41st International Symposium on Forecasting

Event Schedule

Sun, Jun 27, 2021

6:00pm

Workshop: Long Memory in Volatility

🕐 6:00pm - 10:00pm, Jun 27

Workshop

Risk modelling is all about modelling and quantifying risk. In financial industries, market-risk being quantified by potential losses, based on negative fluctuations in a portfolio's market value, is of particular relevance. This workshop offers an introduction to modelling and forecasting risk in commodity markets, using EViews 12.

📢 **Speaker**

Malvina Marchese Lecturer In Finance, Cass Business School

Workshop Amazon: Deep Learning for Forecasting

🕐 6:00pm - 10:00pm, Jun 27

Workshop

In this virtual workshop, we aim at covering neural forecasting methods from ground up, starting from the very basics of deep learning up to recent forecasting model improvements

📢 **Speakers**

Tim Amazon

Lorenzo Stella Applied Scientist, Amazon Web Services

Mon, Jun 28, 2021

3:00am

ECR - Visibility Panel

🕐 3:00am - 4:00am, Jun 28

Social

In a world ruled by the internet and social media, it is more important than ever to give yourself and your work visibility. We have a panel of experts in research visibility ready to answer all your questions! Feel free to send in your questions beforehand to ecr@forecasters.org.

Panelists: Rob Hyndman, Feng Li, Galit Shmueli

Shari De Baets ECR president, International Institute of Forecasting

Rob J Hyndman Professor of Statistics, Monash University

Feng Li School of Statistics and Mathematics, Central University of Finance and Economics

Galit Shmueli Distinguished Professor, National Tsing Hua University

8:00am

Retail forecasting 1
🕐 8:00am - 9:00am, Jun 28

Regular Submission

Chair: Anna-Lena Sachs

3 Subsessions

- **Accuracy, Explainability, and Trust in Business Forecasting**
  🕐 8:00am - 8:20am, Jun 28

- **An Analysis of Merchandise Allocator Adjustments to Sales Forecasts in Apparel Retailing**
  🕐 8:20am - 8:40am, Jun 28

- **Local market information and decision support in retailing**
  🕐 8:40am - 9:00am, Jun 28

Electricity price
🕐 8:00am - 9:00am, Jun 28

Regular Submission

Chair: Michal Narajewski

3 Subsessions

- **Multi-day-ahead Electricity Price Forecasting: A Comparison of fundamental, econometric and hybrid Models**
  🕐 8:00am - 8:20am, Jun 28

- **Price forecasting in electricity markets: evidence from the last decade**
  🕐 8:20am - 8:40am, Jun 28

- **Optimal bidding of large volumes on two day-ahead electricity price auctions**
  🕐 8:40am - 9:00am, Jun 28

Banking and finance
🕐 8:00am - 9:00am, Jun 28

Regular Submission

Chair: Hoang Nguyen

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3 Subsessions

- **Multi-asset return predictability using VARs**
  🕐 8:00am - 8:20am, Jun 28

- **Incorporating bank-level financial variables into forecasting of Russian macroeconomic series**
  🕐 8:20am - 8:40am, Jun 28

- **Dynamic relationship between Stock market and Bond market: A GAS MIDAS copula approach**
  🕐 8:40am - 9:00am, Jun 28

Macroeconomic forecasting with neural networks
🕐 8:00am - 9:00am, Jun 28

Regular Submission

Chair: Nico Beck

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3 Subsessions

- **Multivariate Forecasting using Artificial Neural Networks**
  🕐 8:00am - 8:20am, Jun 28

- **A Neural Network Ensemble Approach for GDP Forecasting**
  🕐 8:20am - 8:40am, Jun 28

- **Benchmarking pre-structured recurrent neural network architectures for macro-economic problems**
  🕐 8:40am - 9:00am, Jun 28

9:00am

Demand forecasting 1
🕐 9:00am - 10:00am, Jun 28

Regular Submission

Chair: Devon Barrow

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3 Subsessions

- **New Product Demand Forecasting for Fashion Retail**
  🕐 9:00am - 9:20am, Jun 28

- **Selection of the number of neighbours for k-NN retail promotional forecasting**
  🕐 9:20am - 9:40am, Jun 28

- **Univariate forecasting methodologies for forecasting medicine demand in hospital pharmacies**
  🕐 9:40am - 10:00am, Jun 28

Assessing forecasters 1
🕐 9:00am - 10:00am, Jun 28

Regular Submission

Chair: Yves R. Sagaert

3 Subsessions

- **Exploring the social influence of Kaggle virtual community on the M5 competition**
  🕐 9:00am - 9:20am, Jun 28

- **Forecasting Principles from Experience with Forecasting Competitions**
  🕐 9:20am - 9:40am, Jun 28

- **From learning analytics to forecast learning: using students' digital footprint to improve learning**
  🕐 9:40am - 10:00am, Jun 28

Central banking and inflation
🕐 9:00am - 10:00am, Jun 28

Regular Submission

Chair: Fabio Verona

3 Subsessions

- **Talking in a language that everyone can understand? Transparency of speeches by the ECB Executive Board**
  🕐 9:00am - 9:20am, Jun 28

- **Inflation dynamics and forecast: frequency matters**
  🕐 9:20am - 9:40am, Jun 28

- **Inflation forecasting performance of a developing economy central bank- The case of Ghana**
  🕐 9:40am - 10:00am, Jun 28

Text and Sentiment Analysis
🕐 9:00am - 10:00am, Jun 28

Regular Submission

Chair: Michał Chojnowski

3 Subsessions

- **Are political risk and policy uncertainty indicators useful to nowcast macrofinancial developments? An application for Latin American using text-based variables**
  🕐 9:00am - 9:20am, Jun 28

- **The value of the online sentiment proxies in realized volatility forecasting: a large scale longitudinal evaluation**
  🕐 9:20am - 9:40am, Jun 28

- **Measure market vulnerability on market sentiments**
  🕐 9:40am - 10:00am, Jun 28

10:00am

Demand forecasting 2

🕐 10:00am - 11:00am, Jun 28

Regular Submission

Chair: Michał Kurcewicz

3 Subsessions

- **The effect of the forecasting metric choice in retail inventory management applications**
  🕐 10:00am - 10:20am, Jun 28

- **A model of cannibalization for E-commerce demand forecasts**
  🕐 10:20am - 10:40am, Jun 28

- **Demand forecasting in times of COVID**
  🕐 10:40am - 11:00am, Jun 28

Forecasting and Covid-19

🕐 10:00am - 11:00am, Jun 28

Regular Submission

Chair: Christos Emmanouilides

3 Subsessions

- **Testing the predictive accuracy of COVID-19 forecasts**
  🕐 10:00am - 10:20am, Jun 28

- **The stock markets of the BRICS: How contagious is Covid-19?**
  🕐 10:20am - 10:40am, Jun 28

- **Forecasting COVID-19: A large-scale comparison of alternative models.**
  🕐 10:40am - 11:00am, Jun 28

MacroFor1: Dynamic Factor Models

🕐 10:00am - 11:00am, Jun 28

Invited Session

Chair: Laurent Ferrara

3 Subsessions

- **Kalman fillter and smoothing factor extraction: Does the specification matter?**
  🕐 10:00am - 10:20am, Jun 28

- **Nowcasting Spanish regional GDP by means of factor models**
  🕐 10:20am - 10:40am, Jun 28

- **Commodity price uncertainty co-movement: Does it matter for global economic growth?**
  🕐 10:40am - 11:00am, Jun 28

Tourism and Hospitality Forecasting 1

🕐 10:00am - 11:00am, Jun 28

Invited Session

Chair: Doris Wu

3 Subsessions

- **Are search queries on neighboring destinations useful in tourism demand forecasting?**
  🕐 10:00am - 10:20am, Jun 28

- **Tourism Demand Forecast Comparisons in Unstable and Complex Environments**
  🕐 10:20am - 10:40am, Jun 28

- **Forecasting tourism demand cycles: A dynamic Markov-Switching Approach**
  🕐 10:40am - 11:00am, Jun 28

11:00am

Tourism and Hospitality Section (THS): Social Event
🕐 11:00am - 12:00pm, Jun 28

`Social`

1. Opening speech by Prof. George Athanasopoulos, IIF president

2. Introduction of THS by Doris Chenguang Wu, Chair of THS

3. Wine Tasting speech by Prof. Haiyan Song (20 mins) (participants are encouraged to bring a bottle/glass of Penfolds 389 (2016 or 2017))

4. "Know Yourself" social game (25 mins) (All participants are invited)

📢 **Speakers**

Doris Chenguang Wu Professor of Tourism Forecasting, School of Business, Sun Yat-sen University

Haiyan Song Associate Dean and Chair Professor, School of Hotel and Tourism Management, The Hong Kong Polytechnic University

12:00pm

Intermittent demand
🕐 12:00pm - 1:00pm, Jun 28

`Regular Submission`

Chair: John Boylan

3 Subsessions

- **Intermittent Demand forecasting with Neighbour-based Multilayer Percpetrons**
  🕐 12:00pm - 12:20pm, Jun 28

- **Inventory Control for Periodic Intermittent Demand**
  🕐 12:20pm - 12:40pm, Jun 28

- **Re-Analysis of Intermittent Demand Forecasting Methods**
  🕐 12:40pm - 1:00pm, Jun 28

Electricity Demand 1
🕐 12:00pm - 1:00pm, Jun 28

Regular Submission

Chair: Carlos Quesada

3 Subsessions

- **Effect of meteorological variables in electric load forecasting: Spanish insular systems**
  🕐 12:00pm - 12:20pm, Jun 28

- **Impact of Temperature Modeling over The Electric Load Forecasting Accuracy**
  🕐 12:20pm - 12:40pm, Jun 28

- **Forecasting of load profiles by time series feature extraction**
  🕐 12:40pm - 1:00pm, Jun 28

Forecast Combination and Evaluation
🕐 12:00pm - 1:00pm, Jun 28

Regular Submission

Chair: Onno Kleen

3 Subsessions

- **Chaoticity versus Stochasticity on financial markets: Are daily S&P500 return dynamics chaotic?**
  🕐 12:00pm - 12:20pm, Jun 28

- **CRPS-Learning**
  🕐 12:20pm - 12:40pm, Jun 28

- **Measurement error sensitivity of loss functions for distribution forecasts**
  🕐 12:40pm - 1:00pm, Jun 28

Multivariate forecasting methodology
🕐 12:00pm - 1:00pm, Jun 28

Regular Submission

Chair: Kashif Rasul

3 Subsessions

- **The Tensor Auto-Regressive Model**
  🕐 12:00pm - 12:20pm, Jun 28

- **Superiority of simple average to equally weighted, variance-covariance and OLS combination forecasts**
  🕐 12:20pm - 12:40pm, Jun 28

- **Autoregressive Denoising Diffusion Models for Multivariate Probabilistic Time Series Forecasting**
  🕐 12:40pm - 1:00pm, Jun 28

1:00pm

Opening welcome / Current and prospective members meeting (all are welcome)

🕐 1:00pm - 2:00pm, Jun 28

- Meet the Directors
- Announcement of Foresight Hall of Famers
- Announcement of the IJF best paper awards
- Announcement of the IIF Fellow

📢 **Speaker**

G

George Athanasopoulos Professor, Monash University

2:00pm

Keynote: Psychological AI: Simplicity and Transparency in Prediction
🕐 2:00pm - 3:00pm, Jun 28

Keynote

Chair: Aris Syntetos

Psychological AI is an elaboration of Herbert Simon's original vision of AI, where the "I" refers to human intelligence as simulated by a machine. By studying the heuristics that experts use and programming these into software, it aims to improve the ability of computers to perform cognitive tasks. I argue that psychological AI originally failed because Simon and others applied it to stable situations such as chess, whereas its promise lies in making predictions in unstable environments, similar to those in which the human mind evolved. I discuss cases where amazingly simple psychological heuristics make more accurate predictions than complex big data algorithms such as Google Flu Trends. These insights offer an alternative to current attempts at understandable AI, and can introduce beams of transparency into an ever-darkening black-box society.

