



ITISE 2015

International Work-Conference on
Time Series Analysis

ITISE 2015

PROGRAM

**1st-3rd July, 2015
Granada (SPAIN)**

ITISE 2015 Short Program

Wednesday, 1st July , 2015		
8:00-8:30	REGISTRATION DESK <i>(start at 8h but it is opened during all the conference)</i>	
8:30-10:00	Session A.1: Advanced Forecasting methods (Part I)	Session B.1: Advanced Mathematical Time Series Forecasting Methods (Part I)
10:00-10:30	COFFEE BREAK	
10:30-12:00	Session A.2: Advanced Forecasting methods (Part II)	Session B.2: Analysis of irregularly sampled time series: techniques, algorithms and case studies
12:00-13:00	OPENING PLENARY LECTURE. Prof. Daniel Peña Sanchez De Rivera	
13:20-15:00	LUNCH	
15:00-17:00	Session A.3: Spatio-temporal analysis of biomedical time series	Session B.3: Econometric models/forecasting
17:00-18:00	Spanish Network Time Series meeting (RESET)	Session A.4/B.4: Poster Session

Thursday, 2nd July, 2015		
8:30-10:00	Session A.5: Advanced Time Series Forecasting Methods. Soft-Computing Techniques and Fuzzy Logic for Time Series Forecasting	Session B.5: Advanced Mathematical Time Series Forecasting Methods (Part II)
10:00-10:30	COFFEE BREAK	
10:30-12:00	Session A.6: Time series Analysis using Machine Learning Techniques and Artificial Neural Networks	Session B.6: Advanced Mathematical Time Series Forecasting Methods (Part III)
12:00-13:00	PLENARY LECTURE. Prof. Siem Jan Koopman	
13:00-15:00	LUNCH	
15:00-16:15	Session A.7: Application in Time Series Analysis/Forecasting (Part I)	Session B.7: Advanced Mathematical Time Series Forecasting Methods (Part IV)
16:15-17:15	Session A.8: High Dimension and Complex/Big Data	Session B.8: Advanced Forecastin methods (Part III)
20:00	Gala Dinner at Hotel Alhambra Palace	

Friday, 3rd July, 2015	
9:00-10:00	Session A.9: Structural Equation Modeling of time series data
10:00-10:30	COFFEE BREAK
10:30-11:30	Session A.10: Application in Time Series Analysis/Forecasting (Part II). Description, designing and implementation of techniques which can exploit data related with traffic flow and Energy Forecasting
11:30-12:30	CLOSING PLENARY LECTURE. Prof. DI Dr. Manfred Deistler
16:30	Visit to the Alhambra

NOTES:

- All **Sessions A** will be held in Salón de Grados, Edificio Mecenas (just 20 meters from the Facultad de Ciencias).
- All **Sessions B** will be held in Salón de Grados, Facultad de Ciencias.
- The **Poster Sessions** will be held in the Hall of Facultad de Ciencias.

Salón De Grados.
SESSIONS A
Edificio Mecenas

Salón De Grados.
SESSIONS B
Facultad de Ciencias



Hall
POSTER SESSIONS
Facultad de Ciencias

MAIN
ENTRANCE

PROGRAM ITISE 2015 FULL PROGRAM

Invited Talks to ITISE 2015

Title of the Talk: Generalized Dynamic Principal Components

Prof. Daniel Peña Sanchez De Rivera.

Title of the Talk: (to be confirmed)

Prof. Siem Jan Koopman

Title of the Talk: Regular and Singular AR and ARMA Models, The Single and The Mixed Frequency Case: A Structure Theory

Prof. DI Dr. Manfred Deistler

Wednesday, July 1

Session A.1: Advanced Forecasting methods (Part I)

Chairman: Prof. Dhouha Kbaier Ben Ismail and Prof. Phil Watson

Emergency Situational Time Series Analysis and Forecasting

Horia-Nicolai Teodorescu

The Relationship Between the Beveridge-Nelson Decomposition and Exponential Smoothing

Victor Gomez

Competitive models for the Spanish short-term electricity demand forecasting.

