ITISE-2022

PROGRAM

27th-30th JUNE, 2022
Gran Canaria (SPAIN)

ITISE-2022 Program

Monday, June 27th, 2022	
18:30-20:00	**REGISTRATION DESK** ***(start at 18:30h but it is open during all the conference)***
18:30-20:00	**Upload the presentations to the room's computer (in case you haven't sent them by email).**

NOTES:

- All **Sessions A** will be held in Hotel Lopesan Villa del Conde Resort. They are **face-to-face sessions**, and they will also be shared on-line by Zoom. The **plenary lectures** are in **Session A.**

- All **Sessions B** will be held on-line (virtual) using Zoom.

- Oral Presentation: 12-14 minutes. Short Presentation: 7 minutes.

Session A: Located in the last floor of the main building

Tuesday, June 28, 2022		
9:00	**REGISTRATION DESK** ***(start at 9:00h but it is open during all the conference)***	
	All **Sessions A: Oral face-to-face sessions**. All **Sessions B:** Oral (will be held on-line by Zoom)	
9:15-10:15	**Session A.1: Time Series Analysis with Computational Intelligence (part I)**	
10:20- 11:20	**Session A.2: Advanced Econometric Methods**	**Session B.1: Applications in: Energy, Finance, Transportation, Networks, Meteorology, Health, Research and Environment (part I)**
11:20-12:00	**COFFEE BREAK**	
12:00-12:55	**Session A.3: Time Series Analysis of Cryptocurrency (High-Frequency)**	**Session B.2: Nonstationarity**
13:00-14:00	**Session A.P1: Opening & Plenary Lecture.** **Prof. Daniel Peña Sánchez De Rivera** **University Carlos III, Madrid (Spain)**	
14:00-16:00	**REST BREAK**	
16:00-17:00	**Session A.4: Applications in: Energy, Finance, Transportation, Networks, Meteorology, Health, Research and Environment, etc**	**Session B.3: Advances in Time Series Analysis and Forecasting. Short Presentation (part I)**
17:05-18:20	**Session A.5: Energy Forecasting**	
18:20-19:30	**Session A.6: POSTER SESSION**	

Wednesday, June 29th, 2022		
9:00	**REGISTRATION DESK** ***(start at 9:00h but it is opened during all the conference)***	
	All **Sessions A: Oral face-to-face sessions**. All **Sessions B:** Oral (will be held on-line by Zoom)	
9:00-10:00	**Session A.7: Functional Time Series Analysis and Application**	
10:05- 11:20	**Session A.8: Time Series Analysis with Computational Intelligence (part II)**	**Session B.4: Advances in Time Series Analysis and Forecasting. Short Presentation (part II)**
11:20-12:00	**COFFEE BREAK**	
12:00-12:55	**Session A.9: Forecasting Complex/Big data**	**Session B.5: Econometric Models. Short Presentation**
13:00-14:00	**Session A.P2: Plenary Lecture.** **Prof. Martin Wagner** **University of Klagenfurt, Chief Economic Advisor at the Bank of Slovenia**	
14:00-16:00	**REST BREAK**	
16:00-17:05	**Session A.10: Advances in Time Series Analysis and Forecasting (part I)**	**Session B.6: Applications in: energy, finance, transportation, networks, meteorology, health, research and environment (part II)**
17:10-18:25	**Session A.11: Econometric Forecasting**	**Session B.7: Time Series Analysis with Computational Intelligence**
18:30-19:50	**Session A.12: Advances in Time Series Analysis and Forecasting. Short Presentation (part II)**	
21:00	**GALA DINNER** **Hotel Lopesan Baobab 5*** **(15 minutes walking from Hotel Lopesan Villa del Conde Resort)**	

Thursday, June 30th, 2022		
9:00	**REGISTRATION DESK** ***(start at 9:00h but it is opened during all the conference)***	
	All **Sessions A: Oral face-to-face sessions**. All **Sessions B:** Oral (will be held on-line by Zoom)	
9:15-10:00	**Session A.13: Statistical methods for Time Series Analysis and Financial Forecasting**	**Session B.8: Forecasting Performance Evaluation**
10:05- 11:20	**Session A.14: Advances in Time Series Analysis and Forecasting. Short Presentation (part III)**	**Session B.9: Advances in Neural Networks for Time Series Forecasting**
11:20-12:00	**COFFEE BREAK**	
12:00-12:55	**Session A.15: Advances in Time Series Analysis and Forecasting (part IV)**	**Session B.10: Time Series Analysis and Forecasting**
13:00-14:00	**Session A.P3: Plenary Lecture.** **Prof. Wesley S. Burr** **Trent University**	

ITISE 2022 PROGRAM

Monday, June 27th 2022

(18:30-20:00) Registration Desk

(18:30-20:00) Upload the presentations to the room's computer (in case you haven't sent them by email).