📢 **Speaker**

Gerd Gigerenzer University of Potsdam

3:00pm

Wisdom of the Crowd
🕐 3:00pm - 4:20pm, Jun 28

Invited Session

Chair: Shu Huang

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4 Subsessions

- **Boosting the Wisdom of Crowds Within a Single Judgment Problem: Weighted Averaging Based on Peer Predictions**
  🕐 3:00pm - 3:20pm, Jun 28

- **Decomposing the Effects of Crowd-Wisdom Aggregators: The Bias-Information-Noise (BIN) Model**
  🕐 3:20pm - 3:40pm, Jun 28

- **Election forecasts can be improved using wisdom-of-crowds methods**
  🕐 3:40pm - 4:00pm, Jun 28

- **Combining Aggregated Judgments: An Effective Method for Improving Accuracy by Stacking Multiple Weighting Models**
  🕐 4:00pm - 4:20pm, Jun 28

Water and Hydro Power
🕐 3:00pm - 4:20pm, Jun 28

Regular Submission

Chair: Björn Sonnenschein

4 Subsessions

- **Online short-term forecasting of aggregated heat load**
  🕐 3:00pm - 3:20pm, Jun 28

- **Predicting Energy Production by HPP Using Machine Learning Algorithms with Priority Weights**
  🕐 3:20pm - 3:40pm, Jun 28

- **Outlier detection in water related demand-driven time series data based on a clustering approach**
  🕐 3:40pm - 4:00pm, Jun 28

- **Probabilistic Intraday Wastewater Treatment Plant Inflow Forecast Utilizing Rain Forecast Data and External Flow Measurements**
  🕐 4:00pm - 4:20pm, Jun 28

GDP Growth and Tilting
🕐 3:00pm - 4:00pm, Jun 28

Regular Submission

Chair: Anastasia Allayioti

3 Subsessions

- **When (where and why) forecasters get it wrong? An analysis of growth forecast errors**
  🕐 3:00pm - 3:20pm, Jun 28

- **Combining Bayesian VARs with survey density forecasts: does it pay off?**
  🕐 3:20pm - 3:40pm, Jun 28

- **Entropic tilting for macroeconomic variables: The role of asymmetrically distributed survey forecasts**
  🕐 3:40pm - 4:00pm, Jun 28

Open Source Forecasting in SAS
🕐 3:00pm - 4:20pm, Jun 28

Invited Session

Chair: Russ Wolfinger

4 Subsessions

- **Accelerate Open Source Forecasting with SAS (Part 1)**
  🕐 3:00pm - 3:20pm, Jun 28

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Accelerate Open Source Forecasting with SAS (Part 2)
🕐 3:20pm - 3:40pm, Jun 28

- **Deep Learning for Retail Sales Forecasting**
  🕐 3:40pm - 4:00pm, Jun 28

- **Major Paradigm Shifts in Modern Forecasting Methodology**
  🕐 4:00pm - 4:20pm, Jun 28

4:00pm

ECR - Visibility Panel
🕐 4:00pm - 5:00pm, Jun 28

`Social`

In a world ruled by the internet and social media, it is more important than ever to give yourself and your work visibility. We have a panel of experts in research visibility ready to answer all your questions! Feel free to send in your questions beforehand to ecr@forecasters.org.

Panelists: Yael Gruschka-Cockayne, Nikos Kourentzes, Nicolas Vandeput

📢 **Speakers**

Shari De Baets ECR president, International Institute of Forecasting

Nikos Kourentzes Skövde

Yael Grushka-Cockayne Darden School of Business

Nicolas Vandeput Consultant, Author, SupChains

MacroFor Social
🕐 4:00pm - 5:00pm, Jun 28

`Social`

The MacroFor section is happy to welcome you to informally chat between macro forecasters and to discuss about future projects.

📢 **Speaker**

Laurent Ferrara Professor of Economics, SKEMA Business School

5:00pm

Disaggregation and forecasting
🕐 5:00pm - 6:00pm, Jun 28

Regular Submission

Chair: Thomas Willemain

3 Subsessions

- **Temporal Disaggregation of U.S. State Natural Gas Data**
  🕐 5:00pm - 5:20pm, Jun 28

- **Progress in the Quantitative Analysis of the Field of Forecasting (1985-2021)**
  🕐 5:20pm - 5:40pm, Jun 28

- **Time Series Disaggregation**
  🕐 5:40pm - 6:00pm, Jun 28

VAR and Covid-19
🕐 5:00pm - 6:00pm, Jun 28

Regular Submission

Chair: Florens Odendahl

3 Subsessions

- **Identifying the Global Transmission of the COVID-19 Pandemic on G-20 Economies**
  🕐 5:00pm - 5:20pm, Jun 28

- **The impact of Covid-19 on vector autoregressions:**
  🕐 5:20pm - 5:40pm, Jun 28

- **Cancelled: Comparing Global VAR with alternative macro models for forecasting and scenario analysis**
  🕐 5:40pm - 6:00pm, Jun 28

Large-Scale New Product Forecasting: A Machine Learning-Based Approach
🕐 5:00pm - 5:30pm, Jun 28

Practitioner track

Chair: Tim Januschowski

Companies need to forecast the demand for new products several periods ahead of the product launch to guide important business decisions such as inventory planning and supply chain optimization. In contrast to traditional forecasting tasks, however, new product forecasting approaches seek to quantify uncertainty in the absence of historical data, making this one of the most challenging areas of forecasting. A challenge that is often magnified for companies producing many short lifecycle products that call for a large number of pre-launch forecasts to be produced in a short period of time.

Following a review of existing new product forecasting methodologies, we will introduce a new product forecasting approach that combines statistical methods and machine learning models. The approach automates the search for previously launched, comparable products that are likely to be useful in forecasting the new product of interest. Compared to benchmark methods, the proposed approach seeks to improve forecast accuracy through an analytically driven and objective methodology that can be scaled and automated to accommodate large datasets.

📢 **Speaker**

Nitzi Roehl Sr. Manager Analytics Consulting, SAS

5:30pm

Winning Strategies To Optimize Product-Mix Using AI-powered Demand Forecasting
🕐 5:30pm - 6:00pm, Jun 28

Practitioner track

Chair: Tim Januschowski

Accurate Demand Planning and Forecasting in the post-COVID era needs modern datadriven tools that provide unmatched line of sight to customer demand and existing capacity constraints across the upstream and downstream operations. By deep diving into their supply value chains, companies can get a precise mapping of the type of components needed and where exactly the components are facing bottlenecks and how
they are moving across the supply chain funnel.

In this talk, Alla Anashenkova will explain how companies can optimize product-mix using AI to relentlessly minimize the time lag between events and the response to those events and smartly respond to those signals.

📢 **Speaker**

Alla Anashenkova Head of Product Management and Sales Engineering, ThroughPut Inc.

6:00pm

Nowcasting and Covid-19
🕐 6:00pm - 7:00pm, Jun 28

Regular Submission

Chair: Erik Christian Montes Schütte

3 Subsessions

- **Tracking economic growth during the Covid-19: a weekly indicator for Italy**
  🕐 6:00pm - 6:20pm, Jun 28

- **Nowcasting the economy with news during the pandemic**
  🕐 6:20pm - 6:40pm, Jun 28

- **Now- and Backcasting Initial Claims with High-Dimensional Daily Internet Search-Volume Data**
  🕐 6:40pm - 7:00pm, Jun 28

Forecasting with AI
🕐 6:00pm - 7:40pm, Jun 28

Invited Session

Chair: Mohsen Hamoudia

5 Subsessions

- **Textual Data for Time Series Forecasting**
  🕐 6:00pm - 6:20pm, Jun 28

- **Academicians and Practitioners Will Thrive Under our New ML Master**
  🕐 6:20pm - 6:40pm, Jun 28

- **Using machine learning in building a sentiment analysis tool to forecast risk appetite**
  🕐 6:40pm - 7:00pm, Jun 28

- **A picture is worth a thousand data points: An image-based time series forecasting approach**
  🕐 7:00pm - 7:20pm, Jun 28

- **Size does matter: Time series augmentation for enhanced cross-learning**
  🕐 7:20pm - 7:40pm, Jun 28

COVID-19 Forecasting: Exploring and Modeling Data
🕐 6:00pm - 7:20pm, Jun 28

Invited Session

Chair: Mahesh Joshi

4 Subsessions

- **Location Network Analysis and Supervised Machine Learning Models to Identify Virus Spread Trends in the COVID-19 Pandemic**
  🕐 6:00pm - 6:20pm, Jun 28

- **Representing and Forecasting the COVID-19 Pandemic Using Differential Equation Models**
  🕐 6:20pm - 6:40pm, Jun 28

- **Visualization by pattern similarity for Covid-19 data set**
  🕐 6:40pm - 7:00pm, Jun 28

- **Evolution of Statistical Models for Producing Weekly COVID-19 Forecast**
  🕐 7:00pm - 7:20pm, Jun 28

8:00pm

Financial Markets
🕐 8:00pm - 9:00pm, Jun 28

Regular Submission

Chair: Conceicao de Castro

3 Subsessions

- **Surrogate Monte Carlo**
  🕐 8:00pm - 8:20pm, Jun 28

- **MODELLING FINANCIAL MARKET TIME SERIES VIA MACHINE LEARNING AND STATISTICAL BASED MODELS; A COMPARISON STUDY**
  🕐 8:20pm - 8:40pm, Jun 28

- **Mapping ABM of Financial Markets: A bibliometric and citation network analysis**
  🕐 8:40pm - 9:00pm, Jun 28