Juan Carlos García-Díaz and Oscar Trull

Singular Spectrum Analysis and Autoregressive models for Ecuadorian shrimp catches Forecasting

Lida Barba and Nibaldo Rodríguez

Predictive and Descriptive Models of Mutual Development of Economic Growth of Germany and Selected Nontraditional EU Countries

Jozef Komornik and Magda Komornikova

Session B.1: Advanced Mathematical Time Series Forecasting Methods (Part I)

Chairman: Prof. Eduardo Loria

GARCH models and their continuous time limits

Robert Elliott, Alex Badescu and Juan-Pablo Ortega

On using predictive-ability tests in the selection of time-series prediction models

Mauro Costantini and Robert M. Kunst

The Relationship between Aggregate Advertising and Aggregate Output in a Structural VAR Model

Chulho Jung

Estimation algorithm based on Kalman filter in the ARCH(p) models

Mohammed Benmoumen and Jelloul Allal

Procedures of reconstruction of the Langevin equation from time series with memory

Zbigniew Czechowski

Session A.2: Advanced Forecasting methods (Part II)

Chairman: Prof. Jozef Komornik and Prof. Robert Elliott

Adding Seasonality to the Bass Diffusion Model and its Application to Forecast the Market Demand of Telecommunication Services

Luis Enrique García Fernández and Mercedes Garijo

Constant amplitude signal detection in high noise conditions using Spectral Kurtosis

Jose María Sierra-Fernández, Juan Jose Gonzalez De La Rosa, Jose Carlos Palomares and Agustín Agüera-Pérez

Identifying the best performing time series analytic for sea-level rise research

Phil Watson

Ramadan Effect on volatility and returns of UAE financial markets

Fatima Al Housani, Hazim El Baz and Noha Tarek Amer

An Approximate Long-Memory Range-Based Approach for Value at Risk Estimation

Xiaochun Meng and James Taylor

Session B.2: Analysis of irregularly sampled time series: techniques, algorithms and case studies

Chairman: Prof. Eulogio Pardo-Iguzquiza and Prof. Francisco Rodriguez

A class of Stein-rules in Multivariate Regression Model with Structural Changes

Sévérien Nkurunziza and Fuqi Chen

Towards a new statistical tool for analyzing unevenly spaced paleoclimate time series

Josue M. Polanco Martinez and Sérgio H. Faria

Spectral Analysis of Uneven Time Series by Maximum Entropy

Eulogio Pardo-Iguzquiza and Francisco Javier Rodríguez-Tovar

Time-frequency analysis of currents data sampled at four stations in the Réunion island: application of EMD and wavelets

Dhouha Kbaier Ben Ismail, Pascal Lazure and Ingrid Puillat

Official Opening Ceremony (12:00-12:25).

It will be chaired by:

Prof. Pilar Aranda Ramirez.

Rector of the University of Granada

Invited Talk 1 (12:25-13:20).

”Generalized Dynamic Principal Components”

Prof. Daniel Peña Sanchez De Rivera

Session A.3: Spatio-temporal analysis of biomedical time series

Chairman: Prof. Young Truong (Tentative)

Use of environmental time-series measurement in modeling radionuclide transfer to marine species

Bruno Fievet, Pascal Bailly Du Bois, Claire Voiseux, Mehdi Morillon and Richard Dupont

Simultaneous Statistical Inference in Dynamic Factor Models

Thorsten Dickhaus and Markus Pauly

Magnitude and sign decomposition of long-range fractal correlated time series

Manuel Gomez-Extremuera, Pedro Carpena and Pedro Bernaola-Galvan

First-passage time properties of correlated time series with scale-invariant behavior and with crossovers in the scaling

Pedro Carpena, Ana Victoria Coronado, Concepción Carretero-Campos, Pedro Bernaola-Galván and Plamen Christov Ivanov

A new method for estimating spectral clustering change points for multivariate time series

Ivor Cribben and Yi Yu

Permutation entropy and order patterns in long time series

Christoph Bandt

Spatio-Temporal Modeling for fMRI Data

Young Truong

Session B.3: Econometric models/forecasting

Chairman: Prof. Magdalena Komornikova and Prof. Jo-Hui Chen

The environmental impact of economic activity on the planet

Aureliano Martín Segura

Commodity returns co-movements: Fundamentals or ”style” effect?