Tuesday, June 28th 2022

(9:15-10:15) Session A.1: Time Series Analysis with Computational Intelligence (part I)

Chairman: Dr. Gissel Velarde and Dr. Grzegorz Dudek

Recurrent Neural Networks for Forecasting Time Series with Multiple Seasonality: A Comparative Study **(Ref: *75*)**
Grzegorz Dudek, Slawek Smyl and Paweł Pełka

ODIN TS: a tool for the black-box evaluation of time series analytics **(Ref: *63*)**
Niccolò Zangrando, Rocio Nahime Torres, Federico Milani and Piero Fraternali

A combination of Fuzzy techniques and Chow test to detect structural breaks in time series **(Ref: *72*)**
Phuong Truong and Vilem Novak

Early detection of flash-floods using Case-Based Reasoning **(Ref: *103*)**
Enrique Fernández, José Ramón Villar, Alberto Navarro and Javier Sedano

(10:20- 11:20) Session A.2: Advanced Econometric Methods

Chairman: Dr. Vilém Novák and Dr. Dieter Nautz

HAC Robust Estimation and Inference for Long-Run Equilibrium Relationships **(Ref: *40*)**
Martin Wagner, Rafael Kawka and Mathias Vetter

A semi-Markov approach to financial modelling during the COVID19 pandemic **(Ref: *41*)**

Riccardo De Blasis

Asymmetric New Keynesian Phillips Curve for Mexico, 2005Q1-2021Q4. **(Ref: *52*)**

Eduardo Loría and Raúl Tirado

Analytic Solution to ISO Problem with Bounded Production Capacities **(Ref: *62*)**

Miroslav Pištěk, Elisabetta Allevi, Martin Branda and Rossana Riccardi

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(10:20- 11:20) Session B.1: Applications in: Energy, Finance, Transportation, Networks, Meteorology, Health, Research and Environment (part I)

Chairman: Dr. Hector Pomares

Forecasting Stock Market Volatility using Hybrid of Fuzzy Inference Rules with Descent Method with Haar Wavelet Function: Saudi Arabia **(Ref: *10*)**

Abdullah Alenezy, Mohd Tahir Ismail, Sadam Alwadi, Jamil Jaber and Nawaf Hamadneh

Deep Learning Approaches for Daily Climate Forecasting, Case Study: Malang Indonesia **(Ref: *46*)**

Alif Aditya Wicaksono, Wiwik Anggraeni and Mauridhi Hery Purnomo

A joint probability density function of wind speed and direction for wind power plant analysis **(Ref: *59*)**

Guglielmo D'Amico and Filippo Petroni

Forecast-based Financing for Food Security Interventions in Africa: Case Studies in Djibouti, Ethiopia, Lesotho, Madagascar and Niger **(Ref: *73*)**

Asher Siebert, Bohar Singh, M. Azhar Ehsan, Souha Ouni, Yohana Tekeste, Remi Cousin, Igor Khomyakov, Aaron Kaplan and Daniel Osgood

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(12:00-12:55) Session A.3: Time Series Analysis of Cryptocurrency (High-Frequency)

Chairman: Dr. Damian Zięba and Dr. Rocio Nahime Torres

Introduction to this Special Session: Research on Cryptocurrency Market and Especially High-Frequency **(Ref: .)**

Damian Zięba

Indexed Semi-Markov Model to forecast volatility in cryptocurrency market **(Ref: *60*)**
Filippo Petroni, Guglielmo D'Amico and Flavio Prattico

Optimal Sampling Frequency of High-Frequency Cryptoasset Time Series - Application to Determining Structural Breaks **(Ref: *173*)**
Damian Zięba

(12:00-12:55) Session B.2: Nonstationarity

Chairman: Dr. Nicola Rubino

Evaluating the long-term impacts of economic or policy shocks among necessity and opportunity entrepreneurs **(Ref: *35*)**
Nicola Rubino, Emilio Congregado and David Troncoso

Modelling the Number of Intra-day Stock Transactions using a Novel Time Series Model **(Ref: *143*)**
Yuvraj Sunecher

Costationary Whitenoise Processes and Local Stationarity Testing **(Ref: *168*)**
Alessandro Cardinali

An Application of Neural Networks to Predict COVID-19 Cases in Italy **(Ref: *47*)**
Lorena Saliaj and Eugenia Nissi

(13:00-14:00) Opening Ceremony. Plenary Talk: Prof. Daniel Peña Sánchez De Rivera

Professor at University Carlos III, Department of Statistics, Madrid (Spain).
Title of the presentation: New approaches in Dynamic Factor Models

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(16:00-17:10) Session A.4: Applications in: Energy, Finance, Transportation, Networks, Meteorology, Health, Research and Environment

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Chairman: Dr. Aslihan Karatas

Dynamical models for projecting COVID-19 hospital demand: could a more traditional time series approach do better? **(Ref: *42*)**
Richard Wood

Investigate FIBA World Cup 2019: Evidence Using Advanced Statistical Analysis And Quantitative Tools **(Ref: *99*)**
Christos Katris

Forecasting of COVID-19 Hospital Occupancy Using Differential Flatness **(Ref: *139*)**
Benjamin Franz, Alexander Wasserburger, Christoph Hametner and Stefan Jakubek

Inland Areas, Protected Natural Areas and Sustainable Development **(Ref: *180*)**
Antonio Bertini, Immacolata Caruso and Tiziana Vitolo

(16:00-17:00) Session B.3: Advances in Time Series Analysis and Forecasting. Short Presentation (part I)

Chairman: Dr. Alessandro Cardinali (tentative)

The Role of labour market institutions as a driver of Self-employment in OECD countries: A Bayesian approach **(Ref: *53*)**
Emilio Congregado, Ana María Rodríguez-Santiago and Concepción Román

Maintenance innovation and big data **(Ref: *58*)**
Javier Gejo-García, Salvador Pérez-García, Sergio Gallego-García and Manuel García-García

Coarse Grain Spectral Analysis for the low-amplitude signature of multiperiodic stellar pulsators **(Ref: *154*)**
Sebastià Barceló Forteza, Javier Pascual-Granado, Juan Carlos Suárez, Antonio García Hernández and Mariel Lares Martiz

