

**Ponente**

Javier Vicente Bas

Universidad de Alcalá de Henares (Departamento de Economía)

**Título del seminario**

An Interpretable Machine Learning Approach to Understanding the Impacts of Attitudinal and Ridesourcing Factors on Electric Vehicle Adoption

**Abstract**

The global electric vehicle (EV) market has been experiencing an impressive growth in recent times. Understanding consumer preferences on this cleaner, more eco-friendly mobility option could help guide public policy towards accelerating EV adoption and building a sustainable transportation system. Previous studies suggest the strong influence of individual and external factors on EV adoption decisions. In this study, we apply machine learning techniques on EV stated preference survey data to predict EV adoption using attitudinal factors, ridesourcing factors (e.g., frequency of Uber/Lyft rides), as well as the underlying sociodemographic and vehicle factors. To overcome machine learning models' low interpretability, we adopt the innovative Local Interpretable Model-Agnostic Explanations (LIME) method to elaborate each factor's contribution to the predicting outcomes. Besides what was found in previous EV preference literature, we find that the frequent usage of ridesourcing, knowledge about EVs, and awareness of environmental protection are important factors in explaining the high willingness of adopting EVs.