



Program

SMTDA2026 Conference and Demographics Workshop

Stochastic Modeling Techniques and Data Analysis International Conference

Agios Nikolaos, Crete, Greece, 8 - 11 June, 2026 Hybrid

Monday, 8.6.2026

TIME ZONE: [EEST – Eastern European Summer Time](#)

Venue: Hellenic Mediterranean University
Dept Management Science & Technology
Lakonia Campus, Agios Nikolaos, Crete, Greece

8:30 – 10:00

Registration

10:00 – 10:20

[Room 1](#)

Opening

10:20-12:00

Opening Ceremony and Plenary Session

[Room 1](#) (PS1)

Chair: Christos Skiadas

Speaker: Fabio L. Spizzichino,

Fondazione Sapienza, Rome, Italy,

Structural Properties and Role of Load-Sharing Models in Applied Probability and Social Choices

12:00- 12:30

Coffee Break

12:30-14.00

SCS1

Special and Contributed Sessions

[Room 1](#)

Data Analysis I

Chair: Hong Mi

[Room 2](#)

Data Analysis II

Chair: George S. Atsalakis

Xiuyi Shi and Hong Mi Influence of Chemical Fertilizer Application Technical Efficiency on Land Output Efficiency	Evgeniy D. Pechuk , Tatyana S. Krasnopolskaya, Vasiliy D. Pechuk Quantitative Characteristics of Chaotic Regimes in Time Delay Systems
Yiming Zhang, Zhongshi Jiang, Zhong Wang Mining Skill Checklists and Constructing Career Sequences Based on Massive Dynamic Data	David Solano, Marc Saez, Maria A. Barceló, Wendy García A hybrid nonparametric framework for outlier detection in functional time series
Nana Guo, Hong Mi From Quantification to Right Confirmation: Visual Modeling and Rights Protection Path of Intensive Motherhood	Samir K. Safi and Afreen Arif Multidimensional Policy Regimes across Countries - A Comparative Clustering Analysis
Gao X; Hyndman C; Pirvu TA; Jevtić P Optimal annuitization post-retirement with labor income	Leonidas Sakalauskas, Neringa Urbonaite Geometry of Euclidean matrices and multifractal analysis
Xiuting Cai The effect decomposition and mechanism of green innovation empowering carbon emission performance	G. Stamatopoulou, A. Kazani and M. Symeonaki Measuring Digital Poverty in Greece: A Multidimensional Approach with data drawn from a large-scale survey
14:00-15:00 Lunch	
15:00-16:30 SCS2 Special and Contributed Sessions	
<u>Room 1</u>	<u>Room 2</u>
Data Analysis III Chair: Liberato Camilleri	Demography I Chair: Apostolos Bozikas
Mojtaba Taghvafard, Elena Babatsouli Alternative Computations of Whole-Word Variability in Child Developmental Speech	George Matalliotakis, Christos Skiadas Stochastic Modeling and Longevity
Liberato Camilleri and Milena Pellicano Analyzing ordinal categorical data related to dance using multilevel modelling	Antonios Sfounis and Yiannis Dimotikalis A Multivariate Evaluation of Higher Education: Institutional Typologies of Greek Universities using PCA and K-Means
Fausto Acernese, Valeria D'Amato, Rocco Romano	Konrad Furmańczyk, Wojciech Niemir, Marta Zalewska

Analytical Reformulation and Fixed-Point Yield Inversion for Fixed-Income Securities	Graphical predictive model of multimorbidity in allergic diseases
Valerie Girardin Jacques Brehelin Th Teo Grente Nathalie Niquil Studying the Impact of Degradation of Data through Ecological Network Analysis Indices in Linear Inverse Modeling for Marine Trophic Systems	Apostolos Bozikas Entropy Decomposition in Mortality Modeling
Maria-Sofia Sotiropoulou Gender reassignment in translation: French masculine nouns to Greek neuter and feminine	Nikos Kounoupas, Yiannis Dimotikalis and Christos H. Skiadas DigiMatch-PA: Matching Public Administration Employees' Digital Skills Clusters with H5P Activities
End of the 1st Day	



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Tuesday, 9.6.2026

TIME ZONE: [EEST](#) – Eastern European Summer Time

Venue: Hellenic Mediterranean University
Dept Management Science & Technology
Lakonia Campus, Agios Nikolaos, Crete, Greece

8:30 – 9:00
Registration

09:00-10:30

SCS4

Special and Contributed Sessions

[Room 1](#)

Data Analysis IV
Chair: K. Koutrsa

Konstantinos Koutras, Sonia Malefaki, and John Garofalakis
Bayesian Linear Regression for Modeling and Predicting Short-Distance Swimming Performance