Forecasting and Uncertainty
🕐 8:00pm - 9:00pm, Jun 28

Regular Submission

Chair: Michael Gilliland

3 Subsessions

- **Forecasting uncertainty - the quest for quantification**
  🕐 8:00pm - 8:20pm, Jun 28

- **The Forecaster's Predicament: Issues with Communicating Uncertainty**
  🕐 8:20pm - 8:40pm, Jun 28

- **Cancelled: Recalibrating probabilistic forecasts to improve their accuracies**
  🕐 8:40pm - 9:00pm, Jun 28

9:00pm

Hierarchical Times Series 1
🕐 9:00pm - 9:40pm, Jun 28

Regular Submission

Chair: Mauricio Lila

2 Subsessions

- **Constrained Maximum Likelihood Estimation for Forecast Reconciliation in Hierarchical Time Series**
  🕐 9:00pm - 9:20pm, Jun 28

- **A Follow-up on Robust Reconciliation**
  🕐 9:20pm - 9:40pm, Jun 28

GDP forecasting and factor models
🕐 9:00pm - 10:00pm, Jun 28

Regular Submission

Chair: Kajal Lahiri

3 Subsessions

- **A Machine Learning Factor-Based Interpretation for the Bond Risk Premia in the U.S.**
  🕐 9:00pm - 9:20pm, Jun 28

- **Estimation of Short-run Predictive Factor for US Growth using State Employment Data**
  🕐 9:20pm - 9:40pm, Jun 28

- **ROC Approach to Forecasting Recessions using Daily Yield Spreads**
  🕐 9:40pm - 10:00pm, Jun 28

Structural breaks
🕐 9:00pm - 10:00pm, Jun 28

Regular Submission

Chair: Moinak Bhaduri

3 Subsessions

- **Structural Breaks in Seemingly Unrelated Regression Models**
  🕐 9:00pm - 9:20pm, Jun 28

- **Applications of sequential change detection in continuous-time self-exciting point process forecasting**
  🕐 9:20pm - 9:40pm, Jun 28

- **Cancelled: Dynamic Model Averaging in the Presence of Structural Change**
  🕐 9:40pm - 10:00pm, Jun 28

Forecasting and software
🕐 9:00pm - 10:00pm, Jun 28

Regular Submission

Chair: Javier Delgado

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3 Subsessions

- **Scalable Cloud-Based Automatic Time Series Imputation**
  🕐 9:00pm - 9:20pm, Jun 28

- **Forecasting Software Trends for the Next Decade**
  🕐 9:20pm - 9:40pm, Jun 28

- **Using Open Source Machine Learning Algorithms in SAS Visual Forecasting**
  🕐 9:40pm - 10:00pm, Jun 28

10:00pm

Keynote: Humachine: Humankind, Machines, and the Future of Enterprise
🕐 10:00pm - 11:00pm, Jun 28

Keynote

Chair: Yael Grushka-Cockayne

We are living in an age of infatuation with AI and technological capability. In this presentation, however, will provide insights into where technology is limited and give reasons for cautious optimism about the true opportunities that lie amidst all the disruptive change currently underway. Dr. Sanders debunks the myth that competitive companies need to replace their human talent with AI. She will identify where and how humans and machines can best complement one another to create an enterprise greater than the sum of its parts. Dr. Sanders will also discuss what the future of enterprise in the age of AI will look like, the changing forecasting function and the new
role for human talent.

📢 **Speaker**

Nada Sanders Northeastern University

11:00pm

Cognitive automation in supply chain planning & forecasting
🕐 11:00pm - 11:30pm, Jun 28

Chair: Tim Januschowski

If you operate in the supply chain or the planning world, it is hard to not come across terminology like supply chain planning 4.0, 'light touch' planning or 'lights out' planning. They all rate high in the hype cycle and for good reasons. We live in the era of AI and cognitive automation, the intelligent automation of the supply chain planner and knowledge worker in general.

But what's really required from technology perspective to achieve autonomous planning & forecasting in an enterprise environment?

Why and how should we differentiate between planning process & decision automation versus decision augmentation and human centricity?

Why will the human stay central to planning & forecasting and the future of work in general?

📢 **Speaker**

Niels Van Hove Engagement Principal, Aera Technology

11:30pm

Trust, But Verify: Using BE to Target the Integration of Judgment in Forecasting
🕐 11:30pm - 11:59pm, Jun 28

Chair: Tim Januschowski

Decades of research has shown conclusively that effectively integrating business intelligence and judgement into statistical forecasts can be highly effective. We also know from the work of BE pioneers like Kahneman, Tversky and Thaler that the human capacity for estimation and judgement under uncertainty is extremely limited. In times of crisis or extreme change, historic models offer much less utility, so human inputs are more critical than ever. So how do we get the benefit of human input into forecasts without undermining them with the inherent biases and heuristics that come along with them?

You will learn:

1. Where is the most appropriate place to integrate judgement while minimizing bias?
2. Understanding the most prevalent unconscious biases and group dynamics.
3. The most effective ways to mitigate the effects of biases and heuristics

📢 **Speaker**

Jonathon Karelse CEO, NorthFind Management

Tue, Jun 29, 2021

1:00am

Oil and commodities
🕐 1:00am - 2:00am, Jun 29

Chair: Xun Zhang

3 Subsessions

- A tail risk penalty based combination approach to commodity price forecasting
  🕐 1:00am - 1:20am, Jun 29

- Social Costs of the New Energy Policy in Mexico, 2005Q1-2020Q4. A Forecast.
  🕐 1:20am - 1:40am, Jun 29

- Efficiency gains from the deregulations of refined oil prices in China
  🕐 1:40am - 2:00am, Jun 29

Forecasting with mobility data
🕐 1:00am - 2:00am, Jun 29

Regular Submission

Chair: Rob Hyndman

3 Subsessions

- Nowcasting Economic Activity with Mobility Data
  🕐 1:00am - 1:20am, Jun 29

- Nowcasting Thailand Economic Activity Using the Google Mobility Data
  🕐 1:20am - 1:40am, Jun 29

- Probabilistic ensemble forecasting of Australian COVID-19 cases
  🕐 1:40am - 2:00am, Jun 29

2:00am

The uncertainty estimation of forecast combination
🕐 2:00am - 3:20am, Jun 29

Invited Session

Chair: Feng Li

4 Subsessions

- Feature-based ETS model components selection
  🕐 2:00am - 2:20am, Jun 29

- Improving intermittent demand forecasting : an empirical study on forecast combination methods
  🕐 2:20am - 2:40am, Jun 29

- The uncertainty estimation of feature-based forecast combinations
  🕐 2:40am - 3:00am, Jun 29

- Distributed Forecasting with Large Bayesian Vector Auto Regressions
  🕐 3:00am - 3:20am, Jun 29

Tourism and Hospitality Forecasting 2
🕐 2:00am - 3:00am, Jun 29

Invited Session

Chair: Xinyan Zhang

3 Subsessions

- **Online Hotel Product Click-Through Forecast Using Contents of Promotional Photos**
  🕐 2:00am - 2:20am, Jun 29

- **Tourism demand forecasting using time-varying parameter global vector autoregressive model**
  🕐 2:20am - 2:40am, Jun 29

- **Towards tourism demand forecasting with multisource big data in cloud computing**
  🕐 2:40am - 3:00am, Jun 29

3:00am

ECR - Teaching Panel
🕐 3:00am - 4:00am, Jun 29

`Social`

As forecasters, we don't just practice, we also teach! But how do you engage a classroom? We have a panel of superb teachers ready to answer all your questions! Feel free to send in your questions beforehand to ecr@forecasters.org

Panelists: Gael Martin, Farshid Vahid, Doris Wu

📢 **Speakers**

Shari De Baets ECR president, International Institute of Forecasting

Gael Martin Professor of Econometrics, Monash University

Doris Chenguang Wu Professor of Tourism Forecasting, School of Business, Sun Yat-sen University

Hello

Farshid Vahid-Araghi Professor, Monash University

5:00am

Solar Power
🕐 5:00am - 6:00am, Jun 29

`Regular Submission`

Chair: Takuji Matsumoto

3 Subsessions

- **Probabilistic Forecasting of Solar Power Generation with Autoregressive Recurrent Networks**
  🕐 5:00am - 5:20am, Jun 29

- **Enhanced SVR model for solar PV power forecasting**
  ⏱ 5:20am - 5:40am, Jun 29

- **Solar power forecasting method based on smooth trend estimation in three directions of time, date, and solar radiation**
  ⏱ 5:40am - 6:00am, Jun 29

Factor Models and Housing
⏱ 5:00am - 6:00am, Jun 29

Regular Submission

Chair: Jiawen Xu

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3 Subsessions

- **Second-hand housing price forecast with purchase purpose analysis: an empirical study**
  ⏱ 5:00am - 5:20am, Jun 29

- **Nowcasting GDP with targeted predictors: A model averaging for dynamic factor models**
  ⏱ 5:20am - 5:40am, Jun 29

- **Nowcasting China's PPI inflation using low frequencyand mixed frequency dynamic factor models**
  ⏱ 5:40am - 6:00am, Jun 29

6:00am

Hierarchical Times Series 2
⏱ 6:00am - 7:00am, Jun 29

Regular Submission

Chair: Mahdi Abolghasemi

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3 Subsessions

- **Optimal reconciliation with immutable forecasts from specific hierarchical levels**
  ⏱ 6:00am - 6:20am, Jun 29

- **Explainability versus privacy for hierarchical time series forecasting**
  ⏱ 6:20am - 6:40am, Jun 29

- **Forecasting hierarchical time series with multi-output ML models**
  ⏱ 6:40am - 7:00am, Jun 29

Macroeconomic Forecasting with New Methods
⏱ 6:00am - 7:00am, Jun 29

Regular Submission

Chair: Evripidis Bantis

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3 Subsessions

- **Measuring Unobserved Judgment**
  ⏱ 6:00am - 6:20am, Jun 29

- **Band-Pass Filtering in the Time Domain**
  ⏱ 6:20am - 6:40am, Jun 29

- **Forecasting GDP Growth Rates Using Google Trends in the United States and Brazil**
  ⏱ 6:40am - 7:00am, Jun 29

Time series clustering for forecasting
⏱ 6:00am - 7:00am, Jun 29

Regular Submission

Chair: Thiyanga S. Talagala

3 Subsessions

- **Time Series Segmentation Using Two-Stage Clustering Approach**
  ⏱ 6:00am - 6:20am, Jun 29

- **Model Agnostic Feature Based Explainability For Timeseries Forecasting**
  ⏱ 6:20am - 6:40am, Jun 29

- **Forecasting Model Territories**
  ⏱ 6:40am - 7:00am, Jun 29

Tourism and Hospitality Forecasting 3
⏱ 6:00am - 7:00am, Jun 29

Invited Session

Chair: Ming Cai

3 Subsessions

- **Modelling and Forecasting the Stock Market Volatility of China's Listed Tourism Companies in Unstable Environments**
  ⏱ 6:00am - 6:20am, Jun 29

- **Hotel demand forecasting with travel reviews: A topical sentiment analysis**
  ⏱ 6:20am - 6:40am, Jun 29

- **Product Picture Color and Consumers' Click Behavior**
  ⏱ 6:40am - 7:00am, Jun 29

8:00am

Keynote: Modelling and Forecasting Interval-valued Data: Theory and Applications
⏱ 8:00am - 9:00am, Jun 29

Keynote

Chair: Esther Ruiz Ortega

Interval-valued data are not uncommon in real life; examples include maximum and minimum daily temperatures, maximum and minimum asset prices in a trading period, high and low blood pressures, bid and ask prices, saving and lending interest rates, and so on. They contain more information than point-valued data, and such informational advantages could be exploited to yield more efficient statistical inferences and more accurate forecasts. This talk will provide an updated survey about various approaches to modeling interval-valued data and compare their properties from an econometrictheoretic perspective. A new parsimonious approach to modelling, estimating and forecasting time series interval-valued data will be examined in detail, with prime examples being an interval version of a linear regression model and an interval version of an ARMA model. Various empirical applications, including risk factor identification in asset pricing, forecasts of equity prices, foreign exchange rates and crude oil prices, are provided to highlight the merits of using interval-valued data. Directions for further research on interval-valued data analysis will be also suggested.

