





**COST Action HiTEc**  
Text, functional and other  
high-dimensional data in econometrics:  
New models, methods, applications



## Access to the venue

- **Location:** [CUT Tassos Papadopoulos Building](#), Cyprus University of Technology, Limassol, Cyprus.
  - The HiTEc sessions will take place in Amphitheater 1 (Floor 0), Amphitheater 2 (Floor 0) and Lecture Room 1 (Floor 1).
  - The keynote talks will take place Amphitheater 1 (Floor 0) and Amphitheater 2 (Floor 0).
  - The Spring Course will take place in Lecture Room 2 (Floor 1).
  - The coffee breaks will take place at the Foyer of the Ground Floor.
  - The registration desk will be at the Foyer of the Ground Floor.

## Hotel suggestions

- [Poseidonia Beach Hotel](#)

## Meals suggestions

Meals are included in the registration for HiTEc members and grantees and are optional for the rest of the participants.

- Lunches will take place at [Στου Φανή](#).
- The Welcome Reception will take place on Saturday 23<sup>rd</sup> of March at 18:30 at the Foyer of the Ground Floor.
- The Social dinner will take place on Sunday 24<sup>th</sup> of March at 19:30 at [Kipriakon](#), Limassol Marina.



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## Hybrid Sessions – Zoom Links

**Amphitheater 1:** <https://us06web.zoom.us/j/86751178092>

**Amphitheater 2:** <https://us06web.zoom.us/j/89497332341>

**Lecture Room 1:** <https://us06web.zoom.us/j/81178529222>

**Lecture Room 2:** <https://us06web.zoom.us/j/84030421982>

### Zoom passwords

**Password for all rooms:** 01042023

## HiTEc Spring Course

- The Spring Course will take place in the **Lecture Room 2, Floor 1**.
- You can find more information on the different modules [here](#).

## Schedule

### **Saturday, 23 March 2024**

08:30 - 10:00 – Session 1.1 - Module I

10:00 - 10:30 – Coffee break

10:30 - 12:30 – Session 1.2 - Module I

12:30 - 14:00 – Lunch break

14:00 - 15:30 – Session 1.3 - Module I

15:30 - 16:00 – Coffee break

16:00 - 18:30 – Session 1.4 - Module I



## **Sunday, 24 March 2024**

- 08:30 - 10:00 – Session 2.1 - Module II
- 10:00 - 10:30 – Coffee break
- 10:30 - 12:30 – Session 2.2 - Module II
- 12:30 - 14:00 – Lunch break
- 14:00 - 15:30 – Session 2.3 - Module II
- 15:30 - 16:00 – Coffee break
- 16:00 - 18:30 – Session 2.4 - Module II

## **Monday, 25 March 2024**

- 08:30 - 10:00 – Session 3.1 - Module III
- 10:00 - 10:30 – Coffee break
- 10:30 - 13:00 – Session 3.2 - Module III
- 13:00 - 14:30 – Lunch break
- 14:30 - 17:00 – Session 3.3 - Module III

# **HiTEc Working Groups Meetings**

## **Schedule**

### **Saturday 23.03.2024**

- 09:00 - 09:50 – Keynote talk 1: Combinatorial algorithms for variable selection in regression
- 10:20 - 12:25 – Session HI028: Electricity markets and applied machine learning
- 14:00 - 15:40 – Session HO017: Advances on high-dimensional and complex data
  - Session HO022: Machine learning and text-processing for high-dimensional data
- 16:10 - 18:15 – Session HI004: Statistical modelling and causal inference for text data
  - Session HO020: Recent developments in models for data processing
  - Session HO021: Theoretical and computational aspects of complex data models



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## **Sunday 24.03.2024**

- 09:00 - 10:15 – Session HO013: Advances in statistical tools for economics and finance
  - Session HO019: Statistical inference
  - Session HP001: Poster Session (virtual)
- 10:45 - 12:25 – Session HI025: Text mining
  - Session HO023: High dimensional statistics
  - Session HO024: Statistical models and methods for education evaluation
- 14:00 - 15:40 – Session HO012: Low-dimensional structures in high-dimensional data
  - Session HO014: Complex data analysis: Model specification
- 16:10 - 17:25 – Session HI026: Financial econometrics
  - Session HO016: Risk analysis and machine learning applications
- 17:35 – 18:25 – Keynote talk 2: Fuzzy clustering: From numerical to complex data



## Detailed Scientific Programme

Please see the the Detailed Scientific Programme and BoA [here](#).