Fatima Sapundzhi, Irina Naskinova, Mikhail Kolev, Meglena Lazarova, and Michail Todorov
Statistica I Modeling and Assessment of Regression Models Using Data from Computer Modeling

Elena Almaraz Luengo
Evaluating Test Battery Behavior with Contaminated Numerical Sequences

Andreas Markoulakis , Eleanya Nduka
Energy security and public support for renewable energy: Evidence from the UK

[Room 2](#)

Demography II
Chair: Vladimír Holý

Vladimír Holý
Analyzing Time-Varying Ranking Data

Barun Kumar Mukhopadhyay
A New Technique of “-Heaping” vis-à-vis Turner in Age Data

D. Chaidemenaki, G. Verropoulou
Investigating Active Ageing index: From macrolevel to individual score

Kristýna Dvořáková, Filip Hon
Cluster-Based Classification of Czech Districts by Reproductive Behaviour

Jean-Paul Murara Portfolio Optimization using Stochastic Controls and Technical Investment Strategies	Ioanna Atsalaki, George S. Atsalakis Can Greece increase productivity while its population declines
Olympia Hadjiliadis with Gwenaël Gatto Error detection in sequential laser sensor input	George Matalliotakis, Christos Skiadas A Novel Stochastic Quadratic Framework for Advanced Actuarial Modeling
10:30- 11:00 Coffee Break	
11:00-13:00 SCS5 Special and Contributed Sessions	
Room 1 Demography III Chair: Angeliki Kazani	Room 2 Health-Mortality Chair: Y. Dimotikalis
Tomáš Fiala, Jitka Langhamrová, Jana Vrabcová What are the options for ensuring the financial stability of the Czech pension system?	George Matalliotakis, Christos Skiadas Stochastic Modeling and Longevity
Angeliki Kazani, Glykeria Stamatopoulou, Nafsika Moschovakou and Maria Symeonaki Gender differences in digital competence: A probabilistic analysis approach	Volodymyr Anisimov Predicting two-stage screening/rescreening and randomization pipeline in multicenter clinical trials accounting for future sites initiation
Wojciech Otto Model of Lee-Carter type for fertility - analyzing baby bust in Poland	Konrad Furmańczyk, Wojciech Niemir, Marta Zalewska Graphical predictive model of multimorbidity in allergic diseases
Neir Antunes Paes, João Batista Carvalho, Rozane Pereira de Sousa A methodological approach to modeling the advanced ages reporting in censuses in countries undergoing consolidated demographic transition	Stylianos Terzoudis, Yannis Dimotikalis, John Fanourgiakis Trends in Unmet Healthcare Needs Across the EU: 2009–2024 Modeling
Aman Prakash; Raj Kamal Maurya, Debashis Samanta and Debasis Kundu A flexible semiparametric step-stress model based on piecewise monotone hazard function	Peter Hatzopoulos On the modelling of Mortality Improvement Rates
Bojana Todić and Jelena Jocković Waiting time until absorption in the coupon collector problem with penalty coupon	Glykeria Stamatopoulou, Maria Symeonaki, Dimitris Parsanoglou, Nafsika Moschovakou, Orfeas Menis- Mastromichalakis, George Filandrianos, Giorgos Stamou

	Gender stereotyping and occupational composition in Europe: a correlation analysis using Shinar’s scores and the EU-LFS data
13:00-13:40 Room 1 (PS2) Plenary Session Chair: Christos Floros Speaker: Claude Lefèvre <i>Department of Mathematics, Université Libre de Bruxelles</i> Title: Insurance coverage for a SIR epidemic	
13:40-14:30 LUNCH	
14:30 - 21:00 Guided tour to the Traditional Village “Kritsa” with a Greek “Meze” in a local Taverna	
End of the 2nd Day	



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Wednesday, 10.6.2026

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Venue: Hellenic Mediterranean University
Dept Management Science & Technology
Lakonia Campus, Agios Nikolaos, Crete, Greece

8:30 – 9:00
Registration

9:00-10:30

SCS6

Special and Contributed Sessions

[Room 1](#)

Special Session
Data Analysis

Foo, Hui-Men and Yuan-chin Ivan Chang
ALMAB-DC: A Unified Stochastic Framework
Integrating Active Learning, Multi-Armed
Bandits, and Distributed Computing

Foo, Hui-Men and Yuan-chin Ivan Chang
Principal Component Quantile Sampling: A
Structure-Preserving Strategy for Efficient
Data Reduction and Statistical Learning