Y

Yongmiao Hong Chinese Academy of Sciences

9:00am

Forecasting with judgement 1
🕐 9:00am - 10:00am, Jun 29

Invited Session

Chair: Robert Fildes

3 Subsessions

- **Some theoretical ways in which forecast value added analysis can be misleading and how this can be remedied.**
  🕐 9:00am - 9:20am, Jun 29

- **Forecasting using expert causal models**
  🕐 9:20am - 9:40am, Jun 29

- **Stylised facts of forecast value added, a meta-analysis' where do judgmental adjustments improve accuracy?**
  🕐 9:40am - 10:00am, Jun 29

Electricity Markets
🕐 9:00am - 10:00am, Jun 29

Regular Submission

Chair: Konstantinos Plakas

3 Subsessions

- **Risk Management in Wholesale Electricity Markets: A Signal Processing Approach**
  🕐 9:00am - 9:20am, Jun 29

- **SEE CROSS-BORDER TRADE ANALYSIS BASED ON ECONOMIC ELECTRICITY EXCHANGE**
  🕐 9:20am - 9:40am, Jun 29

- **Forecasting of system imbalance (volume and direction) in a real-time balancing market**
  🕐 9:40am - 10:00am, Jun 29

Change points and breaks
🕐 9:00am - 10:00am, Jun 29

Regular Submission

Chair: Jennifer Castle

3 Subsessions

- **A new approach for change-point detection and reconstruction in time series forecasting**
  🕐 9:00am - 9:20am, Jun 29

- **Loss Function-based Change Point Detection in Risk Measures**
  🕐 9:20am - 9:40am, Jun 29

- **Forecasting Time Series using Trend Indicator Saturation**
  🕐 9:40am - 10:00am, Jun 29

10:00am

Forecasting with judgement 2
🕐 10:00am - 11:00am, Jun 29

Invited Session

Chair: Anna Sroginis

3 Subsessions

- **Algorithm aversion or algorithm appreciation ?**
  🕐 10:00am - 10:20am, Jun 29

- **"Using judgmental forecasting and scenario thinking for anticipating the future: what are the differences, the similarities, and the advantages of each?".**
  🕐 10:20am - 10:40am, Jun 29

- **Judgmental interventions: model tuning and forecast adjustments in a retailing case study**
  🕐 10:40am - 11:00am, Jun 29

MacroFor2: High Frequency data for Macro
🕐 10:00am - 11:20am, Jun 29

Invited Session

Chair: Ana Galvao

4 Subsessions

- **The power of text-based indicators in forecasting the Italian economic activity**
  🕐 10:00am - 10:20am, Jun 29

- **High frequency indicators. Why? When? and How? A users' guide**
  🕐 10:20am - 10:40am, Jun 29

- **Seismonomics: Listening to the Heartbeat of the Economy**
  🕐 10:40am - 11:00am, Jun 29

- **Forecasting Low Frequency Macroeconomic Events with High Frequency Data**
  🕐 11:00am - 11:20am, Jun 29

12:00pm

Forecasting and inventories
🕐 12:00pm - 1:00pm, Jun 29

Regular Submission

Chair: Juan R. Trapero

3 Subsessions

- **When Two Become One: Integrated Forecasting and Optimisation in the Newsvendor Problem**

🕐 12:00pm - 12:20pm, Jun 29

- **Evaluating the impact of business practices on inventory performance**
  🕐 12:20pm - 12:40pm, Jun 29

- **Demand forecasting under lost-sales stock policies.**
  🕐 12:40pm - 1:00pm, Jun 29

Hierarchical forecasting and supply chains
🕐 12:00pm - 1:00pm, Jun 29

Regular Submission

Chair: Oliver Schaer

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3 Subsessions

- **Forecasting the all-time demand of spare parts with Bayesian hierarchical diffusion models**
  🕐 12:00pm - 12:20pm, Jun 29

- **New product life-cycle forecasting with temporal hierarchies**
  🕐 12:20pm - 12:40pm, Jun 29

- **Cancelled: Challenges In Large Scale Hierarchical Demand Forecasting**
  🕐 12:40pm - 1:00pm, Jun 29

Time varying volatility
🕐 12:00pm - 1:00pm, Jun 29

Regular Submission

Chair: Laura Reh

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3 Subsessions

- **Predictive regressions under heteroskedasticity**
  🕐 12:00pm - 12:20pm, Jun 29

- **Multiplicative Non-Stationary Volatility Models with Exogenous Information**
  🕐 12:20pm - 12:40pm, Jun 29

- **A time-varying graphical lasso approach to high dimensional portfolio selection**
  🕐 12:40pm - 1:00pm, Jun 29

Neural Networks 1
🕐 12:00pm - 1:00pm, Jun 29

Regular Submission

Chair: Sven F. Crone

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3 Subsessions

- **Bayesian Optimization for Neural Networks with Small Sample Size Data: A Combined Approach for Feature Selection and Hyperparameter Tuning**
  🕐 12:00pm - 12:20pm, Jun 29

- **Automatic time series feature selection for Neural Networks in Forecasting**
  🕐 12:20pm - 12:40pm, Jun 29

- **Cancelled: Optimize time series forecasting model using Artificial Neural Networks**

⏰ 12:40pm - 1:00pm, Jun 29

Tourism and Transport
⏰ 12:00pm - 1:20pm, Jun 29

Regular Submission

Chair: Jonas Krembsler

4 Subsessions

- **Forecasting the New Trends about the Consumer Behavior in the Cruise Industry post the COVID-19.**
  ⏰ 12:00pm - 12:20pm, Jun 29

- **Airbnb travel behaviour during the Covid 19 pandemic. The case of Switzerland.**
  ⏰ 12:20pm - 12:40pm, Jun 29

- **Forecasting and early warning of the holiday subway passenger flow in metropolis using attention-based LSTM model**
  ⏰ 12:40pm - 1:00pm, Jun 29

- **Comparison of different prediction methods for fare revenues in public transportation in Berlin**
  ⏰ 1:00pm - 1:20pm, Jun 29

1:00pm

Retail forecasting 2
⏰ 1:00pm - 2:00pm, Jun 29

Regular Submission

Chair: Charles Chase

3 Subsessions

- **Intermittent demand forecasting in the Enterprise: Empirical verification**
  ⏰ 1:00pm - 1:20pm, Jun 29

- **Enhancing Short-Term Demand Sensing using Machine Learning.**
  ⏰ 1:20pm - 1:40pm, Jun 29

- **All You Need is Consistent Promotions**
  ⏰ 1:40pm - 2:00pm, Jun 29

Wind and Solar
⏰ 1:00pm - 2:00pm, Jun 29

Regular Submission

Chair: Diego J. Pedregal

3 Subsessions

- **Estimation of extreme conditional quantiles of wind speed: An application using South African data**
  ⏰ 1:00pm - 1:20pm, Jun 29

- **Long-term solar impact on groundwater in Long Island, New York**
  ⏰ 1:20pm - 1:40pm, Jun 29

- **A novel forecasting system for medium term solar irradiance**
  🕐 1:40pm - 2:00pm, Jun 29

Assessing forecasters 2
🕐 1:00pm - 2:00pm, Jun 29

Regular Submission

Chair: Rajiv Sethi

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3 Subsessions

- **Optimizing Information and De-confounding Forecast Timing in Forecaster Assessment**
  🕐 1:00pm - 1:20pm, Jun 29

- **Using selected peers to improve forecasting accuracy**
  🕐 1:20pm - 1:40pm, Jun 29

- **Models, Markets, and the Forecasting of Elections**
  🕐 1:40pm - 2:00pm, Jun 29

Quantile and Density Forecasts
🕐 1:00pm - 2:00pm, Jun 29

Invited Session

Chair: Malte Knüppel

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3 Subsessions

- **Quantile Forecast Optimality Testing**
  🕐 1:00pm - 1:20pm, Jun 29

- **Quantile Regression and Predictive Distributions: With an Application Forecasting GDP Growth-at-Risk**
  🕐 1:20pm - 1:40pm, Jun 29

- **Score-based calibration testing for multivariate forecast distributions**
  🕐 1:40pm - 2:00pm, Jun 29

Probabilistic Forecast Combination
🕐 1:00pm - 2:00pm, Jun 29

Regular Submission

Chair: Giulia Mantoan

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3 Subsessions

- **Calibrating and combining probability forecasts**
  🕐 1:00pm - 1:20pm, Jun 29

- **Predictive properties and minimaxity of Bayesian predictive synthesis**
  🕐 1:20pm - 1:40pm, Jun 29

- **Quantile density combination: An application to US GDP forecasts**
  🕐 1:40pm - 2:00pm, Jun 29

2:00pm

Keynote: The computational science of infectious disease forecasting

🕐 2:00pm - 3:00pm, Jun 29

Keynote

Chair:

Infectious disease outbreaks, even in the absence of a pandemic, cause substantial annual morbidity and mortality worldwide. Accurate forecasts of key features of ongoing epidemics or pandemics, such as the timing and severity of peak disease incidence, can inform public health response to outbreaks. Drawing from the experience of working on projects about seasonal influenza outbreaks and pandemic COVID-19, this talk will provide results from two large collaborative efforts that have provided probabilistic forecasts to public health decision-makers in the US. We have developed and refined an operational, real-time pipeline in collaboration with the US
Centers for Disease Control and Prevention for curating forecasts from numerous models in a standard format. This has enabled the creation and careful evaluation of multi-model probabilistic ensemble forecasts that have been generated for both seasonal influenza and COVID-19. In general, simple unweighted ensemble methods have been sufficient to outperform, in the long run, most if not all of the component models. However, in some cases with sufficient training data, ensembles that assign weights to different models have shown further improvements in accuracy. Overall, this talk will survey the current state of outbreak forecasting, highlight limitations to current epidemiological data and modeling approaches, and
identify opportunities for future innovation.