A look into the ICT capital adoption **(Ref: *80*)**
Pablo Casas and Antonio Golpe

Causes and consequences of the ICT adoption **(Ref: *81*)**
Pablo Casas and Antonio Golpe

Convergence clubs in the ICT adoption **(Ref: *82*)**
Pablo Casas and Antonio Golpe

(17:05-18:30) Session A.5: Energy Forecasting

Chairman: Dr. Ebrahim Ghaderpour

Stochastic model for microgrid management **(Ref: *44*)**
Salvatore Vergine, Cesar Alvarez Arroyo, Guglielmo D'Amico, Juan Manuel Escan Gonzalez and Lazaro Alvarado Barrios

Understanding the Interrelationship between Energy-Use Behavior and Socio-Demographic Profile **(Ref: *106*)**
Hevar Palani, Juan G. Acosta, Aslihan Karatas and Sybil Derrible

Forecasting Natural Gas Prices with Spatio-Temporal Copulas **(Ref: *165*)**
Sven Pappert and Antonia Arsova

Power grid load forecasting using ridge regression including weather forecasts, reanalyses, terrestrial and satellite weather data **(Ref: *188*)**
Franko Pandžić, Ivan Sudić, Amalija Božiček, Matko Mesar, Bojan Franc, Marija Žmire and Ivan Šturlić

Least–Squares Wavelet Analysis of PS–InSAR and Precipitation Time Series **(Ref: *174*)**
Ebrahim Ghaderpour, Claudia Masciulli, Marta Zocchi, Roberta Marini, Giandomenico Mastrantoni, Francesca Reame, Gianmarco Pantozzi, Niccolo Belcecchi, Gabriele Scarascia Mugnozza and Paolo Mazzanti

Limitation of deep learning algorithm for prediction power consumption **(Ref: *171*)**
Majdi Frikha, Khaled Taouil, Ahmed Fakhfakh and Faouzi Derbel

Bridging fundamental and statistical models for short term electricity forecasting for the German market. **(Ref: *153*)**
Souhir Ben Amor, Thomas Möbius and Felix Müsgens

(18:20-19:30) Session A.6: POSTER SESSION

Chairman: Dr. Fernando Rojas

Evaluation and ranking of urban sustainability based on sustainability assessment by fuzzy evaluation model **(Ref: *2*)**
Maryam Robati and Fatemeh Rezaei

Effects of Transportation, Commerce, and Spillover on Airbnb **(Ref: *14*)**
Ruggero Sainaghi and Jorge Chica-Olmo

Detection and quantification of wave trends in Southern Italy **(Ref: *175*)**
Francesco Aristodemo, Tommaso Caloiero, Andrea Lira Loarca and Giovanni Besio

Study of the interaction between cereal yield and hydroclimatic factors through Dynamic Factor Analysis **(Ref: *184*)**

Tom Vanwalleghem and María del Pilar Jiménez Donaire

Estimation of cloud fraction by longwave radiation using machine learning **(Ref: *149*)**

Tina Andriantsalama, Chao Tang, Remy Ineza Mugenga, Thierry Portafaix, Mathieu Delsaut, Patrick Jeanty, Alexandre Graillet, Girish Kumar Beeharry, Roddy Lollchund, Tyagaraja S. Modelly Cunden and Béatrice Morel

Partitioning of Net Ecosystem Exchange using Dynamic Mode Decomposition and Time Delay Embedding **(Ref: *194*)**

Maha Shadaydeh, Joachim Denzler and Mirco Migliavacca

Singular spectrum analysis and Fisher-Shannon analysis of MODIS Terra satellite time series of Italian urban forests **(Ref: *76*)**

Luciano Telesca, Nicodemo Abate, Farid Faridani, Carmen Fattore, Michele Lovallo and Rosa Lasaponara

Forecasting South African exchange rate using nonlinear models **(Ref: *101*)**

Diteboho Xaba, Amogelang Senosi, Katleho Makatjane and Ishmael Rapoo

Forecasting Costa Rican Solar Energy Production **(Ref: *112*)**

Randall Rojas, Abel Mendez-Porras and Efren Jimenez-Delgado

Inventory Forecasting and Average Fill Rates: Theoretical Insights and Computational Procedures **(Ref: *133*)**

Joanna Bruzda, Jakub Wojtasik and Babak Abbasi

Applying high dimensional time series forecasting for traffic flow prediction **(Ref: *90*)**

Siham Alaoui and Badih Ghattas

Oil prices and selected pollutant emissions: A multifractal characterization **(Ref: *65*)**

Milena Kojic, Petar Mitic and Stephan Schlueter

A Comparison Study of Deep Learning Models Combined with Multistep Time Series Forecasting Strategies **(Ref: *104*)**

Zuokun Ouyang, Philippe Ravier and Meryem Jabloun

Sensor-Based Anomaly Detection for Marine Engines with LSTM Auto-Encoders **(Ref: *113*)**

Valerian Cimniak, Martin Brutsche, Michael Grill, André Kulzer and Michael Bargende

Automatization of the features selection process to improve temperature-based solar radiation models in Southern Spain **(Ref: *30*)**

Juan Antonio Bellido-Jiménez, Javier Estévez Gualda and Amanda Penélope García-Marín

Autoencoders for Anomaly Detection in an Industrial Multivariate Time Series Dataset **(Ref: *191*)**

