On the origin of elementary particle masses

*In honor of my lifelong friend Joseph Katz*

Abstract:

Avoiding mathematics I will present in simple but conceptually correct terms the theory of mass generation for elementary particles. Robert Brout and I, and then Peter Higgs, initiated a solution to this problem. My colleague and friend Robert Brout passed away in 2011, missed his Nobel Prize and left me alone to tell the story.

I will place the theory in the context of the quest for a rational understanding of nature in physical terms and in the vision of a future where there is already evidence that the very small scale of particle physics contains the seed of the genesis of our very large universe.