📢 **Speaker**

Nicholas Reich University of Massachusetts-Amherst

3:00pm

Automated forecasting

🕐 3:00pm - 4:00pm, Jun 29

Regular Submission

Chair: Fotios Petropoulos

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3 Subsessions

- **Automatic Forecasting with Gaussian Processes**
  🕐 3:00pm - 3:20pm, Jun 29

- **Monitoring Forecast Model Fitness Using Control Charts**
  🕐 3:20pm - 3:40pm, Jun 29

- **Fast and frugal time series forecasting**
  🕐 3:40pm - 4:00pm, Jun 29

Exchange Rates 1

🕐 3:00pm - 4:00pm, Jun 29

Regular Submission

Chair: Andrej Mijakovic

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3 Subsessions

- **Forecasting Value-at-Risk and Expected Shortfall in Large Portfolios: a General Dynamic Factor Model Approach**

⏱ 3:00pm - 3:20pm, Jun 29

- **Comparison of macroeconomic, GARCH and neural networks approach on forecasting exchange rates' densities**
  ⏱ 3:20pm - 3:40pm, Jun 29

- **The reliability of equilibrium exchange rate models: A forecasting perspective**
  ⏱ 3:40pm - 4:00pm, Jun 29

Forecasting with spatial data
⏱ 3:00pm - 4:00pm, Jun 29

Regular Submission

Chair: Zachary Nordgren

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3 Subsessions

- **Spatiotemporal Modeling with General and Geographical Covariates: Insights on Crime in Philadelphia**
  ⏱ 3:00pm - 3:20pm, Jun 29

- **Wildfire forecasting with deep neural networks**
  ⏱ 3:20pm - 3:40pm, Jun 29

- **Weather Patching: How good is good enough?**
  ⏱ 3:40pm - 4:00pm, Jun 29

Fundamentals of Effective Forecasting Process and Supporting Technology
⏱ 3:00pm - 3:30pm, Jun 29

Practitioner track

Chair: Michael Gilliland

How we are embracing tech, process, and people to support and work through supply chain challenges. Focusing on one aspect only might might appear to be the right answer but ultimately not.

📢 **Speaker**

Sara Park Vice President, E2E Integrated Planning, The Coca-Cola Company, North America

3:30pm

Map Technologies for Ride-Hailing
⏱ 3:30pm - 4:00pm, Jun 29

Practitioner track

Chair: Michael Gilliland

Extensive literature now exists on methods for pricing and matching in ride-hailing platforms, such as Uber, Lyft, Didi Chuxing, and Ola. However, less attention has been paid to the complex geospatial inputs required for these systems. For example, carpool matching methods require accurate predictions of the time required to travel between any two locations in the road network. We describe geospatial (map) technologies, including those for travel time prediction and route optimization, that can be used in the context of such large-scale vehicle decision systems.

We showcase the challenges, such as data sparsity on parts of the road network, and the fact that highly accurate predictions need to take into account the detailed dynamics of a physical system (traffic patterns in a road network). We also compare several common approaches for travel time prediction, and provide rigorous theoretical results showing that one class of approaches has higher accuracy than the alternatives.

📢 **Speaker**

Dawn Woodard Senior Director of Data Science, Platforms, Uber

4:00pm

SWEET Social
🕐 4:00pm - 5:00pm, Jun 29

`Social`

📢 **Speaker**

Tao Hong University of North Carolina Charlotte

ECR - Teaching Panel
🕐 4:00pm - 5:00pm, Jun 29

`Social`

As forecasters, we don't just practice, we also teach! But how do you engage a classroom? We have a panel of superb teachers ready to answer all your questions! Feel free to send in your questions beforehand to ecr@forecasters.org

Panelists: John Boylan, Fernando Cyrino, Tao Hong, Matthew Schneider

📢 **Speakers**

Shari De Baets ECR president, International Institute of Forecasting

John Boylan Professor of Business Analytics, Lancaster University

Matthew Schneider Assistant Professor, LeBow College of Business, Drexel University

Tao Hong University of North Carolina Charlotte

Fernando Cyrino Associate Professor, PUC-Rio - Pontifical Catholic University of Rio de Janeiro

5:00pm

Retail and Sport
🕐 5:00pm - 6:00pm, Jun 29

Regular Submission

Chair: Patrícia Ramos

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2 Subsessions

- **Fan support in Major League Baseball: Can forecasting attendance improve game outcome predictions?**
  🕐 5:00pm - 5:30pm, Jun 29

- **Comparing penalized dynamic regression with time series methods for modeling and forecasting retail product sales**
  🕐 5:30pm - 6:00pm, Jun 29

Energy in Brazil
🕐 5:00pm - 6:20pm, Jun 29

Regular Submission

Chair: Albert Melo

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4 Subsessions

- **Fitting three-parameter Weibull distributions with high negative skewness to generate monthly wind scenarios correlated with inflows to the Brazilian hydropower reservoirs**
  🕐 5:00pm - 5:20pm, Jun 29

- **Forecasting Electricity Daily Load Profile Consumption in Brazil**
  🕐 5:20pm - 5:40pm, Jun 29

- **Development of future biomass energy generation scenarios with intra-hourly frequency**
  🕐 5:40pm - 6:00pm, Jun 29

- **Considering Wind Uncertainties in the Long-Term Operation Planning of the Brazilian Power System**
  🕐 6:00pm - 6:20pm, Jun 29

Hierarchical Times Series and Machine Learning
🕐 5:00pm - 5:40pm, Jun 29

Regular Submission

Chair: Filotas Theodosiou

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2 Subsessions

- **Transfer learning for hierarchical forecasting: Reducing computational efforts of M5 winning methods**

⏰ 5:00pm - 5:20pm, Jun 29

● **Forecasting with Deep Temporal Hierarchies**
⏰ 5:20pm - 5:40pm, Jun 29

Factor Modelling
⏰ 5:00pm - 6:00pm, Jun 29

Regular Submission

Chair: Douglas Eduardo Turatti

3 Subsessions

● **A Flexible Factor Model and the Implications for Financial Modelling**
⏰ 5:00pm - 5:20pm, Jun 29

● **Factor analysis and forecasting of data with heterogenous blocks of variables.**
⏰ 5:20pm - 5:40pm, Jun 29

● **Forecasting with factor-augmented time-varying parameter models**
⏰ 5:40pm - 6:00pm, Jun 29

Forecasting Methodologies and Applications in the High Tech Industry 1
⏰ 5:00pm - 6:00pm, Jun 29

Invited Session

Chair: Jerry Shan

3 Subsessions

● **Automation of Causal Impact Measurement using BSTS Model at LinkedIn**
⏰ 5:00pm - 5:20pm, Jun 29

● **Time-Series Forecasting with Random Curve Modeling Techniques**
⏰ 5:20pm - 5:40pm, Jun 29

● **Mid-flight Forecasting for CPA Lines in Online Advertising**
⏰ 5:40pm - 6:00pm, Jun 29

6:00pm

Forecasting in a Policy Environment
⏰ 6:00pm - 7:20pm, Jun 29

Invited Session

Chair: Neil Ericsson

4 Subsessions

● **Forecasting FOMC Forecasts**
⏰ 6:00pm - 6:20pm, Jun 29

● **Forecasting US inflation in real time**
⏰ 6:20pm - 6:40pm, Jun 29

● **Extracting Information from Different Expectations**
⏰ 6:40pm - 7:00pm, Jun 29

● **Evaluating the Federal Reserve's Tealbook Forecasts**

🕐 7:00pm - 7:20pm, Jun 29

Forecasting with news and media
🕐 6:00pm - 7:00pm, Jun 29

Regular Submission

Chair: Zhishi Wang

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3 Subsessions

- **Media Tone in Commodity Markets**
  🕐 6:00pm - 6:20pm, Jun 29

- **Relationship between country risk volatility and indices based on unstructured information. Evidence for Argentina**
  🕐 6:20pm - 6:40pm, Jun 29

- **Bayesian Time Varying Coefficient Model with Applications to Media Mix Modeling**
  🕐 6:40pm - 7:00pm, Jun 29

Tourism and Hospitality Forecasting 4
🕐 6:00pm - 7:20pm, Jun 29

Invited Session

Chair: Ulrich Gunter

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4 Subsessions

- **The impact of decomposition on the forecasting performance of Bagging**
  🕐 6:00pm - 6:20pm, Jun 29

- **A hybrid method of exponential smoothing and neural networks for hotel demand forecasting**
  🕐 6:20pm - 6:40pm, Jun 29

- **Forecasting Tourist Arrivals in Europe: A Causal Spatiotemporal Econometric Model**
  🕐 6:40pm - 7:00pm, Jun 29

- **Improving Daily, Weekly, Monthly, and Quarterly Hotel Room Demand Forecasts for Vienna across Hotel Classes: Evidence from Single Models and from Combination Techniques**
  🕐 7:00pm - 7:20pm, Jun 29

YouTube infrastructure capacity forecasting
🕐 6:00pm - 6:30pm, Jun 29

Practitioner track

Chair: Elaine Deschamps

Every day around the globe, people watch over a billion hours of video and generate billions of views on YouTube. Since 2020, due to pandemic and people sheltering at home, YouTube has become an even more critical part of people's life.

We will talk about how YouTube applies forecasting in its capacity planning to meet the global growing demand. And how YouTube kept up with the unpredictable pandemic situation such as inorganic demand and supply changes.

R

Ran Ding Google

6:30pm

Forecasting at scale at IBM's Chief Analytics Office
🕐 6:30pm - 7:00pm, Jun 29

Practitioner track

Chair: Elaine Deschamps

IBM's Chief Analytics Office (CAO) brings together deep understanding of the business, big data and analytics to direct IBM's strategic transformation. The team is often asked by IBM Senior Executives to tackle the company's most complex strategic issues and guide the future of IBM. This may include addressing business areas such as credit risk
assessment, precision cloud selling, sales coverage, channel performance, workforce optimization, marketing optimization, development optimization, revenue forecasting, pricing, fraud detection, and strategic planning. Forecasting emerges naturally from out mandate to better understand business growth and to make IBM's business model more effective and efficient. In this talk, first, we will give a high level description of multiple
CAO projects that use forecasting to address business problems. Then, we will deep dive into the Client Health project that is tasked with increasing revenue and improving product experiences by forecasting customer behavior and usage trends.