Zakaria Moussa, Philippe Charlot and Olivier Darne

Revisiting the condition number and indicator in ridge regression

Roman Salmeron, Jose Garcia Perez, Maria del Mar Lopez Martin and Catalina Garcia

Eudoxus: A SVEC model based to forecast and perform structural analysis (shocks) for the Mexican economy, 1985Q1-2013Q4

Eduardo Loría and Emmanuel Salas

Methods and models for the forecasting and management of time series

Vera Ivanyuk and Fedor Pashchenko

An analysis of nonlinearity and chaos in financial markets

Lucía Inglada-Perez and Pablo Coto-Millan

Session A.4-B.4: Poster Presentation

Chairman: Prof. Luis Javier Herrera

Are the stock market indices really Brownian motions?

María A. Navascués, María V. Sebastián and Mario Latorre

Time series analysis with computational intelligence in Biomedical problems

Olga Valenzuela

Prediction of wood maximum price to substitute fuel oil at thermoelectric plants

Crismeire Isbaex, Márcio Lopes Da Silva, Liniker Fernandes Da Silva, Lyvia Julienne Sousa Rego and Thiago Taglialeagna Salles

A Note on Estimation of the Common Component in Dynamic Factor Models

Jan Bruha

Statistical forecasting model of electric energy consumption

Kamil Rajdl, Aleš Farda, Petr Štěpánek and Pavel Zahradníček

Forecasting of electricity production from photovoltaic and wind power plants in the Czech Republic

Aleš Farda, Petr Štěpánek, Pavel Zahradníček and Kamil Rajdl

Estimation of ARMA models in the presence of outliers

Hamid Louni

Time Series Analysis and Prediction of Bed Level Changes in Chabahar Bay

Saeed Zeinali, Nasser Talebbeydokhti, Morteza Mojarad and Mojtaba Jandaghian

Use of auto regressive models with threshold (TAR) to forecast the price of exported Brazilian pulp

Liniker Fernandes Da Silva, Marcio Lopes Da Silva, Crismeire Isbaex, Thiago Taglialeagna Salles, Lyvia Julienne Sousa Rego and Cinthia Grazielle Carvalho Andrade

The Impact of Smoothing of Age-specific Death Rates by the Gompertz-Makeham Function on the Results of Stochastic Projections by Lee-Carter Model

Ondřej Šimpach and Petra Dotlačilová

The impact of information systems on safety and traffic flow continuity in urban agglomerations

Simona Kubíková, Alica Kalašová and ubomír Černický

Investigation of Copper Homeostasis Through the Analysis of Time-Course High-Throughput Transcriptome Data

Sebnem Oc, Serpil Eraslan and Betul Kirdar

An application of time series analysis in judging the working state of ground-based microwave radiometers

Zhenhui Wang, Qing Li and Jiansong Huang

Toward a Data Mining Full-Model on Time-Series Databases with Automated Parameter Selection

Nancy Pérez Castro, Héctor Gabriel Acosta Mesa, Efrén Mezura Montes and Nicandro Cruz Ramírez

Monument stability analysis in continuous GNSS stations from position time series

Alberto Sánchez-Alzola, María Jesús Borque and Antonio José Gil

Forecasting with a Dynamic Probit Model

Francis Bismans and Reynald Majetti

The information transmissions between the European sovereign CDS and the sovereign debt markets of emerging countries

Alan Wang

The application of time series theory in the road traffic analyses

Malwina Splawinska

Application of data fusion to analyzing time series monitoring data in coal mine

Yang Shouguo, Li Shugang and Lu Yan

Comparison of Linear, Neural and ELM based Models for Short Term Heat Load Forecasting

Primož Potočnik and Edvard Govekar

Effective Linking of Crop Modeling and Remote Sensing

Jonghan Ko and Chi Tim Ng

Issues in the Estimation of Mis-Specified Models of Fractionally Integrated Processes

Kanchana Nadarajah, Gael Martin and Donald Poskitt

Time series Interval predictor based on bounding techniques

José Manuel Bravo Caro, Emilio Congregado, Manuel Emilio Gegúndez and Antonio A. Golpe

