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Substratified Layered Medium -- Critical Dynamics of the Superfuid Phase Transition. Calculation of z critical exponent and Stability of the IR Fixed Point -- Cardiorespiratory System under Delta Covid Variant Disease -- Rare Attractors and Chaos in Buck Converter Under Peak-Current Mode Control -- Analysis of the Influence of Boundary Conditions in Kinetic Problems -- Complexity and Chaos Control of a Bertrand Guopoly Game with Bounded Rational and Imitative Expectations -- On the Dynamics of a Heterogeneous Duopoly Game Participating in Nitrogen Emission Reduction -- Symmetry and Generalized Intermittency in the Lorenz Model -- Examples of Applications of an Invariant Statistical Theory of Field to Cosmology, Astrophysics Hydrodynamics, Electrodynamics, and Photonics -- "Order" and "Chaos" in the Evolution of Matter -- Fisher Information Perspective of Pauli's Electron -- Formal Setting for Period Doubling Bifurcation of Limit Cycles.

Sommario/riassunto	This proceedings of 15th CHAOS2022 International Conference highlights recent developments in nonlinear, dynamical, and complex systems. The conference was intended to provide an essential forum for Scientists and Engineers to exchange ideas, methods, and techniques in the field of Nonlinear Dynamics, Chaos, Fractals and their applications in General Science and Engineering Sciences. The principal aim of CHAOS2022 International Conference is to expand the development of the theories of the applied nonlinear field, the methods, empirical data and computer techniques as well as the best theoretical achievements of chaotic theory. CHAOS2022 Conference provides a forum for bringing together the various groups working in the area of Nonlinear and Dynamical Systems, Chaotic theory and Application to exchange views and report research findings.