Theodoros Tziolas, Konstantinos Papageorgiou, Theodosios Theodosiou, Elpiniki Papageorgiou, Theofilos Mastos and Angelos Papadopoulos

Wednesday, June 29th, 2022

(9:00-10:00) Session A.7: Functional Time Series Analysis and Application

Chairman: Dr. Tom Vanwalleghem

Long Short-Term Memory Networks for the prediction of Fuel Cell Voltage and Efficiency **(Ref: *120*)**
Martin Angerbauer, Michael Grill and André Casal Kulzer

Using regional climate reanalysis for astronomical site-testing **(Ref: *122*)**
Sebastian Hidalgo, Casiana Muñoz Tuñón, Julio Castro Almazán and Antonia Varela Pérez

T-DPnet: Transformer-based deep Probabilistic network for load forecasting **(Ref: *170*)**
Omar Bouhamed, Manar Amayri and Nizar Bouguila

On the prospective use of deep learning systems for earthquake forecasting over Schumann Resonances Signals **(Ref: *185*)**
Carlos Cano, Ruxandra Stoean, Nuria Novas Castellano, Manuel Fernandez Ros, Gonzalo Joya Caparrós and Jose Antonio Gázquez Parra

(10:05-11:20) Session A.8: Time Series Analysis with Computational Intelligence (part II)

Chairman: Dr. Christian Uhl

Reconstructed Phase Spaces and LSTM Neural Network Ensemble Predictions **(Ref: *126*)**
Sebastian Raubitzek and Thomas Neubauer

An Open-Source and Reproducible Implementation of LSTM and GRU Networks for Time Series Forecasting **(Ref: *5*)**
Gissel Velarde, Pedro Brañez, Alejandro Bueno, Rodrigo Heredia and Mateo Lopez-Ledezma

Forecasting nonlinear causal relationships between crude oil prices and exchange rates using machine learning methods **(Ref: *26*)**
Witold Orzeszko

APUMPEDI: Approximating Pan Matrix Profiles of Time Series Under Unnormalized Euclidean Distances by Interpolation **(Ref: *51*)**
Jing Zhang and Daniel Nikovski

Macroeconomic Predictions using Payments Data and Machine Learning **(Ref: *109*)**
Ajit Desai and James Chapman

(10:05-11:20) Session B.4: Advances in Time Series Analysis and Forecasting. Short Presentation (part II)

Chairman: Dr. Luis Javier Herrera

Outliers impact on parameter estimation of Gaussian and non-Gaussian state space models: a simulation study **(Ref: *89*)**
F. Catarina Pereira, A. Manuela Gonçalves and Marco Costa

Linear Programming-Based Bi-Objective Optimization for Short Univariate Time Series Forecasting **(Ref: *67*)**
Santhosh Kumar Selvam, Chandrasekharan Rajendran and Ganesh Sankaralingam

Exploring the performance of Test Statistics of Time Series Outlier Detection: Evidence from Robust Estimation Methods **(Ref: *117*)**
Tanzeela Yaqoob and Arfa Maqsood

Combining ARIMA-SVR and Fuzzy Time Series Model based on Hedge Algebra to Forecast Bitcoin **(Ref: *114*)**
Dinh Thuan Nguyen and Tung Hoang

Big data oriented to innovation through quality techniques **(Ref: *57*)**
Salvador Pérez-García and Manuel García-García

Time Series Clustering of High Gamma Dose Rate Incidents **(Ref: *179*)**
Mohammed Al Saleh, Béatrice Finance, Yehia Taher, Ali Jaber and Roger Luff

A Hybrid Model of VAR-DCC-GARCH and Wavelet Analysis for Financial Markets Volatility **(Ref: *197*)**
Maryam Nafisi Moghadam and Shahram Fattahi

Multiplicative Nonstationary Volatility Models with Exogenous Information **(Ref: *15*)**
Cristina Amado and Timo Teräsvirta

(12:00- 12:55) Session A.9: Forecasting Complex/Big data

Chairman: Dr. Fang Xu

Unbiased estimation of autoregressive models based on the SIMEX algorithm **(Ref: *4*)**

Wilfredo Palma, Susana Eyheramendy, Felipe Elorrieta and Esteban Barrientos

Deep Learning Applied to Wind Power Forecasting: a Spatio-Temporal Approach **(Ref: *135*)**

Rubén del Campo, Eloy Anguiano, Álvaro Romero and José R. Dorronsoro

Dynamical Component Analysis: Updated and improved algorithm, applications, and limitations **(Ref: *156*)**

Monika Warmuth, Philipp Romberger, Knut Hüper and Christian Uhl

Traffic flows time series clustering in flooding risk areas using origin-destination mobile phone data **(Ref: *145*)**

Maurizio Carpita, Giovanni De Luca, Rodolfo Metulini and Paola Zuccolotto

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(12:00- 12:55) Session B.5: Econometric Models. Short Presentation

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Chairman: Dr. Fernando Rojas

Modelling and predicting the dynamics of confirmed Covid-19 cases based on climate data **(Ref: *119*)**

Yuzhi Cai, Fangzhou Huang and Jiao Song

Dynamic Asymmetric Causality Tests with an Application **(Ref: *61*)**

Abdulnasser Hatemi-J

The implications of the ICT adoption for wages and employment **(Ref: *83*)**

Pablo Casas and Concepción Román

Time series analysis of topological indicators of the network of connections in the insurance sector during the greatest financial crises of the 21st century. **(Ref: *169*)**

Anna Denkowska and Stanisław Wanat

Renewable energy transition in Europe: a multi-national analysis. **(Ref: *36*)**