### KEYNOTE TALKS (UTC+2)

**Keynote talk 1 Saturday 23.3.2024 09:00 - 09:50 Room: Amphitheater 1**  
**Combinatorial algorithms for variable selection in regression**  
Speaker: C. Gatu Co-authors: M. Hofmann,  
M. Demosthenous, E. Kontoghiorghes Chair: Erricos  
Kontoghiorghes

**Keynote talk 2 Sunday 24.3.2024 17:35 - 18:25 Room: Amphitheater 1**  
**Fuzzy clustering: From numerical to complex data**  
Speaker: M.B. Ferraro Chair: Ana Colubi

### PARALLEL SESSIONS (UTC+2)

**Saturday 23.03.2024**

**Parallel session B: HiTECCoDES2024 Saturday 23.3.2024 10:20 - 12:25**  
**Session HI028 Room: Amphitheater 2**  
**Electricity markets and applied machine learning** Saturday 23.3.2024 10:20 - 12:25  
Chair: Christina Erlwein-Sayer Organizer: HiTeC COST Action

**HI0163: A. Petukhina**, C. Erlwein-Sayer, M. Phan, M. Basangova, A. Conda, V. Bolovaneanu, A. Melzer

[Day-ahead probability forecasting for redispatch 2.0 measures](#)

**HI0172: C. Erlwein-Sayer**, T. Sayer, F. Schirra, S. Grimm

[Regime shifts in LSTM models for spot prices](#)

**HC0178: E. Paschalidou**, N. Thomaidis

[Understanding the drivers of electricity prices in the day-ahead market: A factor analysis approach](#)

**HI0162: D. Scacciatelli**, E. Cangiano, F. De Napoli

[A hybrid machine learning framework for tax revenues monitoring](#)

**HC0171: W. Orzeszko**, P. Fiszeder, G. Dudek, P. Kobus

[Application of machine learning methods to forecast cryptocurrencies volatility](#)



**Parallel session C: HiTECCoDES2024**

**Saturday 23.3.2024 14:00 - 15:40**

**Session HO017**

**Room: Amphitheater 1**

**Advances on high-dimensional and complex data**

**Saturday 23.3.2024 14:00 - 15:40**

Chair: Eugen Pircalabelu

Organizer: Eugen Pircalabelu

**HO0177: J. Zhou**

[Asymptotic normality and bias correction in high-dimensional statistical inference with regularized estimators](#)

**HO0188: A. Munteanu**, S. Omlor

[Turnstile  \$\ell\_1\$  leverage score sampling with applications](#)

**HO0190: A. Artemiou**

[\(Almost\) real time outlier detection via principal least squares support vector machines](#)

**HC0205: M. Sauvenier**, S. Van Bellegem

[Direction identification and minimax estimation by generalized eigenvalue problem in high dimensional sparse regression](#)

**Session HO022**

**Room: Amphitheater 2**

**Machine learning and text-processing for high-dimensional data**

**Saturday 23.3.2024 14:00 - 15:40**

Chair: Miroslav Stefanik

Organizer: Miroslav Stefanik

**HO0164: Z. Kostalova**, M. Stefanik, S. Lyocsa

[Forecasting online job vacancy attractiveness](#)

**HO0181: T. Plihal**, O. Deev

[Graph convolutional networks for bankruptcy prediction in P2P Bondora market](#)

**HO0206: R. Pater**, M. Beresewicz, H. Cherniaiev

[Estimating the number of entities with vacancies using administrative and online data](#)

**HO0182: S. Lyocsa**

[Forecasting financial cycle: Machine learning approach](#)



**Parallel session D: HiTECCoDES2024**

**Saturday 23.3.2024 16:10 - 18:15**

**Session HI004**

**Room: Amphitheater 1**

**Statistical modelling and causal inference for  
text data**

Saturday 23.3.2024 16:10 - 18:15

Chair: Andrej Srakar

Organizer: HiTEc COST Action,  
Andrej Srakar

**HI0160: K. Mylona**

[Optimal experimental designs for the industry: Case studies](#)

