Dr. Joseba Martinez is a macro- and financial economist whose research interests include the effect of automation on productivity, economic growth, and income distribution. In addition, his work on the optimal design of banking system stress-tests has been published in the Review of Economic Studies. He holds a BSc from University College London, an MSc from London School of Economics and Political Science and a PhD from New York University, all in economics.

Research Seminar Economics

You are cordially invited to the following seminar Thursday, 29 April from 12:15 – 13:15hrs, ONLINE via ZOOM

Automation Potential and Diffusion

We introduce a novel methodology to measure the invention and diffusion of labor-replacing technology in the US economy. First, we measure the relevance of US patents introduced from 1900-2020 to work tasks performed by human workers using a natural language processing algorithm. After controlling for the confounding effects of the evolution of language, we obtain a measure that we call the automation potential of newly introduced technology: the potential for that technology to eventually replace human workers in the performance of tasks. In a local projections framework, we project long-horizon changes in task demand onto automation potential and find large negative effects, suggesting i) that our measure captures the development of automation technology, and ii) that such technology diffuses slowly into the economy.