Guoyong Ma, Hong Mi
Research on Aging Risk Identification and
Policy Simulation of China's Families Who
Lost Their Only Child and Families with
Disabled Only Child

Hongmin Li

[Room 2](#)

Demography IV
Chair: Ingrida Vaičiulytė

Kornélia Svačinová, Elena Říhová and Petr
Kasal
Extreme Decline in the Birth Rate in the
Czech Republic

Constantinos Stathopoulos, George
Matalliotakis
Evolution of Private Health Expenditure
(Out - Of - Pocket Money) in Greece & how
it affects Inequality and Poverty

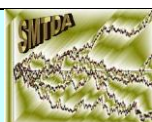
Ingrida Vaičiulytė
Operations Research-Based Decision
Support System for Menu Planning and
Food Inventory Management

Accurate forecasting of regional carbon emissions in China is essential for the government to formulate dual-carbon policies	
Hui Zhang An innovative statistical method for co-localization in super-resolution microscope images	
10:30- 11:00 Coffee Break	
11:00-11:40 Room 1 (PS3) Plenary Session Chair: Georgios Atsalakis Speaker: Sally McClean <i>Ulster University, School of Computing, Northern Ireland, UK,</i> Title: Explanatory distributions for process durations	
11:40-13:30 SCS7 Special and Contributed Sessions	
Room 1	Room 2
SPECIAL SESSION: of ECANET Institute of HMU Research Centre on “Economic Analysis, Entrepreneurship and Tourism”, Chair: Christos Floros	Probability and Statistics I Chair: L. Camilleri
Ourania Kitsou Big Data Analytics and Human Capital as Joint Information-Processing Capabilities: A Theory-Building Framework for Economic Performance under Uncertainty	Jeremy Farrugia, Mark Anthony Caruana The Inverse Shortest Path Problem for Earthquakes’ Motion
Smaragda Markaki and Costas Panagiotakis Distance Transform and AIC-based Model Selection for Tree Detection	Jana Kalická, Dominika Sónak Ballová, and Štefan Krištofič A Statistical Framework for Analyzing Electricity Consumption in Construction Projects
Papanikolaou Nikolaos, Papanikolaou Anastasios, Pantos Themistoclis, Vasileiou Evangelos Conflict-Related Attention and Market Dynamics: GARCH and Granger Evidence from Israel case	Liberato Camilleri, Derya Karagoz and Mireille Fenech Using the robust Cox regression model to analyze student dropouts in tertiary education

Fotis Papatheofanous and Christos Floros Integrating Multi-Criteria Decision Analysis into FX Forecasting: A Conceptual Framework	James Freeman Inference for Poisson Change-point Analysis
Manos Mamatzakis Bayesian Sigma-Mu: A probabilistic framework for portfolio selection with weight uncertainty	Garcia, Jesus E, Gonzalez-Lopez, Veronica Nonparametric Testing of Copula Equality via Young Diagram Shapes
	Akrivi Kallergi and George Matalliotakis Evaluation of patient satisfaction with family doctor services in primary care health centers in provincial areas of the prefecture of Heraklion, Crete
13:30-14:30 Lunch	
14:30-15:30 SCS8 Special and Contributed Sessions	
Room 1	Room 2
Stochastic & Data Analysis Chair: Christos Floros	Health and Mortality II Chair: Konstantinos A. Tasias
Vishwambhar Pathak Quantum Circuit based Workflow for Multivariate Connectivity Estimation and Classification	Konstantina Tsiota and Konstantinos A. Tasias A unified model for SPC and maintenance in high investigation cost processes with multiple quality disruption
Wojciech Niemiro Directed information in graphical models of causality	George Matalliotakis, Christos Skiadas Application of the First Exit Time Model to Mortality Dynamics in Central European Countries
Ilias Velaoras, George Matalliotakis Primary Health Care during the period of Covid - 19 pandemic. The case management and the effect of the pandemic on the cost and the quality of services rendered at Health Care Centers of Fthiotida Prefecture	Derya Karagoz and Ugur Karabey Gaida Pettere and Ilze Zarina-Cirule Improved Insurer's Capital Efficiency of non-life underwriting risk using copula approach and hypothesis tests
	Jelena Jocković and Bojana Todić Modeling the spread of several rumors using competing Markov chains
20:00 - 24:00	

Farewell Dinner
Cretan food, music and dances

End of the 3rd Day



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9:30 – 10:00

Registration

10:00-11:30

SCS10

Special and Contributed Sessions

[Room 1](#)

Special Session I

Chair: G. L. Thanasas

Georgios Antonopoulos, Alexia Gazeta, Maria Rigou, Georgios L. Thanasas
Visual Attention and Cognitive Effort in Financial Statement Analysis: Insights from an Experimental Study