**HC0183: L. Piancastelli, N. Friel**

[Clustered Mallows model](#)

**HO0211: A. Srakar**

[Spectral CLTs with long memory for causal inference in augmented large language models](#)

**HO0216: R. Mozer, L. Miratrix**

[Matching with text data: An experimental evaluation of methods for matching documents and of measuring match quality](#)

**Session HO020**

**Room: Amphitheater 2**

**Recent developments in models for data  
processing**

Saturday 23.3.2024 16:10 - 18:15

Chair: Marija Cuparic

Organizer: Marija Cuparic

**HO0167: S. Lotspeich**

[Extrapolation before imputation reduces bias when imputing heavily censored covariates](#)

**HO0208: B. Milosevic, M. Cuparic, B. Ebner**

[Testing independence for spherical and hyperspherical data: Kernel-based approach](#)

**HO0218: G. Grobler, S. Meintanis, E. Taufer, D. Belomestny**

[Estimation and goodness-of-fit testing of Levy processes: The variance gamma process](#)

**HO0212: M. Cuparic, D. Aleksic, B. Milosevic**

[Testing independence in the presence of data missing completely at random](#)





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## Session HO021

Room: Lecture room 1

### Theoretical and computational aspects of complex data models

Saturday 23.3.2024 16:10 - 18:15

Chair: Matus Maciak

Organizer: Matus Maciak

**HO0220: M. Matouskova**, J. Picek, P. Prucha

[Financial time series modelling using artificial intelligence](#)

**HO0210: S. Gavioli-Akilagun**, P. Fryzlewicz

[Fast and optimal inference for change points in piecewise polynomials via differencing](#)

**HO0173: M. Hrba**, M. Maciak, B. Pestova, M. Pesta

[Bootstrapping not independent and not identically distributed data](#)

**HO0176: K. Hron**, N. Stefelova, J. de Sousa, J. Palarea-Albaladejo, D. Dobesova, A. Kvasnicka, D. Friedecky

[Selective pivot log-ratio coordinates for classification in high-dimensional compositional data](#)

**HO0179: M. Maciak**

[Online instability detection in a nonlinear expectile model: Theoretical and computational aspects](#)

## Sunday 24.03.2024

### Parallel session F: HiTECCoDES2024

Sunday 24.3.2024 09:00 - 10:15

#### Session HO013

Room: Amphitheater 2

#### Advances in statistical tools for economics and finance

Sunday 24.3.2024 09:00 - 10:15

Chair: Alessandra Amendola

Organizer: Vincenzo Candila,  
Alessandra Amendola

**HO0184: A. Bitetto**, P. Cerchiello

[Initial coin offerings: Can ESG mitigate underpricing?](#)

**HO0187: A. Grimaldi**, A. Amendola, W. Distaso

[Political cohesion and economic growth: The case of GDP for Italy](#)

**HO0191: V. Candila**, L. Aldieri, A. Amendola

[Examining the influence of ESG rates on the composition of the global minimum variance portfolio](#)



<b>Session H0019</b>	<b>Room: Amphitheater 1</b>
<b>Statistical inference</b>	Sunday 24.3.2024 09:00 - 10:15
Chair: Andreas Artemiou	Organizer: Andreas Artemiou
<b>H00156: A. Karagrigoriou</b> , I. Mavrogiannis, I. Vonta, G. Papatirou <a href="#">Statistical inference for extreme value analysis</a>	
<b>H00158: A. Makrides</b> , A. Karagrigoriou, I. Vonta, T. Dimitrakopoulou <a href="#">Statistical analysis in the presence of several competing risks</a>	
<b>H00169: K. Ntotsis</b> , A. Artemiou, A. Karagrigoriou <a href="#">Addressing complex feature relationships: Harnessing the kernel association coefficient for nonlinear associations</a>	