📢 **Speaker**

S

Stefa Etchegaray Garcia IBM Chief Analytics Office

8:00pm

Cryptocurrency and risk
🕐 8:00pm - 9:00pm, Jun 29

Regular Submission

Chair: Matthew Harrington

3 Subsessions

● **Measuring uncertainty from a large set of models' predictions**
🕐 8:00pm - 8:20pm, Jun 29

● **Duration-dependent volatility models with value-weighted approach**
🕐 8:20pm - 8:40pm, Jun 29

● **Leveraging Latent Spaces for Cryptocurrency Return Forecasting with Deep Networks**
🕐 8:40pm - 9:00pm, Jun 29

Interval and density forecasts

🕐 8:00pm - 9:00pm, Jun 29

Regular Submission

Chair: Edwin Ng

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3 Subsessions

- **Prediction Intervals: Neglected Diagnostics?**
  🕐 8:00pm - 8:20pm, Jun 29

- **Estimating Interval Forecasts using Pruned Ensembles**
  🕐 8:20pm - 8:40pm, Jun 29

- **Orbit: Probabilistic Forecast with Exponential Smoothing**
  🕐 8:40pm - 9:00pm, Jun 29

Neural Networks 2
🕐 8:00pm - 9:00pm, Jun 29

Regular Submission

Chair: Taiyeong Lee

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3 Subsessions

- **Forecasting in Big Data Environments: an Adaptable and Automated Shrinkage Estimation of Neural Networks (AAShNet)**
  🕐 8:00pm - 8:20pm, Jun 29

- **General NN Forecaster**
  🕐 8:20pm - 8:40pm, Jun 29

- **Time Series Forecasting with Time Series Plot and Computer Vision**
  🕐 8:40pm - 9:00pm, Jun 29

9:00pm

Exchange Rates 2
🕐 9:00pm - 10:00pm, Jun 29

Regular Submission

Chair: Pablo Pincheira

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3 Subsessions

- **A Multiple Investigation with Time Series, Structural Models and Model Selection**
  🕐 9:00pm - 9:20pm, Jun 29

- **Combination of theoretical models for exchange rate forecasting**
  🕐 9:20pm - 9:40pm, Jun 29

- **Forecasting Fuel Prices with the Chilean Exchange Rate**
  🕐 9:40pm - 10:00pm, Jun 29

Forecasting Methodologies and Applications in the High Tech Industry 2
🕐 9:00pm - 10:00pm, Jun 29

Invited Session

Chair: Jerry Shan

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3 Subsessions

- **Multivariate Business Forecasting with Causal Validity**
  🕐 9:00pm - 9:20pm, Jun 29

- **Forecasting models in production systems**
  🕐 9:20pm - 9:40pm, Jun 29

- **Forecasting Daily Business Metrics On Short-Term Horizons**
  🕐 9:40pm - 10:00pm, Jun 29

Planning and Demand Response
🕐 9:00pm - 10:00pm, Jun 29

Regular Submission

Chair: Zohreh Parvini

3 Subsessions

- **Electricity Demand Threshold Forecasting for Triggering Cost Saving Peak Demand Shaving Actions**
  🕐 9:00pm - 9:20pm, Jun 29

- **Long-term probabilistic forecasting for intra-hour reserve requirements**
  🕐 9:20pm - 9:40pm, Jun 29

- **Machine Learning Application in Identifying Representative Hours in Capacity Expansion Planning Model**
  🕐 9:40pm - 10:00pm, Jun 29

Hierarchical Times Series 3
🕐 9:00pm - 10:00pm, Jun 29

Regular Submission

Chair: Nikolaos Kourentzes

3 Subsessions

- **Tools for forecast reconciliation: the R package FoReco**
  🕐 9:00pm - 9:20pm, Jun 29

- **Understanding forecast reconciliation: further insights and extensions**
  🕐 9:20pm - 9:40pm, Jun 29

- **Forecast combinations, pooling, and hierarchies: how do they "combine"?**
  🕐 9:40pm - 10:00pm, Jun 29

10:00pm

Forecast Evaluation
🕐 10:00pm - 11:00pm, Jun 29

Regular Submission

Chair: Yasemin Ulu

3 Subsessions

- **Forecasting the U.S. Unemployment Rate: Another Look**
  🕐 10:00pm - 10:20pm, Jun 29

- **Modelling higher moments and density forecasting: a comprehensive look**
  🕐 10:20pm - 10:40pm, Jun 29

- **Optimal Prediction Under Multivariate Asymmetric Loss; Comparison of Multivariate Garch vs. Multivariate Realized Garch Models**
  🕐 10:40pm - 11:00pm, Jun 29

11:00pm

Analysis of survey forecasts
🕐 11:00pm - 11:59pm, Jun 29

Regular Submission

Chair: Robert Rich

3 Subsessions

- **Inflation Expectations and Uncertainty from the Perspective of Firms**
  🕐 11:00pm - 11:20pm, Jun 29

- **How far ahead can we forecast US Data?**
  🕐 11:20pm - 11:40pm, Jun 29

- **All Forecasters Are Not the Same: Time-Varying Predictive Ability across Forecast Environments**
  🕐 11:40pm - 11:59pm, Jun 29

Robust Forecasting I: penalized methods and mixed integer programming
🕐 11:00pm - 11:59pm, Jun 29

Invited Session

Chair: Artem Prokhorov

3 Subsessions

- **Feature selection via a modern optimisation lens: Helping insurers ask the right questions**
  🕐 11:00pm - 11:20pm, Jun 29

- **Estimation of Tail Risk Measures for Heteroskedastic Financial Time Series: A Extreme Value Approach With Covariates**
  🕐 11:20pm - 11:40pm, Jun 29

- **Mixed Integer Optimization for time series change points detection**
  🕐 11:40pm - 11:59pm, Jun 29

Forecasting Research and Products at Google
🕐 11:00pm - 11:59pm, Jun 29

Invited Session

Chair: Casey Lichtendahl

3 Subsessions

- **BQML Time Series Forecasting & Anomaly Detection**
  🕐 11:00pm - 11:20pm, Jun 29

- **ML Forecasts on Small Datasets Using Transfer Learning and Data Augmentation**
  🕐 11:20pm - 11:40pm, Jun 29

- **Robust Ensembles of Quantile Forecasts**
  🕐 11:40pm - 11:59pm, Jun 29

Wed, Jun 30, 2021

12:00am

Forecasting Research and Products at Google
🕐 12:00am - 12:20am, Jun 30

   Chair: Casey Lichtendahl

1 Subsessions

- **Constructing Stationary Errors for Empirical Prediction Intervals**
  🕐 12:00am - 12:20am, Jun 30

Robust Forecasting I: penalized methods and mixed integer programming
🕐 12:00am - 12:20am, Jun 30

   Chair: Artem Prokhorov

1 Subsessions

- **Improving data-driven forecasting through constrained optimization**
  🕐 12:00am - 12:20am, Jun 30

1:00am

Bayesian methods and combinations
🕐 1:00am - 2:00am, Jun 30

   Chair: Andrey Vasnev

3 Subsessions

- **Bayesian analysis of the mean-volatility dynamic factor model**
  🕐 1:00am - 1:20am, Jun 30

- **Loss-Based Variational Bayes Prediction**
  🕐 1:20am - 1:40am, Jun 30

- **Forecast combination puzzle in the HAR model**
  🕐 1:40am - 2:00am, Jun 30

Mortality and Health
🕐 1:00am - 2:00am, Jun 30

   Chair: Han Li

3 Subsessions

- **Multi-population Mortality modelling: Extensions to Cairns-Blake-Dowd Model**
  ⏱ 1:00am - 1:20am, Jun 30

- **How Effective Is Social Distancing?**
  ⏱ 1:20am - 1:40am, Jun 30

- **Assessing mortality inequality in the U.S.: What can be said about the future?**
  ⏱ 1:40am - 2:00am, Jun 30

2:00am

Exchange Rates 3
⏱ 2:00am - 3:00am, Jun 30

Regular Submission

Chair: Shaolong Sun

3 Subsessions

- **A new hybrid ensemble framework for exchange rate forecasting using Taylor rule and Temporal convolutional network**
  ⏱ 2:00am - 2:20am, Jun 30

- **Do sentiment indices always improve the prediction accuracy of exchange rates?**
  ⏱ 2:20am - 2:40am, Jun 30

- **Exchange Rates Forecasting and Trading with Evolutionary Relaxed Support Vector Regression**
  ⏱ 2:40am - 3:00am, Jun 30

Recent advances in Global Forecasting Models 1
⏱ 2:00am - 3:00am, Jun 30

Invited Session

Chair: Abishek Sriramulu

3 Subsessions

- **Time series feature embedding for forecasting with deep learning**
  ⏱ 2:00am - 2:20am, Jun 30

- **A Look at the Evaluation Setup of the M5 Forecasting Competition**
  ⏱ 2:20am - 2:40am, Jun 30

- **Dependency Learning Graph Neural Networks for Multivariate Forecasting**
  ⏱ 2:40am - 3:00am, Jun 30

Tourism and Hospitality Forecasting 5
⏱ 2:00am - 3:00am, Jun 30

Invited Session

Chair: Haiyan Song

3 Subsessions

- **Probabilistic forecasts using expert judgement: the road to recovery from COVID-19**
  ⏱ 2:00am - 2:20am, Jun 30

- **Daily hotel demand forecasting using a hybrid deep learning approach**

⏱ 2:20am - 2:40am, Jun 30

● **Forecasting Visitor Arrivals amid COVID-19**
⏱ 2:40am - 3:00am, Jun 30

3:00am

ECR Social - Online games
⏱ 3:00am - 4:00am, Jun 30

`Social`

The social event will have time for some informal chats and an online game. Everyone is welcome!

