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Titolo	Chaotic, Fractional, and Complex Dynamics: New Insights and Perspectives // edited by Mark Edelman, Elbert E. N. Macau, Miguel A. F. Sanjuan
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Soggetti	Statistical physics Vibration Dynamics Computational complexity Applications of Nonlinear Dynamics and Chaos Theory Vibration, Dynamical Systems, Control Statistical Physics and Dynamical Systems Complexity
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	preliminary: 1. Lev Ostrovsky: Dynamics of particles and bubbles under the action of acoustic radiation force -- 2. Tomasz Kapitaniak: Synchronous states in the network of Kuramoto systems with excitation -- 3. Jose Antonio Tenreiro Machado -- 4. Mark Edelman: Universality in systems with power-law memory and fractional dynamics -- 5. Miguel A. F. Sanjuan: Basin Entropy and the uncertainty in the chaotic scattering of cold atoms -- 6. Albert Luo -- 7. Christian Bick -- 8. Jason Gallas -- 9. Jose Mario Martinez -- 10. Lea Santos: Nonequilibrium dynamics of isolated many-body quantum systems -- 11. Luis FC Alberto -- 12. Marcelo G. Ramirez Avila: Fireflies: a paradigm in synchronization -- 13. Mike Field: Heteroclinic networks and patterns of synchronization in identical coupled cell systems -- 14. Luis Antonio Aguirre -- 15. José Mário Vicensi Grzybowski.

## Sommario/riassunto

The book presents nonlinear, chaotic and fractional dynamics, complex systems and networks, together with cutting-edge research on related topics. The fifteen chapters – written by leading scientists working in the areas of nonlinear, chaotic and fractional dynamics, as well as complex systems and networks – offer an extensive overview of cutting-edge research on a range of topics, including fundamental and applied research. These include but are not limited to aspects of synchronization in complex dynamical systems, universality features in systems with specific fractional dynamics, and chaotic scattering. As such, the book provides an excellent and timely snapshot of the current state of research, blending the insights and experiences of many prominent researchers.

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