

# Review of: "Hamiltonian Chaos and the Fractal Topology of Spacetime (Part 1)"

Francisco Gonzalez Montoya

**Potential competing interests:** No potential competing interests to declare.

The present work is a brief overview of the basic concepts of classical Hamiltonian dynamics. The text gives some basic intuitive ideas about integrability, KAM theory, and chaos in Hamiltonian systems.

It will be convenient to add to the text some extra details about the connection between cosmology and chaos theory. Also, to guide the reader to find more details about the subject, it is convenient to include some well-known basic bibliography about dynamical systems theory and Hamiltonian dynamics:

- Ott, E. (2002). *Chaos in Dynamical Systems* (2nd ed.). Cambridge: Cambridge University Press.  
doi:10.1017/CBO9780511803260
- Tamás Tél, Márton Gruiz. (2006) *Chaotic Dynamics An Introduction Based on Classical Mechanics*. Cambridge University Press. : [www.cambridge.org/9780521839129](http://www.cambridge.org/9780521839129)
- John Guckenheimer, Philip Holmes. (1983). *Nonlinear Oscillations, Dynamical Systems, and Bifurcations of Vector Fields*. Springer New York, NY. <https://doi.org/10.1007/978-1-4612-1140-2>
- V. I. Arnold. (1978). *Mathematical Methods of Classical Mechanics*. Springer New York, NY.  
<https://doi.org/10.1007/978-1-4757-1693-1>