Andrea Savio and Mariangela Guidolin

Utilising Empirical Mode Decomposition, CNN-LSTM Network with Bayesian Optimisation for Accurate Short-term Residential Load Forecasting **(Ref: *77*)**

Ashkan Lotfipoor, Sandhya Patidar and David P. Jenkins

Demand forecasting under lost-sales stock policies with Tobit Exponential Smoothing **(Ref: *55*)**

Diego J. Pedregal, Juan R. Trapero and Enrique Holgado

(13:00-14:00) Plenary Talk: Prof. Martin Wagner

University of Klagenfurt, Chief Economic Advisor at the Bank of Slovenia *Title of the presentation: HAC Robust Estimation and Inference for Long-Run Equilibrium Relationships*

(16:00-17:05) Session A.10: Advances in Time Series Analysis and Forecasting (part I)

Chairman: Dr. Witold Orzeszko

Online estimation methods for irregular autoregressive models **(Ref: *3*)**

Felipe Elorrieta, Lucas Osses, Matias Caceres, Susana Eyheramendy, Wilfredo Palma and Esteban Barrientos

Noise inference for ergodic Lévy driven SDE **(Ref: *34*)**

Hiroki Masuda, Lorenzo Mercuri and Yuma Uehara

CARMA(p, q) Hawkes processes **(Ref: *50*)**

Lorenzo Mercuri, Andrea Perchiazzo and Edit Rroji

Synthetic subject generation with coupled coherent time series data **(Ref: *147*)**

Xabat Larrea, Mikel Hernandez, Gorka Epelde, Andoni Beristain, Cristina Molina, Ane Alberdi, Debbie Rankin, Panagiotis Bamidis and Evdokimos Konstantinidis

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(16:00-17:05) Session B.6: Applications in: energy, finance, transportation, networks, meteorology, health, research and environment (part II)

Chairman: Dr. Cristina Amado and Dr. Katarzyna Kaczmarek-Majer

Renewable Energy Installations and Policy Assessment: Evidence from cointegration and non-causality in Greece (1987-2020) **(Ref: *134*)**

Georgios Evangelidis, Konstantinos Konstantakis and Panayotis G. Michaelides

Forecasting Temperature of Satellites in Low Earth Orbit **(Ref: *137*)**

Kiranmai Madisa, Sharmistha Dey and Paulo de Souza

Hybrid K-Mean Clustering and Markov Chain for Network Accessibility and Retainability Prediction **(Ref: *129*)**

Amel Salem Omer, Tesfaye Addisie Yemer and Dereje Hailemariam Woldegebreal

Air pollution modeling for southern Poland through aggregated land-use regression **(Ref: *159*)**

Katarzyna Kaczmarek-Majer, Olgierd Hryniewicz, Julia Soloch, Krzysztof Skotak and Anna Degórska

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(17:10-18:25) Session A.11: Econometric Forecasting

Chairman: Dr. Sara Zermani

Value-at-Risk Forecasting with Hierarchical Outer Power Archimedean Copulas **(Ref: *6*)**

Jan Gorecki

A Collection of Wisdom in Predicting Sector Returns **(Ref: *33*)**

Hsiu-Lang Chen and Jolana Stejskalová

Relationship between stationarity and dynamic convergence of time series **(Ref: *74*)**

Gerardo Covarrubias and Xuedong Liu

The Vector Error Correction Index Model: Representation and Statistical Inference **(Ref: *98*)**

Gianluca Cubadda and Marco Mazzali

Inflation Expectations, Inflation Target Credibility and the COVID-19 Pandemic: New Evidence from Germany **(Ref: *97*)**

Dieter Nautz

Macroeconomic Forecasting Evaluation of MIDAS Models **(Ref: *11*)**
Nicolas Bonino-Gayoso and Alfredo Garcia-Hiernaux

(17:10-18:25) Session B.7: Time Series Analysis with Computational Intelligence

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Chairman: Dr. Asher Siebert and Dr. Miguel Ángel Ruiz Reina

Online Classification of High Gamma Dose Rate Incidents **(Ref: *45*)**
Mohammed Al Saleh, Béatrice Finance, Yehia Taher, Ali Jaber and Roger Luff

Multichoice Entropy Clustering for Time Series and Seasonality **(Ref: *111*)**
Miguel Ángel Ruiz Reina

Do News Sentiments Predict Stock Price Direction? **(Ref: *118*)**
Fennee Chong and Bharanidharan Shanmugam

Combination of post-processing methods to improve high resolution solar irradiance forecasts in French Guiana **(Ref: *152*)**
Rafael Alvarenga, Hubert Herbaux and Laurent Linguet

Time Series sampling **(Ref: *196*)**
Florian Combes, Ricardo Fraiman and Badih Ghattas

(18:30-19:50) Session A.12: Advances in Time Series Analysis and Forecasting. Short Presentation (part II)

Chairman: Dr. Gianluca Cubadda

Measuring the impact of monetary policy on the stock market via an identified multivariate GARCH model **(Ref: *132*)**
H. Herwartz, J. Roestel and F. Xu

Point and probabilistic forecast reconciliation for general linearly constrained multiple time series **(Ref: *110*)**
Daniele Girolimetto and Tommaso Di Fonzo

The state of Africa's air transport market amid COVID-19, and forecasts for recovery **(Ref: *29*)**
Tassew Tolcha

Rethinking Tourism and Hospitality Research **(Ref: *78*)**
Mireya Morgana-Orellana, Patricia Picazo-Peral and Sergio Moreno-Gil