An ensemble strategy for forecasting the extra-virgin olive oil price in Spain

Antonio Jesús Rivera Rivas, María Dolores Pérez Godoy, Francisco Charte Ojeda, Francisco José Pulgar Rubio and Maria Jose Del Jesus

Long-Range Dependence in Heart Rate Data: An Arfima-Garch Approach

Mar Fenoy and Juan-B. Seoane-Sepúlveda

Forecasting Time Series with Outliers via Decision Trees

Chris Zwilling and Michelle Wang

Identifying and forecasting speculative bubbles on commodity markets

Alexander Matthies

Improved Target Detection Methods in Hyperspectral Images Based on Tensorial Model

Salah Bourennane and Caroline Fossati

An Implementation of a Multi-Model Predictor Based on the Qualitative and Quantitative Decomposition of the Time-Series

Rodrigo Lopez Farias, Vicenç Puig and Héctor Rodríguez Rangel

Thursday, July 2

Session A.5: Advanced Time Series Forecasting Methods. Soft-Computing Techniques and Fuzzy Logic for Time Series Forecasting

Chairman: Prof. Eren Bas and Prof. Ukuf Yolcu

Application of Fuzzy Cognitive Maps to the Forecasting of Daily Water Demand

Jose L. Salmeron, Wojciech Froelich and Elpiniki Papageorgiou

A Fuzzy Time Series Network for Forecasting

Eren Bas, Erol Egrioglu, Cagdas Hakan Aladag and Ukuf Yolcu

Forecasting Turkey Electricity Consumption by Using Fuzzy Functions Approach

Ali Zafer Dalar, Ukuf Yolcu, Erol Egrioglu and Cagdas Hakan Aladag

SOM-Based clustering to determine the length of intervals for fuzzy time series

Ferhan Demirkoparan, Oguz Kaynar and Sibel Sener

A High Order Time Fuzzy Time Series Forecasting Model Based on Fuzzy C-means and Artificial Neural Networks

Ozge Cagcag Yolcu, Ukuf Yolcu, Erol Egrioglu and Cagdas H. Aladag

Session B.5: Advanced Mathematical Time Series Forecasting Methods (Part II)

Chairman: Prof. Bernard B. Hsieh and Prof. Naoufel Cheikhrouhou

Determination of stochastic dynamics from discrete time series with persistent noise

Monika Petelczyc, Jakub M. Gac, Jan J. Żebrowski and Maciej Kwiatkowski

A direct method for the Langevin-analysis of multidimensional stochastic processes with strong correlated measurement noise

Teresa Scholz, Frank Raischel, Pedro Lind, Matthias Wächter, Bernd Lehle and Vitor V. Lopes

Nonparametric Tests for Conditional Independence Using Conditional Distributions

Taoufik Bouezmarni and Abderrahim Taamouti

Approximate Methods for Assessing the Statistical Moments of the Time Series

Alexander Pashchenko, Fedor Pashchenko and Galina Pikina

Similarity based neuro-fuzzy systems for runoff forecasting in a rural catchment

Amin Talei, Lloyd Hock Chye Chua and Chai Quek

Session A.6: Time series Analysis using Machine Learning Techniques and Artificial Neural Networks

Chairman: Prof. Pedro Carpena

Communicating Artificial Neural Networks with Physical-Based Flow Model for Complex Coastal System

Bernard Hsieh

Particle Swarm Optimization and Trimmed Mean Based Training Algorithm for Multiplicative Neuron Model Artificial Neural Networks for Forecasting Time Series

Ozge Gundogdu and Erol Egrioglu

Parallel seasonal approach for electrical load forecasting

Oussama Ahmia and Nadir Farah

Financial investing using internet activity time series and multiobjective genetic programming

Martin Jakubáci and Michal Greguš

Integrating independent component analysis-based SSA with neural network for stock price prediction

Milan Badics

Session B.6: Advanced Mathematical Time Series Forecasting Methods (Part III)

Chairman: Prof. Soo Young Kim and Prof. Chulho Jung

Estimation and asymptotic covariance matrix for stochastic volatility models

Maddalena Cavicchioli

A New Type Recurrent Multiplicative Neuron Model Artificial Neural Network for Forecasting

