I am unpersuaded by the most common theoretical argument for the second law of thermodynamics, although I don’t doubt the empirical evidence for it. I have therefore written a small article and held a lecture to criticize the argument. To illustrate and verify the logic in my article and lecture, I wrote a piece of code, which calculates how a gas would behave, if the premises behind the argument that I criticized were correct. This behavior is neither consistent with data, nor with the second law of thermodynamics.

The article and code can be found in the folder “A thermodynamics paradox”.