📢 **Speaker**

Shari De Baets ECR president, International Institute of Forecasting

5:00am

Recent advances in Global Forecasting Models 2
⏱ 5:00am - 6:00am, Jun 30

`Invited Session`

Chair: Rakshitha Godahewa

3 Subsessions

● **A Scalable Ensemble of Global and Local Models for Long-term Energy Demand Forecasting**
⏱ 5:00am - 5:20am, Jun 30

● **Causal Inference Using Global Forecasting Models for Counterfactual Prediction**
⏱ 5:20am - 5:40am, Jun 30

● **A Strong Baseline for Weekly Time Series Forecasting**
⏱ 5:40am - 6:00am, Jun 30

Electricity Demand 3
⏱ 5:00am - 6:00am, Jun 30

`Regular Submission`

Chair: Priyanga Dilini Talagala

3 Subsessions

● **Forecast evaluation of electricity peak load in South Korea: from traditional to hybrid models**
⏱ 5:00am - 5:20am, Jun 30

● **Application of Deep Neural Network and Recurrent Neural Network for Short-term Electricity Load Forecasting**
⏱ 5:20am - 5:40am, Jun 30

● **Tidy Time Series Anomaly Detection for Load Forecasting**
⏱ 5:40am - 6:00am, Jun 30

Forecasting in the tech sector
🕐 5:00am - 6:00am, Jun 30

Regular Submission

Chair: Jiří TOMČALA

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3 Subsessions

- **Application of VAR Models for Semiconductor Manufacturing Equipment Market: Impulse Responsive Analysis to Chip Product Market and User's Financial Performance**
  🕐 5:00am - 5:20am, Jun 30

- **Short-term Facebook Network Traffic Forecasts for Data-center Planning**
  🕐 5:20am - 5:40am, Jun 30

- **A new times series forecasting method and its application to the supercomputer power consumption prediction**
  🕐 5:40am - 6:00am, Jun 30

6:00am

Inflation and food
🕐 6:00am - 7:20am, Jun 30

Invited Session

Chair: Oguzhan Cepni

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4 Subsessions

- **Can we measure inflation expectations using Twitter?**
  🕐 6:00am - 6:20am, Jun 30

- **Nowcasting food inflation with a massive amount of online prices**
  🕐 6:20am - 6:40am, Jun 30

- **Nowcasting Turkish Food Inflation Using Daily Online Prices**
  🕐 6:40am - 7:00am, Jun 30

- **How local is the local inflation factor? Evidence from Emerging European Countries**
  🕐 7:00am - 7:20am, Jun 30

Robust Forecasting II: penalization, structural breaks and robust covariance estimation
🕐 6:00am - 7:20am, Jun 30

Invited Session

Chair: Artem Prokhorov

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4 Subsessions

- **A new test for common breaks in heterogeneous panel data models**
  🕐 6:00am - 6:20am, Jun 30

- **Robust Covariance Matrix Estimation in Time-Series Econometrics: A Review**
  🕐 6:20am - 6:40am, Jun 30

- **Dynamically Time Warped Cointegration**
  🕐 6:40am - 7:00am, Jun 30

- **Inference in the Nonparametric Stochastic Frontier Model**
  🕐 7:00am - 7:20am, Jun 30

8:00am

Keynote: "Improving" Prediction of Human Behavior Using Behavior Modification
🕐 8:00am - 9:00am, Jun 30

Keynote

Chair: Pierre Pinson

Large internet platforms that collect behavioral big data predict user behavior for internal purposes and for third parties (advertisers, insurers, security forces, political consulting firms) who utilize the predictions for personalization, targeting, and other decisionmaking. Data science researchers design algorithms, models, and approaches to improve prediction. Prediction is also improved with larger and richer data. We describe how, beyond improving algorithms and data, platforms can stealthily achieve better prediction accuracy by "pushing" users' outcomes towards their predicted values, using behavior modification techniques, thereby demonstrating more certain predictions. The better the platform can make users conform to their predicted outcomes, the more it can
boast its predictive accuracy. Hence, platforms are incentivized to "make predictions true". Such apparent "improved" prediction can unintentionally result from employing reinforcement learning algorithms that combine prediction and behavior modification. This strategy is absent from the machine learning and statistics literature. Investigating its properties requires integrating causal with predictive notation. To this end, we incorporate Pearl's causal do(.) operator into the predictive vocabulary. We then decompose the expected prediction error given behavior modification, and identify the components impacting predictive power. Our derivation elucidates implications of such behavior modification to data scientists, platforms, their customers, and the humans whose behavior is anipulated. Behavior modification can make users' behavior more predictable and even more homogeneous; yet this apparent predictability might not generalize when customers use predictions in practice. Outcomes pushed towards their predictions can be at odds with customers' intentions, and harmful to manipulated users.

📢 **Speaker**

Galit Shmueli Distinguished Professor, National Tsing Hua University

9:00am

Exponential Smoothing
🕐 9:00am - 10:00am, Jun 30

Regular Submission

Chair: Ivan Svetunkov

3 Subsessions

- **Exponential Smoothing with Regularisation**
  🕐 9:00am - 9:20am, Jun 30

- **A new taxonomy for vector exponential smoothing and its application to seasonal time series**
  🕐 9:20am - 9:40am, Jun 30

- **How to make multiplicative ETS work for you**
  🕐 9:40am - 10:00am, Jun 30

Wind Power
🕐 9:00am - 10:00am, Jun 30

Regular Submission

Chair: Leo May

3 Subsessions

- **Forecasting bounded time series with time-varying bounds**
  🕐 9:00am - 9:20am, Jun 30

- **Forecasting Hourly Wind Power Production In Sweden With Time Series Models**
  🕐 9:20am - 9:40am, Jun 30

- **Day-Ahead Forecasting of Instantaneous Power at Wind Farms**
  🕐 9:40am - 10:00am, Jun 30

Forecasting in the shipping industry
🕐 9:00am - 10:00am, Jun 30

Regular Submission

Chair: Benedikt Sommer

3 Subsessions

- **Forecasting port container throughput with multisource big data and optimized machine learning**
  🕐 9:00am - 9:20am, Jun 30

- **Predicting operating speed in transshipment processes**
  🕐 9:20am - 9:40am, Jun 30

- **On direct horizon-specific forecasting with state space models**
  🕐 9:40am - 10:00am, Jun 30

Crude oil forecasting
🕐 9:00am - 10:00am, Jun 30

Regular Submission

Chair: Angi Roesch

3 Subsessions

- **What should be taken into consideration when forecasting oil implied volatility index?**
  🕐 9:00am - 9:20am, Jun 30

- **Forecasting crude oil prices with DSGE models**
  🕐 9:20am - 9:40am, Jun 30

- **Crude oil and green energy finance: an asymmetric connection?**
  🕐 9:40am - 10:00am, Jun 30

10:00am

Forecasting with judgement 3
🕐 10:00am - 11:00am, Jun 30

Invited Session

Chair: Hans Georg Zimmermann

3 Subsessions

- **Effects of outcome feedback on inflation judgments and confidence in them**
  ⏱ 10:00am - 10:20am, Jun 30

- **Ensembles of Judgmental Forecasts in Dynamic Environments containing Structural Breaks**
  ⏱ 10:20am - 10:40am, Jun 30

- **Forecasting in Supply Chain Management**
  ⏱ 10:40am - 11:00am, Jun 30

Shrinkage and Sparsity
⏱ 10:00am - 11:00am, Jun 30

Regular Submission

Chair: David Kohns

3 Subsessions

- **Bayesian Estimation of the Italian Business Cycle through SVSS through**
  ⏱ 10:00am - 10:20am, Jun 30

- **Decoupling Shrinkage and Selection for the Bayesian Quantile Regression**
  ⏱ 10:20am - 10:40am, Jun 30

- **Global-Local Priors and the Illusion of Sparsity**
  ⏱ 10:40am - 11:00am, Jun 30

12:00pm

Energy
⏱ 12:00pm - 1:00pm, Jun 30

Regular Submission

Chair: Akylas Stratigakos

3 Subsessions

- **A holistic approach for improving the renewable energy forecasting model and value chain: The Smart4RES project**
  ⏱ 12:00pm - 12:20pm, Jun 30

- **Forecast of future technological developments in German energy companies and energy start-ups**
  ⏱ 12:20pm - 12:40pm, Jun 30

- **An integrated forecasting and optimization approach applied in trading renewable energy.**
  ⏱ 12:40pm - 1:00pm, Jun 30

Forecasting for social good
⏱ 12:00pm - 1:00pm, Jun 30

Invited Session

Chair: Bahman Rostami-Tabar

3 Subsessions

- **Binary Choice with Asymmetric Loss in a Data-Rich Environment: Theory and an Application to Racial Justice**
  🕐 12:00pm - 12:20pm, Jun 30

- **Protecting Time Series for Data Privacy with Minimal Forecast Loss**
  🕐 12:20pm - 12:40pm, Jun 30

- **Forecasting for Social Good**
  🕐 12:40pm - 1:00pm, Jun 30

Finance
🕐 12:00pm - 1:00pm, Jun 30

`Regular Submission`

Chair: Stanislav Anatolyev

3 Subsessions

- **Frequency-domain information for active portfolio management**
  🕐 12:00pm - 12:20pm, Jun 30

- **Modelling the Relation between the US Real Economy and the Corporate Bond-Yield Spread in Bayesian VARs with non-Gaussian Disturbances**
  🕐 12:20pm - 12:40pm, Jun 30

- **MEM or/and logARMA: Investigation of Predictive Performance for Realized Volatility**
  🕐 12:40pm - 1:00pm, Jun 30

GDP Forecasting and nowcasting
🕐 12:00pm - 1:00pm, Jun 30

`Regular Submission`

Chair: Philip Hans Franses

3 Subsessions

- **Modeling and Forecasting Macroeconomic Downside Risk**
  🕐 12:00pm - 12:20pm, Jun 30

- **Capturing GDP nowcast uncertainty in real time**
  🕐 12:20pm - 12:40pm, Jun 30

- **Forecasting real GDP growth for Africa**
  🕐 12:40pm - 1:00pm, Jun 30

1:00pm

Forecasting in the Health sector
🕐 1:00pm - 2:00pm, Jun 30

`Regular Submission`

Chair: Qixuan Hou

3 Subsessions

- **Hierarchical forecasts of Diabetes mortality in Mexico by marginalization and sex to**

establish resource allocation
🕐 1:00pm - 1:20pm, Jun 30

- **Ensemble CNN Approach for Patient Classification Covid-19 using CT Scan**
  🕐 1:20pm - 1:40pm, Jun 30

- **A Comparative Study of Predicting ICU Length of Stay**
  🕐 1:40pm - 2:00pm, Jun 30

Macroeconomic and financial forecasting
🕐 1:00pm - 2:00pm, Jun 30

`Regular Submission`

Chair: Robert Kunst

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3 Subsessions

- **Forecasting with Bayesian stochastic volatility Fourier series Model: The case study of Covid-19 effect on Food futures and Marine stocks**
  🕐 1:00pm - 1:20pm, Jun 30

- **Factors of predictive power for mineral commodities**
  🕐 1:20pm - 1:40pm, Jun 30

- **Forecasting aggregate household consumption and aggregate income: A simulation-based model selection approach**
  🕐 1:40pm - 2:00pm, Jun 30

Forecasting with geographical data
🕐 1:00pm - 2:00pm, Jun 30

`Regular Submission`

Willard Zvarevashe

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3 Subsessions

- **Investigating Climate Variability Impact on Sugarcane Using Satellite-Based NDVI Time Series**
  🕐 1:00pm - 1:20pm, Jun 30

- **Tailings dam slope stability analysis using the WARIMAX-GARCH forecasting model**
  🕐 1:20pm - 1:40pm, Jun 30

- **OpenDrift Model : a Search and Rescue forecast evaluation at Rio Janeiro coast.**
  🕐 1:40pm - 2:00pm, Jun 30

How Does S&OP Integrate with an Organization's Strategy
🕐 1:00pm - 1:30pm, Jun 30

`Practitioner track`

Chair: Michael Gilliland

While S&OP is often referred to as a strategic process, many if not most S&OP implementations fail to pull strategic elements into the underlying conversation. This session will examine what is an organizations strategy and how do you connect strategic elements into S&OP

You will learn:

- That S&OP is not a strategic process without important strategic linkages

- Why these linkages are important to executive engagement in the process.
- How commercial and supply chain strategy logically connect to the S&OP process
- You will see how you can pull strategic metrics into the conversation to better improve the gravitas of the Executive Review meeting

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📢 **Speaker**

Patrick Bower Sr. Director, Supply Chain, Aceto

1:30pm

One number forecasting – can we realistically expect to align on a single number?
🕐 1:30pm - 2:00pm, Jun 30

Practitioner track

Chair: Michael Gilliland

In the late 1970's it became fashionable in management consulting to promote the practice of using a single set of forecast numbers to ensure alignment of sales, marketing, finance, manufacturing and distribution. In the 1980's and 1990's the concept was broadly adopted as a best practice to break down functional barriers and promote collaboration. The benefits being a more streamlined, informed, and efficient way to anticipate the future, saving time and money. In this presentation the rationale for this approach is challenged and an alternative is proposed.

