Skin effect

The skin effect results from this theory quite simple:

Given that electrons move within conductors in the direction of the electric field (described as current), these electrons don't have big velocity differences between each other as long as the electric field (current) stays constant.

Now, in higher frequencies, electrons change the direction, but depending on the free pathlengths of these electrons some might start from 0 velocity during a voltage-reversal, while others start at high velocities in the opposite direction.

So the reversed electric field no accelerates some elecrons, while it slows others down. This overall results in higher relative speeds between electrons, and thus results according to this theory in stronger repellent forces.

Thus, the skin-effect is simply predicted by this theory.