Professor Pakes has done research in the fields of industrial organization (I.O.), the economics of technological change, and econometric theory. He has focused recently on developing techniques to enable the empirical analysis of I.O. models. This focus includes theoretical work on how to estimate demand and cost systems, the use of the estimated parameters of such systems to analyze equilibrium responses to policy and environmental changes, empirical work that uses these techniques to analyze the implications of alternative events in different industries, and the development of a framework for the numerical analysis of dynamic oligopolies (with and without collusive possibilities). His previous work outside I.O. proper included the co-development of simulation estimators (in econometric theory) and the development of measures of the costs and returns to research and patenting activities (in technological change).