What is the importance of Physics in Computer Science?

Physics is critical in computer engineering, the design and manufacture of hardware. However, it's something we computer scientists rarely think about.

1. Physics of spinning disks. The amount of data that can be stored and retrieved from spinning disk drives are governed by the speed at which they spin. The limit of that speed is obviously a material problem, but the physics of the spin, and the direct impact of that spin speed on data storage and latency is critical to modern computer science.

2. **Speed of light**. The speed of light is directly relevant to computer science in lots of ways. It seems like a gigantic speed, but given the millions of calculations going on in a CPU or GPU, fractions of a microsecond matter. In long-distance telecommunications, the speed of light is directly relevant again. All fiber-optics operate by sending light pulses. Every single light pulse is a bit of data (a 1 or a 0). Lasers can create very discreet pulses and send them out, but the raw physics of the speed of light in a glass fiber dictates how long it will take to get that bit down the glass.