Attoworld Under Fire

Abstract: This year’s Nobel Prize was awarded to the inventors of the interferometric gravitational wave detectors, which are measuring distance in the attometer scale. Particle accelerators create a pancake-like atomic nucleus with attometer thickness and splash them together to create the primordial material of the Universe that existed only 13.5 billion years ago. Recent high intensity lasers are creating attosecond long pulses, making flash-photos about complicated molecules.

Computing centers are storing data at the petabyte, even exabyte scales in the above studies, and humankind is able to handle these huge databases.

In my talk I will give an overview of the above topics with a special Hungarian taste, and show how a small country can contribute to Big Science.