📢 **Speaker**

Simon Clarke Principal, Argon & Co

2:00pm

Keynote: Forecasting Climate Change, Pandemics and Economics
🕐 2:00pm - 3:00pm, Jun 30

Keynote

Chair: Anastasios Panagiotelis

Climate change affects pandemics which impact badly on economic activity which in turn is the source of climate change. Although they have vastly different data frequencies, from very low frequency at 1000-year intervals for paleoclimate, through annual and monthly for current climate, monthly or quarterly for economic, down to daily for pandemic data, climate, pandemic and economic time series exhibit many commonalities. In particular, all three disciplines are subject to non-stationarities in the
form of evolving stochastic trends and sudden distributional shifts as well as data revisions and sometimes changes to the data measurement systems. All three disciplines need forecasts of likely future outcomes to plan and adapt as events unfold, albeit over very different horizons, yet face imperfect and incomplete knowledge of their data generating processes (DGPs) so must search for reasonable approximations to them.

Consequently, while structural or theory-based formulations are important for understanding in most disciplines, they have indifferent to poor forecasting records. A key reason is the combination of shifts not being included in theoretical analyses while the resulting models are in the class of equilibrium-correction mechanisms: these converge back to their in-built equilibrium despite that no longer being the relevant location, leading to systematic forecast failure. Handling non-stationarity in all three disciplines leads to improved forecasts, revealing the generality of such forecasting

methods.

The analysis is illustrated by empirical examples from all 3 areas. First, using a simultaneous equations system of ice volume, CO2 and temperature over the last 800,000 years of ice-ages, we forecast the next 100,000 years and compare the outcomes to those after anthropogenic greenhouse gas emissions. We also consider annual forecasts of the UK's CO2 emissions from a vector autoregression after policy intervention. As the Covid-19 pandemic has put forecasting methodologies under the spotlight, we discuss our real-time short-term forecasts of daily confirmed cases and deaths, based on the Cardt method. This quickly adapts to abrupt structural change, a major feature of the pandemic data due to data measurement errors, definitional and testing changes, policy interventions, technological advances, and rapidly changing trends. As the pandemic has also led to abrupt structural change in macroeconomic outcomes and measures, we apply Cardt to forecasting monthly aggregate UK unemployment over the pandemic and show that it adapts quickly to the shifts in employment policies implemented when the UK entered lockdown. We contrast these forecasts with those from an economic model of unemployment that performed well up to end 2019, but exhibits forecast failure over the pandemic, reinterpreted as establishing useful scenario forecasts had furlough policies not been implemented.

📢 **Speaker**

David Hendry University of Oxford, Nuffield College

3:00pm

Closing Ceremony
🕐 3:00pm - 4:00pm, Jun 30

Presenting Oxford 2022: John Boylan

Presenting best student presentation award

Closing remarks

📢 **Speaker**

George Athanasopoulos Professor, Monash University

4:00pm

ECR Social - Online games
🕐 4:00pm - 5:00pm, Jun 30

Social

The social event will have time for some informal chats and an online game. Everyone is welcome!

📢 **Speaker**

Shari De Baets ECR president, International Institute of Forecasting

Thu, Jul 01, 2021

6:00pm

Workshop Business Forecast Systems: Business Forecasting: Techniques, Application and Best Practices

🕐 6:00pm - 10:00pm, Jul 1

`Workshop`

This workshop surveys the most commonly implemented business forecasting methods, explains how they work conceptually, reveals their strengths and limitations, and offers best practices for applying them in a business environment.

📢 **Speakers**

Eric Stellwagen President, Business Forecast Systems, Inc.

Sarah Darin Senior Consultant, Business Forecast Systems

Workshop SAP: Forecasting to meet demand

🕐 6:00pm - 10:00pm, Jul 1

`Workshop`

Demand is influenced by various drivers, from the "standard" ones treated in every forecasting course and textbook like seasonality, trend etc. to causal factors we can influence, like prices or promotions, to factors we cannot influence, like the weather or a competitor's marketing activities. We will discuss forecasting as one ingredient into other processes, data and data quality (with a particular emphasis on causal drivers), the forecasting process itself and forecast quality measurement. We will conclude with a summary of lessons we have learned (the hard way, partly). We will not dig into specific forecasting models. Instead, we will focus on the larger picture and work in a modelagnostic way so you can apply what you learn whether your model of choice is ordinary least squares, neural networks or random forests.

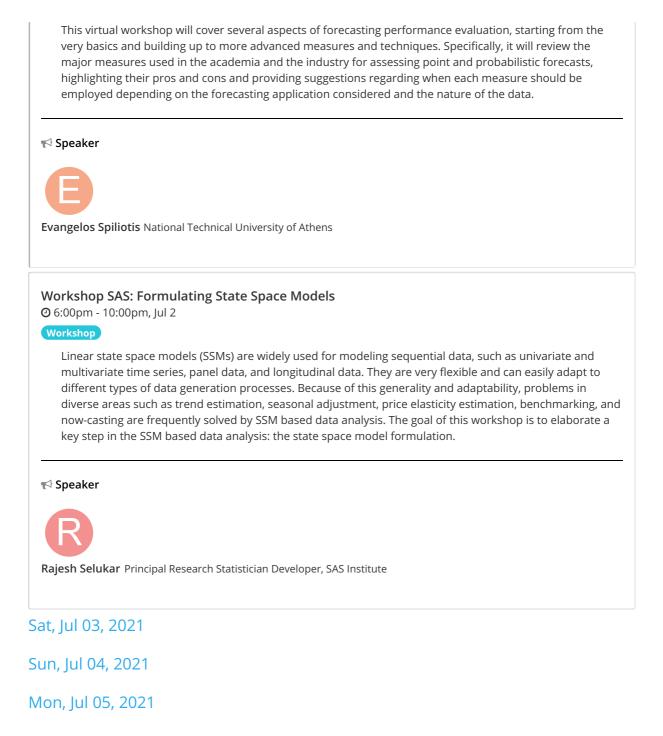📢 **Speakers**

Stephan Kolassa Data Science Expert, SAP Switzerland AG

Roland Martin SAP SE

Fri, Jul 02, 2021

6:00pm

Workshop: Evaluating forecasting performance

🕐 6:00pm - 10:00pm, Jul 2

`Workshop`

This virtual workshop will cover several aspects of forecasting performance evaluation, starting from the very basics and building up to more advanced measures and techniques. Specifically, it will review the major measures used in the academia and the industry for assessing point and probabilistic forecasts, highlighting their pros and cons and providing suggestions regarding when each measure should be employed depending on the forecasting application considered and the nature of the data.

📢 **Speaker**

(E)

Evangelos Spiliotis National Technical University of Athens

Workshop SAS: Formulating State Space Models
🕐 6:00pm - 10:00pm, Jul 2

`Workshop`

Linear state space models (SSMs) are widely used for modeling sequential data, such as univariate and multivariate time series, panel data, and longitudinal data. They are very flexible and can easily adapt to different types of data generation processes. Because of this generality and adaptability, problems in diverse areas such as trend estimation, seasonal adjustment, price elasticity estimation, benchmarking, and now-casting are frequently solved by SSM based data analysis. The goal of this workshop is to elaborate a key step in the SSM based data analysis: the state space model formulation.

📢 **Speaker**

(R)

Rajesh Selukar Principal Research Statistician Developer, SAS Institute

Sat, Jul 03, 2021

Sun, Jul 04, 2021

Mon, Jul 05, 2021

1:00pm

Forecasting Summer School (Registered participants only)
🕐 1:00pm - 4:15pm, Jul 5

This short course reviews some recent developments in the analysis of time series data with a special emphasis on the use of mixed frequency and large datasets for nowcasting. After a summary of the underlying theory, empirical applications are presented. EViews and Matlab code to replicate some of the empirical applications will be also provided and discussed.

📢 **Speaker**

Massimiliano Marcellino Bocconi University

Tue, Jul 06, 2021

1:00pm

Forecasting Summer School (Registered participants only)
🕐 1:00pm - 4:15pm, Jul 6

This short course reviews some recent developments in the analysis of time series data with a special emphasis on the use of mixed frequency and large datasets for nowcasting. After a summary of the underlying theory, empirical applications are presented. EViews and Matlab code to replicate some of the empirical applications will be also provided and discussed.

📢 **Speaker**

Massimiliano Marcellino Bocconi University

Wed, Jul 07, 2021

1:00pm

Forecasting Summer School (Registered participants only)
🕐 1:00pm - 4:15pm, Jul 7

This short course reviews some recent developments in the analysis of time series data with a special emphasis on the use of mixed frequency and large datasets for nowcasting. After a summary of the underlying theory, empirical applications are presented. EViews and Matlab code to replicate some of the empirical applications will be also provided and discussed.

📢 **Speaker**

Massimiliano Marcellino Bocconi University

Thu, Jul 08, 2021

1:00pm

Forecasting Summer School (Registered participants only)
🕐 1:00pm - 4:15pm, Jul 8

This short course reviews some recent developments in the analysis of time series data with a special emphasis on the use of mixed frequency and large datasets for nowcasting. After a summary of the underlying theory, empirical applications are presented. EViews and Matlab code to replicate some of the empirical applications will be also provided and discussed.

📢 **Speaker**

Massimiliano Marcellino Bocconi University