Georgios Kampiotis, Georgios L. Thanasas, Georgia Kontogeorga
Big Data Analytics for Digital Accounting: Bankruptcy Prediction Models for Financial Risk Management

Georgia Thanasa, Ioanna Giannoukou, Christos Klavdianos
Design and Evaluation of a Strategic Digital Decision-Support Application for Smart Hospitals

Spyridon D. Lampropoulos, Georgios L. Thanasas, Sotiris Kotsiantis, Nicos Sykianakis

[Room 2](#)

Probability and Statistics II

Chair: J. Dimoticalis

García JE and González-López VA
Estimation of Partition Markov Models for Multiple Processes via the Efficient Determination Criterion

Angeliki Kazani and Apostolos Linardis
Exploring Multidimensional Digital Burden: A Data-Driven Analysis of Functional, Economic and Psychosocial Dimensions

Anna Kouroukli and Konstadinos Politis
Nonparametric Estimation for Compound Renewal Processes in Weighted Cadlag Spaces

Derya Karagoz and Ugur Karabey

Quantifying the Impact of Sustainability on ROE: Insights from Non-Linear & Quadratic Regression Models	Robust Estimation of Value-at-Risk under Weibull Loss Distributions: A Simulation and Empirical Study
Leonidas Theodorakopoulos, Christos Klavdianos, Alexandra Theodoropoulou. Large-Scale Customer Conversion Prediction in Digital Marketing Using PySpark and Distributed Machine Learning	
Ioanna Kalliampakou, C. Klavdianos, H. Antonopoulou Predicting Sustainable Tourism Choices Using AI-Driven Marketing Signals: A Machine Learning Approach	
11:30 - 12:00 Coffee Break	
12:00-13:30 SCS11 Special and Contributed Sessions	
Room 1	Room 2
Stochastic II Chair: G. L. Thanasas	Health Statistics & Data Analysis Chair: Jang Schiltz
Georgios Psarrakos Mean Value Theorems for Random Variables with applications to Probability Model	Aggeliki Yfanti, Anastasia Charalampi and Catherine Michalopoulou Investigating the performance of an overall index of political trust to representative institutions cross-nationally
G. Stamatopoulou, M. Symeonaki, and D. Parsanoglou Gender inequality across European labour markets: a comparative analysis with the use of EU-LFS	Jang Schiltz, Emilie Takla, Maurice Dumrose, Daniel Engler, Christian Klein, and Ramon Hörler, Othar Kordsachia, Sabrina Urban Measuring the literacy in sustainable finance of European students by means of a computerized adaptive assessment too
Nasrollah Saebi Asymptotic Relation between the Bayesian Predictive Distributions for Random Sampling	Vivien Czofa, Tibor Szendrei, Katalin Varga Macroprudential Policy and Downside Risk: Regime-Dependent Effects of Capital Regulation
	George Matalliotakis, Christos Skiadas

	Comparative Study of Stochastic Survival Modeling: The Stochastic Quadratic Model vs. the Stochastic First Exit Time Model and the Deterministic Weibull model applied to Danish raw survival data
13:30- 14:30 LUNCH	
14:30-15:30 <u>Room 1</u> Closing Ceremony	
End of the Conference	

Webex Link for ROOM 1

Meeting link:

<https://isast.webex.com/isast/j.php?MTID=m9540d7cb355728e104b97fcb69c13988>

Meeting number: 2744 665 1970

Password: SMTDA2026

Host key:

264382

Agenda:

SMTDA 2026 Conference and Demographics Workshop - Stochastic
Modeling Techniques and Data Analysis International Conference

Join by video system

Dial 27446651970@isast.webex.com

You can also dial 62.109.219.4 and enter your meeting number.

Join by phone

+44-20-7660-8149 United Kingdom Toll

Access code: 2744 665 1970

Host PIN: 6913

[Global call-in numbers](#)

Webex Link for ROOM 2

Meeting link:

<https://isast.webex.com/isast/j.php?MTID=m2cdd2f04a6c0a4298fd28483701f5105>

Meeting number: 2744 572 2261

Password: SMTDA2026

Host key:

896453

Agenda:

SMTDA 2026 Conference and Demographics Workshop - Stochastic
Modeling Techniques and Data Analysis International Conference

Join by video system

Dial 27445722261@isast.webex.com

You can also dial 62.109.219.4 and enter your meeting number.

Join by phone

+44-20-7660-8149 United Kingdom Toll

Access code: 2744 572 2261

Host PIN: 6913

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