Using Forecasting Methods on Crime Data: The SKALA Approach of the State Office of Criminal Investigation North Rhine-Westphalia, Germany. **(Ref: *121*)**
Kai Seidensticker and Katharina Schwarz

Machine learning and satellite data processing for spatio-temporal forecasting - application to solar energy in Guyana **(Ref: *86*)**
Sara Zermani, Jessica Bechet and Laurent Linguet

The (a)symmetric aspects of business-consumer confidence on outward-inward tourism for Russia **(Ref: *187*)**
Magdaline Enow Mbi Tarkang Mary

Exploration of Different Time Series Models for Soccer Athlete Performance Prediction **(Ref: *193*)**
Siarhei Kulakou, Cise Midoglu, Nourhan Ragab, Matthias Boeker and Paal Halvorsen

A Dynamic Combination of Optimized Theta Method with ATA, and Exponential Smoothing Methods; Validating on a Real Business Case and Comparing to Moving Average **(Ref: *162*)**
Yasin Tadayonrad and Alassane Ballé Ndiaye

Thursday, June 30th, 2022

(9:15-10:00) Session A.13: Statistical methods for Time Series Analysis and Financial Forecasting

Chairman: Dr. Susana Eyheramendy

Cloud Base Height estimation based on Convolutional Neural Network and All Sky Images **(Ref: *91*)**

Emanuele Ogliari, Alfredo Nespoli, Dario Ronzio and Elena Collino

Alone we can do so little; together we can not be detected. Detection of outliers in time series by analyzing cluster transitions. **(Ref: *163*)**

Sergej Korlakov, Gerhard Klassen, Stefan Conrad and Marcus Bravidor

Comparison of different portfolio optimization strategies to minimize the risk **(Ref: *71*)**

Aleš Kresta and Anlan Wang

(9:15-9:45) Session B.8: Forecasting Performance Evaluation

Chairman: Dr. Cise Midoglu and Dr. Sebastià Barceló Forteza

Recommendations of stockbrokers vs. fuzzy portfolio approach in construction sector **(Ref: *146*)**

Aleksandra Wójcicka-Wójtowicz and Anna Łyczkowska-Hańćkowiak

An approximation to relative automatic time series forecasting measures **(Ref: *68*)**

Miguel Ángel Ruiz Reina

(9:50-11:20) Session A.14: Advances in Time Series Analysis and Forecasting. Short Presentation (part III)

Chairman: Dr. Serena Brianzoni

High-Dimensional Temporal Disaggregation and Nowcasting: Examination of Trade-in-Services throughout the Brexit Transition Period **(Ref: *56*)**

Luke Mosley, Alex Gibberd and Kaveh Salehzadeh Nobari

Estimating Growth at Risk with Skewed Stochastic Volatility Models **(Ref: *164*)**

Elias Wolf

Performance Evaluation of Neural Network-Based Short-Term Solar Irradiation Forecasts **(Ref: *28*)**
Simon Liebermann, Jung-Sup Um, YoungSeok Hwang and Stephan Schlüter

Effects of Covid on the performance of different prediction methods: fare revenue forecasting in public transportation in Berlin **(Ref: *79*)**
Nicki Lena Kämpf, Jonas Krembsler, Sandra Spiegelberg, Nicola Winter, Thomas Winter and Robert Knappe

Performance evaluation of a family of GARCH processes based on Value-at-risk forecasts **(Ref: *131*)**
Alex Babiš and Beáta Stehlíková

On the correlation analysis of illiquid stocks **(Ref: *48*)**
Hamdi Raissi

Filling the Gap between Continuous Time AR Processes and Discrete Time AR Sequences. Application to Time Change Issues. **(Ref: *49*)**
Rachid Senoussi and Valérie Girardin

PV fault diagnosis method based on time series electrical signal analysis **(Ref: *128*)**
Carole Lebreton, Fabrice Kbidi, Frédéric Alicalapa, Michel Benne and Cédric Damour

An Example of Time-Series Modelling with Bayesian Symbolic Regression **(Ref: *32*)**
Krzysztof Drachal

Expectation-maximization algorithm for autoregressive models with Cauchy innovations **(Ref: *148*)**
Monika Singh Dhull and Arun Kumar

Towards time series feature engineering in automated machine learning for multi-step forecasting **(Ref: *108*)**
Can Wang, Mitra Baratchi, Thomas Thomas Bäck, Holger H. Hoos, Steffen Limmer and Markus Olhofer

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(10:05-11:20) Session B.9: Advances in Neural Networks for Time Series Forecasting

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Chairman: Dr. Philipp Wegmüller and Dr. Juan Laborda

Improving the Predictive Power of Historical Consistent Neural Network **(Ref: *127*)**
Rockefeller Rockefeller, Bubacarr Bah, Vukosi Marivate and Hans-Georg Zimmermann

Multi-Country and Multi-Horizon GDP Forecasting Using Temporal Fusion Transformers **(Ref: *141*)**
Juan Laborda, Sonia Ruano and Ignacio Zamanillo

Deep Representation Learning for Cluster Level Time Series Forecasting **(Ref: *144*)**
Tsegamlak Terefe Debella, Bethelhem Seifu Shawel, Maxime Devanne, Jonathan Weber, Dereje Hailemariam Woldegebriel, Sofie Pollin and Germain Forestier

On Generating Synthetic Time Series For Cybersecurity **(Ref: *167*)**
Veronica Sirghei