Burcin S. Corba, Erol Egrioglu and Ufuk Yolcu

Intermediate Scaling in the Entropy of Time Series

Miron Kaufman

Bayesian nonparametric prediction in nonlinear random dynamical systems

Spyridon Hatjispyros and Christos Merktas

Value at Risk with Filtered Historical Simulation

Mária Bohdalová and Michal Greguš

Invited Talk 2 (12:00-13:00): (To be confirmed)
Prof. Siem Jan Koopman

Session A.7: Application in Time Series Analysis/Forecasting (Part I)

Chairman: Prof. Ivor Cribben

A preliminary analysis on the effect of time series clustering on short term travel time prediction models.

Usue Mori, Alexander Mendiburu and Jose A. Lozano

Short-Term Forecasting of Wind Speed and Direction Exploiting Data Non-Stationarity

Alice Malvaldi, Jethro Dowell, Stephan Weiss and David Infield

The influence of forecast information on behavioral inventory management in supply chains

Naoufel Cheikhrouhou, Sylvain Hirth, Remy Wagner and Philippe Wieser

A Practical Application of Hierarchical Neural Clustering to Forecast Short-Term Demand for Electronic Assemblies

Tamás Jónás, Pál Dömötör and Zsuzsanna Eszter Tóth

Session B.7: Advanced Mathematical Time Series Forecasting Methods (Part IV)

Chairman: Prof. Livio Fenga and Prof. Maria A. Navascues

Long-memory and Volatility Asymmetry in the Stock Returns of Top Emerging Economies

Jo-Hui Chen and John Francis Diaz

Integer-Valued APARCH Processes in the Analysis of Time Series of Counts

Maria Da Conceição Costa, Manuel Scotto and Isabel Pereira

Testing for breaks in variance structures with smooth changes

Raja Ben Hajria, Salah Khardani and Hamdi Raissi

Session A.8: High Dimension and Complex/Big Data

Chairman: Prof. Ivor Cribben

Intraday data vs daily data to forecast volatility in financial markets

Antonio Santos

Estimation of Generalized Linear Dynamic Factor Models -The Single and the Mixed Frequency Case

Alexander Braumann, Manfred Deistler, Elisabeth Felsenstein, Diego Fresoli and Lukas Koelbl

Sparse Bayesian Latent Factor Stochastic Volatility Models for High-Dimensional Financial Time Series

Gregor Kastner, Sylvia Frühwirth-Schnatter and Hedibert Freitas Lopes

Session B.8: Advanced Forecasting methods (Part III)

Chairman: Prof. Livio Fenga and Prof. Maria A. Navascues

high dimensional factor analysis of time series

Chi Tim Ng

Artificial Intelligence and Multiscale approximation-based Forecast of Time Series with complex dynamics.

Fenga Livio

Modelling Directionality in Stationary Geophysical Time Series

Mahayaudin M. Mansor, Max E. Glonek, David A. Green and Andrew V. Metcalfe

Supermodeling An Objective Process by Synchronization of Alternative Models

Gregory Duane, Mao-Lin Shen, Noel Keenlyside and Frank Selten

A Multiple-Model Predictor Approach Based on an On-Line Mode Recognition with
Application to Water Demand Forecasting

Vicenç Puig and Rodrigo López Farías

Friday, July 3

Session A.9: Structural Equation Modeling of time series data

Chairman: Prof. Belkhouja Mustapha

Structural Change and Long memory in the Dynamic of G7 inflation Processes

Mustapha Belkhouja

What Drives Restaurants Bankrupt? A Survival Analysis Perspective

Soo Kim, Nan Hua and Arun Upneja

Examining the Degree of Exchange Rate Pass-through: A Panel Data Approach

Nafiu Bashir Abdussalam, Professor Shehu Usman Aliyu Rano and Dr Sani Bawa

Session A.10: Application in Time Series Analysis/Forecasting (Part II)

Chairman: Prof. Pedro Castillo Valdivieso

Session A.10.A. Description, designing and implementation of techniques which can exploit data related with traffic flow

