Abstract
Like beauty, complexity is hard to define but relatively easy to identify. Statistical mechanics, through the use of nonadditive entropies, offers a rich path for discussing what complexity may be and how to quantify it. An introduction to the central concepts will be provided, as well as recent applications and verifications in several branches of knowledge, such as biology, medicine, economics, networks, granular matter, high energy physics (LHC/CERN).

A quite complete bibliography is available at
http://tsallis.cat.cbpf.br/biblio.htm

See also
https://www.santafe.edu/people/profile/constantino-tsallis