“The End of the Universe and the Future of Life”

Recent developments in cosmology have not only shed new light on the beginning of the Universe: they have also changed our speculations about how the Universe may end in the far future. Chief among these new discoveries is the observation that the expansion of the Universe is accelerating, indicating that the Universe will end not in a “Big Crunch”, but in an ever-faster rush of expansion. In the context of this new cosmology, I will revisit the famous argument first made by Freeman Dyson in 1979 that life in an expanding universe has a limitless future. The reality for the future of evolution is more complex than Dyson envisioned.