# Tabla de Contenidos

# Mitchell, M. Complexity - A Guided Tour (2009)

Oxford University Press

This book has five parts. In **part I** I give some background on the history and content of four subject areas that are fundamental to the study of complex systems: information, computation, dynamics and chaos, and evolution. In **parts II–IV** I describe how these four areas are being woven together in the science of complexity. I describe how life and evolution can be mimicked in computers, and conversely how the notion of computation itself is being imported to explain the behavior of natural systems. I explore the new science of networks and how it is discovering deep commonalities among systems as disparate as social communities, the Internet, epidemics, and metabolic systems in organisms. I describe several examples of how complexity can be measured in nature, how it is changing our view of living systems, and how this new view might inform the design of intelligent machines. I look at prospects of computer modeling of complex systems, as well as the perils of such models. Finally, in the **last part** I take on the larger question of the search for general principles in the sciences of complexity.

part one Background and History



part two Life and Evolution in Computers



part three Computation Writ Large



part four Network Thinking



part five Conclusion

- chapter nineteen The Past and Future of the Sciences of Complexity 291