

Answer on Question 49603, Physics, Mechanics | Kinematics | Dynamics

A shadow is really not matter at all.

The shadow represents a zone where photons (as light waves) emanating from a source are blocked by impeding matter. It is the pattern formed when light is blocked by an object and peripheral light to the sides of the object strikes the surface.

Thus, it is only an optical phenomenon.

So - when you wave at your shadow on a winter day you are impeding the direct flow of photons from the sun from impacting on the ground in the zone of your shadow.

Matter is not part of the shadow.