Time Series Forecasting Using Smoothing Ensemble Empirical Mode Decomposition and Machine Learning Techniques **(Ref: *192*)**
Mona Bahri, Sahand Vahidnia and Mahtab Mohtashamkhani

(12:00- 12:55) Session A.15: Advances in Time Series Analysis and Forecasting (Part. IV)

Chairman: Dr. Riccardo De Blasis

Heterogeneous agent model of multi-assets in discrete-time **(Ref: *69*)**
Serena Brianzoni, Giovanni Campisi, Graziella Pacelli and Filippo Petroni

An ordinal procedure to detect change points in the dependence structure between non-stationary time series **(Ref: *107*)**
Alexander Schnurr and Svenja Fischer

Modelling a Continuous Time Series from FOU(p) processes **(Ref: *100*)**
Juan Kalemkerian

(12:00- 12:55) Session B.10: Time Series Analysis and Forecasting

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Chairman: Dr. Eduardo Caro

Nowcasting US-Inflation with random forests **(Ref: *102*)**
Wegmüller Philipp

Three states of the French business cycle **(Ref: *125*)**
Catherine Doz and Anna Petronevich

Short-Term Electricity Load Forecasting: Modelling the COVID-19 Lockdown in Spain **(Ref: *70*)**
Eduardo Caro Huertas and Jesús Juan Ruiz

(13:00-14:00) Plenary Talk: Prof. Wesley S. Burr

Trent University, Department of Mathematics

Virtual Session

Chairman: Dr. Ignacio Rojas

Testing for and measuring serial dependence by neural networks **(Ref: *124*)**
Jinu Lee

Measuring the dynamic cross-correlation and contagion effect between Brent crude and heating oil (US-Diesel) prices pre and during the Covid-19 outbreak **(Ref: *136*)**
Claudio M. C. Inacio Jr and Sergio A. David

Forecasting Macroeconomic Tail Risk with Big Data Quantile Regressions **(Ref: *181*)**
Jan Prüser and Florian Huber

Improve the forecasting accuracy using GJR-GARCH and MODWT (C6) **(Ref: *8*)**
Tariq Alshammari, Mohd Tahir Ismail, Sadam Alwadi, Mohammad H. Saleh and Jamil Jaber

Using Multi-Layer Perceptron (MLP) to Detect Outliers in Saudi Arabia Stock market **(Ref: *9*)**
Khudhayr Rashedi, Mohd Tahir Ismail, Sadam Alwadi, Jamil Jaber and Nawaf Hamadneh

The bootstrap for testing the equality of two multivariate stochastic processes with an application to financial markets **(Ref: *12*)**
Ángel López-Oriona and José A. Vilar

Bootstrap-based nonlinear shrinkage of sample eigenvalues **(Ref: *13*)**
Eran Raviv

Forewarning pest attacks in crops using beta regression **(Ref: *138*)**
Bishal Gurung, Kn Singh, Achal Lama and Biwash Gurung

The WEF's Global Competitiveness Reports: A case of reliable nonsense? **(Ref: *186*)**
Harald Bergsteiner

Probabilistic Forecasting for Oil Producing Wells using Seq2seq Augmented Model **(Ref: *115*)**

Hadeel Afifi, Mohamed Elmahdy, Motaz El Saban and Mervat Abu-Elkheir

Geothermal time series analysis of the Deception volcano 2011-2022 (Antarctica) **(Ref: *155*)**

Belen Rosado, Luis Miguel Peci, Amós De Gil, Paola Barba and Manel Berrocoso

An analysis of liquidity through the self-similarity surfaces **(Ref: *160*)**

Sergio Bianchi, Augusto Pianese and Massimiliano Frezza

Analysis of underwater temperature series of Deception and Livingston Islands 2012-2022 (Antarctica) **(Ref: *166*)**

Olga Luengo, Belén Rosado, Amós De Gil, Paola Barba and Manuel Berrocoso

Analysis of tidal series of Deception and Livingston Islands (Antarctica) **(Ref: *172*)**

Olga Luengo, Belén Rosado, Amós De Gil, Paola Barba and Manuel Berrocoso

Influence of the Eruption of La Palma on the Evolution of Tropospheric Activity in the Canary Archipelago **(Ref: *176*)**

Paola Barba, Belén Rosado, Javier Ramírez-Zelaya, Adrián Villanueva and Manuel Berrocoso

Economic and Legal Nature of Blockchain **(Ref: *130*)**

Farouq Alazzam and Iryna Diachuk

Impact of capitalization on labor productivity in European countries **(Ref: *183*)**

Antonio Mihi-Ramírez, Elías Melchor-Ferrer and Ammar Ziad-Alwrekiat

LASSO regression: an application for Brazilian hydrological time series **(Ref: *54*)**

Johann Freitas

Forecasting Net Asset Value (NAV) for Exchange Traded Fund(ETF) using Time Series ARIMA Model **(Ref: *158*)**

Zobia Mushtaq and Muhammad Rafi

Economic uncertainty impact in forecasting Uruguayan macro variables **(Ref: *38*)**

Bibiana Lanzilotta, Gabriela Mordecki and Viviana Umpiérrez

A decoder-based transformer model for multi-step fresh produce price forecasts **(Ref: *123*)**

Fatemeh Jafari, Kumaraswamy and Fakhri Karray

K-means Clustering Assisted Spectrum Utilization Prediction with Deep Learning Models **(Ref: *150*)**
Bethelhem S. Shawel, Frehiwot Bantigegn, Tsegamlak Terefe Debella, Sofie Pollin and Dereje H. Woldegebreal

