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Nota di contenuto	A Brief History of SHAR -- Structures, Mechanisms and Energetics in Temporal Processing -- The Human Auditory Cortex: In Search of the Flying Dutchman -- From Cajal to the Connectome: Building a Neuroanatomical Framework for Understanding the Auditory System -- Recording from Hair Cells -- Three Decades of Tinnitus Related Research -- The Sense of Hearing in Fishes -- A Quarter-Century's Perspective on a Psychoacoustical Approach to Loudness -- Nonsyndromic Deafness: It Ain't Necessarily So -- Evolving Mechanosensory Hair Cells to Hearing Organs by Altering Genes and Their Expression -- The Implications of Discharge Regularity-My Forty-Year Peek into the Vestibular System -- Aging, Hearing Loss and Speech Recognition: Stop Shouting, I Can't Understand You -- Cochlear Mechanics, Otoacoustic Emissions and Medial Olivocochlear Efferents: 20 Years of Advances and Controversies Along with Areas Ripe for New Work -- Examining Fish in the Sea: A European Perspective on Fish Hearing Experiments -- The Behavioral Study of Mammalian Hearing -- Hearing in Insects: The Why, When and How -- The Cognitive Auditory System -- Fundamentals of Hearing in Amniote Vertebrate -- Directional Hearing in Insects and Other Small Animals: The Physics of Pressure-Difference Receiving Ears -- Cortical Representation of Sound Locations: Distributed Representation by Magnitude and Timing of Neural Spike Patterns -- Mechanisms Underlying the Pitch of Pure and

Complex Tones -- Unavoidably Delayed: A Personal Perspective of Twenty Years of Research on a Sound Localization Cue -- Size Matters in Hearing: How the Auditory System Normalizes the Sounds of Speech and Music for Source Size -- A Changing View of the Auditory System Obtained from the Ears of Bats -- From Cave Fish to Pile Driving: A Tail of Fish Bioacoustics -- Current Topics in the Study of Sound Conduction to the Inner Ear -- From Degenerative Debris to Neuronal Tracing: An Anterograde View of Auditory Circuits -- Adventures in Bionic Hearing -- My Dull Deaf Ears: Four Millennia of Acquired Hearing Loss -- What's the Use of Genetics? -- Advances in the Understanding of Binaural Information Processing: Consideration of the Stimulus as Processed -- Temporal Processing: Observations on the Psychophysics and Modeling of Temporal Integration and Temporal Resolution -- Psychoacoustics and Auditory Perception -- APPENDIX: Table of Contents from SHAR volumes 1-49.

Sommario/riassunto

Perspectives on Auditory Research is the 50th volume in the 21-year history of the Springer Handbook of Auditory Research (SHAR). SHAR was originally conceived as having perhaps eight volumes on the fundamental and more mature topics of auditory neuroscience. The vision in developing SHAR was to ask authors to discuss the major concepts of the authors' discipline. In other words, to have chapters that present the most expert conceptual overview of a particular field. In contrast to the past 49 volumes, volume 50 consists of essays by senior colleagues that focus on their contributions to auditory neuroscience in the past, on their views of the state of the field, and on their thoughts on the future of their field including the outstanding questions that are still unanswered. The chapters are written in the first person, and some provide "autobiographical" information. The aim was to have senior scholars think about their discipline and even their careers and write whatever they wanted. The result is a highly diverse series of chapters, all of which might be different in style and approach and which will be interesting and 'fun" for the reader. The hope is that readers browse the book for the "fun of it" rather than look for specific topics. About the Editors: Arthur N. Popper is Professor in the Department of Biology and Co-Director of the Center for Comparative and Evolutionary Biology of Hearing at the University of Maryland, College Park. Richard R. Fay is Distinguished Research Professor of Psychology at Loyola University Chicago. About the Series: The Springer Handbook of Auditory Research presents a series of synthetic reviews of fundamental topics dealing with auditory systems. Each volume is independent and authoritative; taken as a set, this series is the definitive resource in the field.