1. Record Nr. UNINA9910782268803321 Autore Weiner Richard M Titolo Analogies in physics and life [[electronic resource]]: a scientific autobiography / / Richard M. Weiner New Jersey, : World Scientific, c2008 Pubbl/distr/stampa **ISBN** 1-281-93844-0 9786611938444 981-279-082-9 Descrizione fisica 1 online resource (454 p.) 169 Disciplina Physicists - Germany Soggetti Analogy **Physics** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Includes bibliographical references (p. 383-394) and index. Nota di bibliografia Nota di contenuto Contents; Preface; Part I: THE WANDERING YEARS (1930-1974); Section I: Czernowitz, a City of People and Books that No Longer Exists (1930-1945); Chapter 1. Childhood; My Countries; My Languages; My Family; My Schools; Chapter 2. Politics - Premonition of War; Making Ends Meet; Chapter 3. War - The Ghetto; Section II: Post-War Romania; The Isomeric Shift; Persona Non Grata (1945-1969); Chapter 4. High School and University; Foc sani 1945-1949; Bucharest; University; Theoretical Physics; Chapter 5. The Isomeric Shift on Spectral Lines; The Discovery of the Isomeric Shift Finite Size Effects in Subatomic PhysicsNatural Line Width and the

Limits of Optical Spectroscopy; Atomic Versus Nuclear Shells, the Pauli Exclusion Principle and the Nuclear Shell Model; The Isomeric Shift and the Shell Structure of Nuclei; Some Confusion of Terminology; The Mossbauer Effect; Dubna - 1958; Chapter 6. Persona Non Grata; Applying for Emigration and Its Consequences; The Romanian Thaw; Interdiction to Leave for the West; Nuclear Recoil in Muonic Atoms; Chapter 7. Challenging Conventional Wisdom in Particle Physics; Anticipating Electro-Weak Unification?

Anticipating Supersymmetry? Exotic Particles - Bosonic

LeptonsAnticipating Grand Uni.ed Theories? Exotic Particles - Strange Leptons: The Escape: Czechoslovakia: Chapter 8. Nazi-Communist Analogy: Section III: Geneva, Bonn: Statistical Concepts in High-Energy Physics (1969-1974); Chapter 9. CERN; From Vienna to Geneva; CERN; Uproar in the Media; Physics at CERN; Strong Interaction Phenomenology; Regge Poles and Duality; The Munchhausen Principle; Chapter 10. Statistical Concepts in High-Energy Physics; Phase Transitions; Section IV: Bonn, Bloomington (Indiana), London Super.uidity of Hadronic Matter (1970-1974) Chapter 11. Bonn; Chapter 12. USA; Indiana University; A Letter from the White House; The Mesonic Cloud of the Nucleon and Super.uidity; Chapter 13. London, Imperial College; Trips on the Continent; Superfluidity and Symmetries; Supefluidity and Superconductivity: Analogies and Follow-ups; Related Developments; Superfluidity of Hadronic Matter in Retrospective; Statistical Concepts Applied to Weak Interactions: Part II: SETTLING YEARS (1974-PRESENT); Section V: Marburg; Hot Spots; Chapter 14. Professor at the Philipps University of Marburg CitizenshipChapter 15. Hot Spots in "Elementary" Particles and in Nuclei; Propagation of Heat in Hadronic Matter; Hot Spots in Nuclei; Meeting Bethe; Section VI: Germany's Coping with the Past; The Hydrodynamical Analogy: Chapter 16. Rewriting History: The German A-bomb; Attempts to Justify the Past; Ignoring History; Misunderstanding the Past; Coping with the Communist Past of East Germany; Chapter 17. From Super.uids to Fluids; The Hydrodynamical Analogy Applied to Multiparticle Production in Strong Interactions; The Landau Model Rules the Waves in Nuclei as Well Equation of State and the Speed of Sound in Hadronic Matter

Sommario/riassunto

Analogies play a fundamental role in science. To understand how and why, at a given moment, a certain analogy was used, one has to know the specific, historical circumstances under which the new idea was developed. This historical background is never presented in scientific articles and quite rarely in books. For the general reader, the undergraduate or graduate student who learns the subject for the first time, but also for the practitioner who looks for inspiration or who wants to understand what his colleague working in another field does, these historical circumstances can be fascinating a