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Titolo	Microbial ecology in states of health and disease : workshop summary / / Eileen R. Choffnes, LeighAnne Olsen and Alison Mack, rapporteurs forum on microbial threats board on global health
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Nota di contenuto	""Front Matter""; ""Reviewers""; ""Acknowledgments""; ""Contents""; ""Tables, Figures, and Boxes""; ""Workshop Overview""; ""Appendix A: Contributed Manuscripts""; ""A1 Effector and memory T cell responses to commensal bacteria--Yasmine Belkaid, Nicolas Bouladoux, and Timothy W. Hand""; ""A2 What are the consequences of the disappearing human microbiota?--Martin J. Blaser and Stanley Falkow""; ""A3 Pathways in microbe-induced obesity--Laura M. Cox and Martin J. Blaser"" ""A4 Microbial exposure during early life has persistent effects on natural killer T Cell function--Torsten Olszak, Dingding An, Sebastian Zeissig, Miguel Penilla Vera, Julia Richter, Andre Franke, Jonathan N. Glickman, Reiner Siebert, Rebecca M. Barron, Dennis L. Kasper, and Richard S. Blumberg""""""A5 The application of ecological theory toward an understanding of the human microbiome--Elizabeth K. Costello, Keaton Stagaman, Les Dethlefsen, Brendan J. M. Bohannan, and David A. Relman"" ""A11 Community ecology and the vaginal microbiome--Larry J. Forney and Jacques Ravel""""""A12 Investigating bacterial-animal symbioses with

light sheet microscopy--Michael J. Taormina, Matthew Jemielita, W. Zac Stephens, Adam R. Burns, Joshua V. Troll, Raghuveer Parthasarathy, and Karen Guillemin""; ""A13 Clinical application of fecal microbiota transplantation in Clostridium difficile infection and beyond--Josbert J. Keller and Els van Nood""
""A14 Consumption of human milk glycoconjugates by infant-associated bifidobacteria: Mechanisms and implications--Daniel Garrido, David C. Dallas, and David A. Mills""""""A15 Bacteriophage adhering to mucus providea non host-derived immunity--Jeremy J. Barr, Rita Auro, Mike Furlan, Katrine L. Whiteson, Marcella L. Erb, Joe Pogliano, Aleksandr Stotland, Roland Wolkowicz, Andrew S. Cutting, Kelly S. Doran, Peter Salamon, Merry Youle, and Forest Rohwer""
""A16 Topographic diversity of fungal and bacterial communities in human skin--Keisha Findley, Julia Oh, Joy Yang, Sean Conlan, Clayton Deming, Jennifer A. Meyer, Deborah Schoenfeld, Effie Nomicos, Morgan Park, NIH Intramural Sequencing Center Comparative Sequencing Program, Heidi H. Kong, and Julia A. Segre""

Sommario/riassunto

"Individually and collectively, resident microbes play important roles in host health and survival. Shaping and shaped by their host environments, these microorganisms form intricate communities that are in a state of dynamic equilibrium. This ecologic and dynamic view of host-microbe interactions is rapidly redefining our view of health and disease. It is now accepted that the vast majority of microbes are, for the most part, not intrinsically harmful, but rather become established as persistent, co-adapted colonists in equilibrium with their environment, providing useful goods and services to their hosts while deriving benefits from these host associations. Disruption of such alliances may have consequences for host health, and investigations in a wide variety of organisms have begun to illuminate the complex and dynamic network of interaction - across the spectrum of hosts, microbes, and environmental niches - that influence the formation, function, and stability of host-associated microbial communities. Microbial ecology in states of health and disease is the summary of a workshop convened by the Institute of Medicine's Forum on Microbial Threats in March 2013 to explore the scientific and therapeutic implications of microbial ecology in states of health and disease. Participants explored host-microbe interactions in humans, animals, and plants; emerging insights into how microbes may influence the development and maintenance of states of health and disease; the effects of environmental change(s) on the formation, function, and stability of microbial communities; and research challenges and opportunities for this emerging field of inquiry"--

