Einstein's Legacy

Chris Llewellyn Smith

Abstract: I will begin with a brief overview of Einstein's major contributions to physics in 1905 and the subsequent period up to 1925, and their legacy for pure and applied physics. I shall then turn to the business that occupied the second part of Einstein's career, which he left unfinished – unification of gravity and electromagnetism and the search for a more satisfactory theory that may underlie quantum mechanics. I shall discuss Einstein's motivation and then review developments in unified theories and understanding the mystery of quantum mechanics since his death. I shall end by considering whether Einstein may have been right when he said of his later (non main stream) work "physicists will understand me 100 years from now".