General description
We are pleased to announce details of the latest EABCN Training School; a three-day course entitled “What’s New in Mixed Frequency Data (MIDAS), with Applications to Machine Learning and Big Data”. Professors Eric Ghysels, Massimiliano Marcellino and Jonas Striaukas will teach the course. It is primarily aimed at participants in the Euro Area Business Cycle Network but applications will also be considered from doctoral students, post-doctoral researchers and economists working in central banks and government institutions outside of the network, as well as commercial organisations (fees are applicable for non-network non-academic organisations).

Course outline
The focus of the course is the use of mixed frequency data in economics and finance. A variety of single and multiple equation models will be considered, for both small and large datasets, combined with alternative estimation and inference techniques. Theory and practical implementations will be covered.

The course is divided into three lecture sessions, each followed by a practice session.

Lecture sessions:
- **Day 1 (Ghysels)**
  - Introduction to MIDAS regression and related econometric methods
  - Regularized machine learning MIDAS regression models
- **Day 2 (Ghysels)**
  - Regularized machine learning MIDAS regression models
  - High dimensional mixed frequency panel data regression models
  - High dimensional mixed frequency factor models
- **Day 3 (Marcellino)**
  - Mixed frequency VARs and Mixed frequency factor models
  - Parameter time variation in mixed frequency models
  - Structural mixed frequency models
  - Mixed frequency models for the tails
Practice sessions:

- **Day 1 (Striaukas)**
  - MIDAS regressions (data construction, weight functions, estimation methods, prediction). Applications.
  - Regularized machine learning MIDAS regressions (data construction, group structures, tuning parameter selection, estimation, prediction). Applications.

- **Day 2 (Striaukas)**
  - Implementation of Granger causality with regularized machine learning MIDAS regressions. Application.
  - High dimensional MIDAS panel data regressions (pooled, fixed effects, group structures, estimation, prediction and inference). Applications.

- **Day 3 (Striaukas)**
  - Mixed frequency VARs (impulse response analysis) and mixed frequency factor models (estimation, prediction and inference). Applications.
  - Mixed frequency quantile regressions (estimation and prediction). Application.

**Administrative Information**

The course will take place online via Zoom. The course will run from Monday 26th – Wednesday 28th September. Each day the session will begin at 2 PM (GMT) and with an estimated finish time of 7:30 PM (GMT) each day. More information will be circulated to successful applicants closer to the date.

We ask that you send a current version of your CV. PhD students must also specify in which way the school will be useful for their current research (max 300 words).

Participants from non-academic institutions where the employer is not a member of the EABCN network are charged a course fee of EUR1000. We reserve the right to deny access to the course if payment has not been completed in due time.

**How to apply**

*IMPORTANT:*

Due to an ongoing IT system migration, the application process for this Training School has been updated. Applications will now be collected via an alternative platform.

**The new link to apply is here.** The application deadline remains at 6pm (GMT), Wednesday 24 August 2022.

Applications submitted before midday (UK TIME), on the 2nd of August to the CEPR portal have been accounted for, and resubmission is not necessary.

If you have any difficulty in applying please contact, Lydia Williams, CEPR Events Officer at lwilliams@cepr.org for assistance, with the subject line ‘1559- EABCN Training School - Ghysels, Marcellino, and Striaukas - Online, 2022’

**About the Instructors**

**Eric Ghysels** is the Edward M. Bernstein Distinguished Professor of Economics at the University of North Carolina at Chapel Hill and Professor of Finance at the Kenan-Flagler Business School. He obtained his Ph.D. from the Kellogg Graduate School of Management.
at Northwestern University. He has been a visiting professor or scholar at several major U.S., European and Asian universities. He served on the editorial boards of several academic journals and was co-editor of the *Journal of Business and Economic Statistics* and editor of the *Journal of Financial Econometrics*. He has published in the leading economics, finance and statistics journals and has published several books. He is also the Founding Co-President of the *Society for Financial Econometrics* (SoFiE). He was a Resident Scholar at the Federal Reserve Bank of New York during the 2008-2009 financial crisis and a Duisenberg Fellow at the European Central Bank in 2011 during the sovereign debt crisis. He is a Fellow of the American Statistical Association, Fellow of the Journal of Econometrics, Fellow of the Society for Financial Econometrics and holds an Honorary Doctorate from HEC Liege. He is currently co-editor of the *Journal of Applied Econometrics* and Faculty Research Director of the Rethinc.Labs at the Kenan Institute. His most recent research focuses on MIDAS (meaning Mi(xed) Da(ta) S(ampling)) regression models and related econometric methods, machine learning, artificial intelligence, big data, FinTech, and quantum computing applications in finance.

**Massimiliano Marcellino** is professor of Econometrics in the Economics Department of Bocconi University and fellow of CEPR and IGIER. Previously, he held the Pierre Werner Chair at the European University Institute, where he was also Director of the Department of Economics. He has published over one hundred academic articles in leading international journals on empirical macroeconomics, econometrics, economic statistics and forecasting, his main areas of research, teaching and consulting. He has acted as an advisor for several institutions, including the ECB, Bank of Italy, Bundesbank, Eurostat, BIS, IADB and IMF.

**Jonas Striaukas** is an assistant professor of Statistics in the Finance Department of the Copenhagen Business School. He obtained his Ph.D. from the Université catholique de Louvain in Belgium. His research focuses on machine learning and big data analysis in econometrics with a particular focus on mixed frequency data models.