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Autore	Ryan Thomas P
Titolo	Modern Engineering Statistics [[electronic resource]]
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Nota di contenuto	Modern Engineering Statistics; Contents; Preface; 1. Methods of Collecting and Presenting Data; 1.1 Observational Data and Data from Designed Experiments; 1.2 Populations and Samples; 1.3 Variables; 1.4 Methods of Displaying Small Data Sets; 1.4.1 Stem-and-Leaf Display; 1.4.2 Time Sequence Plot and Control Chart; 1.4.3 Lag Plot; 1.4.4 Scatter Plot; 1.4.5 Digidot Plot; 1.4.6 Dotplot; 1.5 Methods of Displaying Large Data Sets; 1.5.1 Histogram; 1.5.2 Boxplot; 1.6 Outliers; 1.7 Other Methods; 1.8 Extremely Large Data Sets: Data Mining; 1.9 Graphical Methods: Recommendations; 1.10 Summary ReferencesExercises; 2. Measures of Location and Dispersion; 2.1 Estimating Location Parameters; 2.2 Estimating Dispersion Parameters; 2.3 Estimating Parameters from Grouped Data; 2.4 Estimates from a Boxplot; 2.5 Computing Sample Statistics with MINITAB; 2.6 Summary; Reference; Exercises; 3. Probability and Common Probability Distributions; 3.1 Probability: From the Ethereal to the Concrete; 3.1.1 Manufacturing Applications; 3.2 Probability Concepts and Rules; 3.2.1 Extension to Multiple Events; 3.2.1.1 Law of Total Probability and Bayes'

Theorem; 3.3 Common Discrete Distributions
3.3.1 Expected Value and Variance3.3.2 Binomial Distribution; 3.3.2.1 Testing for the Appropriateness of the Binomial Model; 3.3.3 Hypergeometric Distribution; 3.3.4 Poisson Distribution; 3.3.4.1 Testing for the Appropriateness of the Poisson Model; 3.3.5 Geometric Distribution; 3.4 Common Continuous Distributions; 3.4.1 Expected Value and Variance; 3.4.2 Determining Probabilities for Continuous Random Variables; 3.4.3 Normal Distribution; 3.4.3.1 Software-Aided Normal Probability Computations; 3.4.3.2 Testing the Normality Assumption; 3.4.4 t-Distribution; 3.4.5 Gamma Distribution
3.4.5.1 Chi-Square Distribution3.4.5.2 Exponential Distribution; 3.4.6 Weibull Distribution; 3.4.7 Smallest Extreme Value Distribution; 3.4.8 Lognormal Distribution; 3.4.9 F Distribution; 3.5 General Distribution Fitting; 3.6 How to Select a Distribution; 3.7 Summary; References; Exercises; 4. Point Estimation; 4.1 Point Estimators and Point Estimates; 4.2 Desirable Properties of Point Estimators; 4.2.1 Unbiasedness and Consistency; 4.2.2 Minimum Variance; 4.2.3 Estimators Whose Properties Depend on the Assumed Distribution; 4.2.4 Comparing Biased and Unbiased Estimators
4.3 Distributions of Sampling Statistics4.3.1 Central Limit Theorem; 4.3.1.1 Illustration of Central Limit Theorem; 4.3.2 Statistics with Nonnormal Sampling Distributions; 4.4 Methods of Obtaining Estimators; 4.4.1 Method of Maximum Likelihood; 4.4.2 Method of Moments; 4.4.3 Method of Least Squares; 4.5 Estimating ; 4.6 Estimating Parameters Without Data; 4.7 Summary; References; Exercises; 5. Confidence Intervals and Hypothesis Tests-One Sample; 5.1 Confidence Interval for : Normal Distribution, Not Estimated from Sample Data; 5.1.1 Sample Size Determination; 5.1.2 Interpretation and Use
5.1.3 General Form of Confidence Intervals

Sommario/riassunto

An introductory perspective on statistical applications in the field of engineering Modern Engineering Statistics presents state-of-the-art statistical methodology germane to engineering applications. With a nice blend of methodology and applications, this book provides and carefully explains the concepts necessary for students to fully grasp and appreciate contemporary statistical techniques in the context of engineering. With almost thirty years of teaching experience, many of which were spent teaching engineering statistics courses, the author has successfully developed a