network Dynamics -- 2.2 Imperfect and Inaccurate Set of Source Nodes: Deteriorated Pattern -- 2.3 Local Community Detection -- 2.4 State-of-the-Art Study -- 2.5 Biological Relevance -- 3 Results -- 3.1 Local Detection of Communities from Synthetic Benchmark Networks -- 3.2 Local Detection of Communities from Real Social Networks -- 4 Discussion -- Acknowledgments -- Appendix: Synthetic Benchmark Network -- References -- Feature Learning HyperNEAT: Evolving Neural Networks to Extract Features for Classification of Maritime Satellite Imagery -- 1 Intro -- 2 Background -- 2.1 BCCT200 -- 2.2 NeuroEvolution of Augmenting Topologies (NEAT) -- 2.3 CPPNs and HyperNEAT -- 3 Feature Learning HyperNEAT -- 4 Experimental Setup -- 5 Results -- 6 Discussion and Conclusion -- A Result Standard Deviations -- References.  
 Improving Crossover of Neural Networks in Evolution Through

Speciation -- 1 Introduction -- 2 NeuroEvolution of Augmenting Topologies (NEAT) -- 3 Speciation Heuristics -- 4 Experimental Approach -- 5 Results -- 6 Discussion -- 7 Conclusion -- A NEAT Parameters Shared Across Experiments -- References -- Author Index.

---

## Sommario/riassunto

This book constitutes the proceedings of the 10th International Conference on Information Processing in Cells and Tissues, IPCAT 2015, held in San Diego, CA, USA, in September 2015. The 19 papers presented in this volume were carefully reviewed and selected from 22 submissions. They were organized in topical sections named: biochemical information processing; collective and distributed behavior; patterning and rhythm generation; biochemical regulatory networks; metabolomics and phenotypes; and neural modelling and neural networks.

---