Real-data time series benchmark for traffic prediction

Pedro A. Castillo, A.J. Fernandez-Ares, M.G. Arenas, P. Garcia-Sanchez, A. Mora, Pedro Garcia-Fernandez and V.M. Rivas

Modellation and forecast of traffic series by a stochastic process

Desiree Romero, Nuria Rico and M. Isabel Garcia-Arenas

Session A.10.B. Application of Time Series in Energy Forescasting

Generative Exponential Smoothing Models to Forecast Time-Variant Rates or Probabilities

Edgar Kalkowski and Bernhard Sick

Invited Talk 3 (11:30-12:30): Regular and Singular AR and
ARMA Models, The Single and The Mixed Frequency Case: A
Structure Theory

Prof. DI Dr. Manfred Deistler

Virtual Presentation

Chairman: Prof. Hector Pomares

Time series analysis with artificial neural network. Application to the Typical Meteorological Year in Gran Canaria Island

Luis Mazorra-Aguiar, Felipe Díaz and Raquel Pérez

Forecasting Multidimensional Tail Events

Arnold Polanski

Tests of Causality between two infinite-order vector autoregressive series

Chafik Bouhaddioui and Jean-Marie Dufour

A Monetary Analysis of the Liquidity Trap

João Pinto and João Andrade

On the behaviour of tests for the null of stationarity under near stationarity with weakly dependent errors

Julio A. Afonso-Rodríguez

Monitoring Global Business Cycle in Real Time

Jaime Martinez-Martin and Maximo Camacho

Quantitative Comparisons on the Intrinsic Features of Foreign Exchange Rates between the 1920s and the 2010s: Case of the daily USD-GBP Exchange Rates

Young Han

Statistical characteristics of drought events in northern Tunisia

Majid Mathlouthi and Fethi Lebdi

Combine to compete: improving fiscal forecast accuracy over time

Laura Carabotta and Peter Claeys

Linkages between Foreign Exchange Market and Stock Market of China under Order Flows Transmission

Yajie Wang, Chao Wang and Hui Li

Replacing JDN by CEP

Sepp Rothwangl

Dynamic Relationship between Real Estate Investment and Economic Growth

Mei-Se Chien

Sub-ideal causal smoothing filters for the discrete time processes

Nikolai Dokuchaev

On dependency of volatility on sampling frequency for the time series generated by delay equations

Chuong Luong and Nikolai Dokuchaev

Cosinor, and Chronomics Analysis Toolkit (CAT) in R

Cathy Lee Gierke and Germaine Cornelissen

Return On Marketing Investment – A Comparison of Online and Offline Marketing Activities

Yusuf Oc and Aysegul Toker

Analysis and forecasting properties of weight and feed time-series from growing-finishing pigs

Alberto Pena Fernandez, Vasileios Exadaktylos, Claudia Bahr, Erik Vranken and Daniel Berckmans

Impact of wind generation uncertainty on unexpected cross-border power flows in the CEE region

Edgar Nuño

Asymptotic theory for AR-GARCH models with WSN innovation

Sara Alizadeh

Assessing Functional Connectivity in the Human Brain by Nonlinear Models

Maryam Behboudi and Rahman Farnoosh

Modeling of Electric Arc Furnace Reactive power variations by GM(0,3) and GM(1,3)

Haidar Samet and Aslan Mojallal

Global mean sea level changes revealed by discrete wavelet transform and singular spectrum analysis

Sofiane Khelifa, Ali Rami and Bachir Gourine

Exponential Moving Maximum Filter for Predictive Analytics in Network Reporting

Bin Yu

Analysis of changes in rainfall and temperature regime in Bogotá river basin

Guido Ceccherini, Cesar Carmona Moreno, Iban Amezttoy and Claudia Patricia Romero Hernández

Employment in tourism – Croatian experience and expectations

Drago Pupavac

Demographic Dividends, Financial Development and Growth: An Application of Long Run Structural VAR Model

Pranab Kumar Das and Saibal Kar

Nonstationary Autoregressive Conditional Duration Models

Anuj Mishra and T.V. Ramanathan

Forecasting tail risk via realized GARCH, employing the realized range

Richard Gerlach and Chao Wang



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Sessions A.
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Sessions B.
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Facultad de Ciencias

Organized and supported by:

