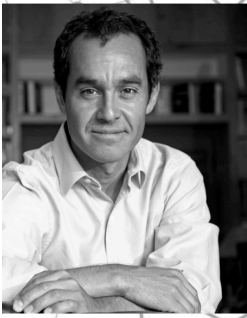


# Miguel Fuentes, PhD

Interdiscipline - Complex Systems



**Ph.D. in Physics** from Instituto Balseiro, one of the most prestigious research centers in Latin America. His thesis was co-directed by Dr. Valentin Krisky, researcher awarded the Lenin Medal, Institut Non-Linéaire de Nice (France) and by Dr. Horacio Wio, Marie Curie Chair, European Commission Excellence Awards, Bariloche Atomic Center - Balseiro Institute, Argentina.

**Ph.D. in Philosophy** from the National University of La Plata, Argentina,

**Master International Affairs and Diplomacy** from The United Nations Institute for Training and Research, and Universitat Oberta de Catalunya.

Miguel has studied and worked in places such as: the Pierre et Marie Curie University (France), the Institut Non-Linéaire de Nice (France), the Center for Nonlinear Studies at **Los Alamos National Laboratory, USA**, and the renowned **Santa Fe Institute** (USA), a center of excellence in Complex Systems and Interdisciplinary Studies, where he is **External Professor**.

He works on **interdisciplinary research** (science, technology, and society research), from applied mathematical physics, with a focus on statistical mechanics, nonlinear dynamics, and the use of information theory and complexity measures to characterize and understand complex behavior on systems, using **interdisciplinary approaches**: social systems, public policies, crisis, ecology, etc. An essential aspect of his research is the epistemological study of complex systems and the **philosophy of innovations** and their role in the development of complex socio-technological systems.

## PERSONAL INFORMATION

**Name:** Miguel Fuentes

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## ACADEMIC DEGREES

**Ph. D. in Physics.** Co-directed: Dr. Valentin Krisky, Lenin medal, Institut Non Linéaire de Nice, Francia; Dr. Horacio Wio, Marie Curie Chair, European Commission Excellence Awards, Bariloche Atomic Center–Instituto Balseiro, Argentina.

**Ph. D. in Philosophy,** Universidad Nacional de La Plata, Argentina.

**Master International Affairs and Diplomacy.** Universitat Oberta de Catalunya and The United Nations Institute for Training and Research.

## LINES OF RESEARCH

**Complexity science:** Social Dynamics. Interdisciplinary Research: modeling, simulation.

**Science, Technology, and Society (STS):** Theory Change and Innovation Dynamics.

## Books

- |  |         |
|--|---------|
| <b>Complexity, emergence and the evolution of scientific theories.</b> Miguel Fuentes. Springer Nature Book.   | 2022/23 |
| <b>La Evolución de las Teorías Científicas.</b> Miguel Fuentes. Pontificia Universidad Católica de Valparaíso. | 2021    |
| <b>Dinámica Científica y Medidas de Complejidad.</b> Miguel Fuentes. Sociedad de Filosofía Analítica.          | 2018    |

## Scientific Publications

- |  |      |
|--|------|
| <b>Presidential Diplomacy Meets Science Diplomacy.</b> Lawler D. and Fuentes, M. Global Policy.  | 2022 |
| <b>Digital Outburst: The Expression of a Social Crisis through Online Social Networks.</b> Fuentes, M., Cárdenas, J. P., Olivares, G., Vidal, G., and Urbina, C. Frontiers in Physics. | 2022 |
| <b>Public Policy Modeling and Applications.</b> Fuentes, M., Tessone, C. J., and Alves Furtado, B. Complexity.   | 2022 |
| <b>Mathematical models of diversification and innovation in biology.</b> Fuentes, M., and Ferrada, E. International Journal of Modern Physics B.                                       | 2022 |
| <b>Evolution of harmonic complexity in western classical music</b> Buongiorno Nardelli, M., Culbreth, G., and Fuentes, M. Advances in Complex Systems.                                 | 2022 |
| <b>Infinite Semiosis and Dynamic Attraction Basins.</b> Fuentes, M., and Céspedes, E. The American Journal of Semiotic.  | 2022 |
| <b>Full list of publications.</b> @ <a href="#">Google Sites</a>   |      |