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# Seminar

# LARGE-SCALE DYNAMIC PREDICTIVE REGRESSIONS


## Daniele Bianchi

### University of Warwick


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**Abstract** : www.stat.unipd.it/fare-ricerca/seminari

# LARGE-SCALE DYNAMIC PREDICTIVE REGRESSONS

**Daniele Bianchi**

Assistant Professor | Warwick Business School | University of Warwick

We develop a novel "decouple-recouple" dynamic predictive strategy and contribute to the literature on forecasting and economic decision making in a data-rich environment. Under this framework, clusters of predictors generate different latent states in the form of predictive densities that are later synthesized within an implied time-varying latent factor model. As a result, the latent inter-dependencies across predictive densities and biases are sequentially learned and corrected. Unlike sparse modeling and variable selection procedures, we do not assume a priori that there is a given subset of active predictors, which characterize the predictive density of a quantity of interest. We test our procedure by investigating the predictive content of a large set of financial ratios and macroeconomic variables on both the equity premium across different industries and the inflation rate in the U.S., two contexts of topical interest in finance and macroeconomics. We find that our predictive synthesis framework generates both statistically and economically significant out-of-sample benefits while maintaining interpretability of the forecasting variables. In addition, the main empirical results highlight that our proposed framework outperforms both LASSO-type shrinkage regressions, factor based dimension reduction, sequential variable selection, and equal-weighted linear pooling methodologies.