A Multivariate Approach for Spatiotemporal Mobile Data Traffic Prediction **(Ref: *151*)**
Bethelhem S. Shawel, Endale Mare, Tsegamlak Terefe Debella, Sofie Pollin and Dereje Hailemariam Woldegebreal

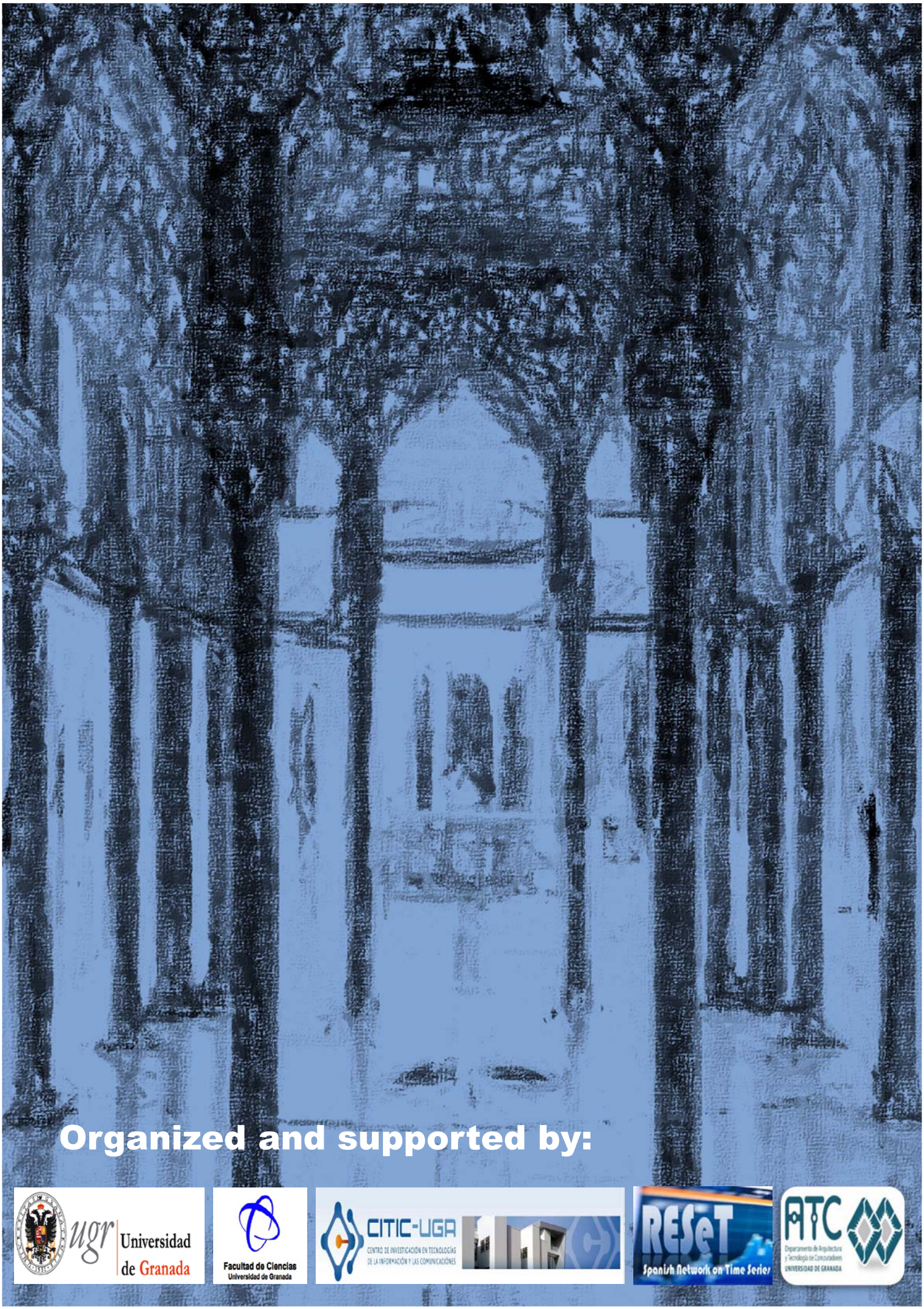
Comparative analysis of residential load forecasting with different levels of aggregationComparative analysis of residential load forecasting with different levels of aggregation **(Ref: *157*)**
Ana Apolo Penaloza, Roberto Leborgne and Alexandre Balbinot

Ensemble Forecasting by Energy associated modified by Renyi's entropy and statistical roughness in the learning process **(Ref: *178*)**
Cristian Rodriguez Rivero, Julián Pucheta and Martin Herrera

Feature Importance Study on Forecasting Hourly Retail Time Series **(Ref: *182*)**
Bruno Mendes, Ana Maria Tomé and José Moreira

Evaluating a Recurrent Neural Networks Model For Predicting Readmission to Cardiovascular ICUs Based on Clinical Time Series Data **(Ref: *190*)**
Sobhan Moazemi, Sebastian Kalkhoff, Steven Kessler, Zeynep Boztoprak, Vincent Hettlich, Artur Liebrecht, Roman Bibo, Bastian Dewitz, Artur Lichtenberg, Hug Aubin and Falko Schmid

Cryptocurrency hourly volatility and information measurement of predictability **(Ref: *64*)**
Filippo Petroni and Flavio Prattico



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RESeT
Spanish Network on Time Series

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