<b>Session HP001</b>	<b>Room: Lecture room 1</b>
<b>Poster Session (virtual)</b>	Sunday 24.3.2024 09:00 - 10:15
Chair: Marios Demosthenous	Organizer: HiTEC COST Action
<b>HP0196: A. Jarynowski</b> , V. Belik <a href="#">Causal models and phylo-spatio-temporal, multidimensional epidemiology: Dark figure estimation</a>	
<b>HP0199: A. Kulli</b> <a href="#">Analyzing the volatility of daily time series FOREX rates by using GARCH models: A case study from Albania</a>	

<b>Parallel session G: HiTECCoDES2024</b>	<b>Sunday 24.3.2024 10:45 - 12:25</b>
<b>Session HI025</b>	<b>Room: Amphitheater 2</b>
<b>Text mining</b>	Sunday 24.3.2024 10:45 - 12:25
Chair: Cristian Gatu	Organizer: HiTEC COST Action
<b>HI0165: V. Naboka-Krell</b> , V. Bystrov, A. Staszewska-Bystrova, P. Winker <a href="#">Analyzing the impact of removing infrequent words on topic quality in LDA models</a>	
<b>HI0193: S. Hadjiantoni</b> , B. Lausen, H. Yang, R. Petraityte, Y. Long <a href="#">Automatic detection of industry sectors in legal articles using machine learning approaches</a>	
<b>HI0195: L. Kontoghiorghes</b> , A. Colubi <a href="#">Data augmentation for testing subject alignment with a COST Action</a>	
<b>HI0150: V. Batagelj</b> <a href="#">Weighted degrees and truncated derived networks</a>	



### Session H0023

#### High dimensional statistics

Chair: Andreas Artemiou

Room: Amphitheater 1

Sunday 24.3.2024 10:45 - 12:25

Organizer: Andreas Artemiou

**H00168: B. Jones**

[Generalized sufficient dimension reduction in the presence of categorical predictors](#)

**H00186: E. Pircalabelu**

[Distributed estimation and inference in sparse conditional Gaussian graphical models under an unbalanced setting](#)

**H00189: L. Heinonen, J. Virta**

[A method for sparse and robust independent component analysis](#)

**HC0223: A. Alzahrani**

[Envelope-based support vector machine classifier](#)

### Session H0024

#### Statistical models and methods for education evaluation

Chair: Marialuisa Restaino

Room: Lecture room 1

Sunday 24.3.2024 10:45 - 12:25

Organizer: Marialuisa Restaino

**H00180: C. Usala, M. Porcu, I. Sulis**

[The role of schools in shaping university careers: Evidence from Italy](#)

**H00192: M. Zenga, A. Marshall**

[What we learn from PISA 2022?](#)

**H00194: L. Scaffidi Domianello, S. Bacci, B. Bertaccini**

[Clustering of Italian higher education institutions based on a destination: Specific approach](#)

**H00201: M. Restaino, M. Niglio, M. La Rocca, M.P. Vitale**

[Educational data mining for predicting students' success](#)

### Parallel session H: HiTECCoDES2024

Sunday 24.3.2024

14:00 - 15:40

#### Session H0012

#### Low-dimensional structures in high-dimensional data

Chair: Dan Vilenchik

Room: Amphitheater 1

Sunday 24.3.2024 14:00 - 15:40

Organizer: Dan Vilenchik

**H00207: H. Rika, D. Vilenchik, D. Ben-Michael**

[The DNA of sarcasm and its implication in cross-domain tasks](#)

**HC0203: D. Vilenchik**

[Towards reverse algorithmic engineering of neural networks](#)

**HC0213: S. Cohen**

[Drug repurposing using link prediction on knowledge graphs](#)

**H00175: D.P. Suda, M. Attard, F. Sammut, D. Vilenchik**

[Addressing high-dimensionality for dynamic principal components analysis in the frequency domain](#)

**H00224: I. Cohen**

[A general framework for learning-augmented online allocation](#)



## Session HO014

### Complex data analysis: Model specification

Chair: Bojana Milosevic

Room: Amphitheater 2

Sunday 24.3.2024 14:00 - 15:40

Organizer: Bojana Milosevic

**HO0157: S. Loizidou**, A. Anastasiou, C. Ley

[Optimal testing for symmetry on the torus](#)

**HO0174: A. Fischer**, R. Gaunt, Y. Swan

[New estimators for directional data](#)

**HO0202: G. Bernard**

[Multivariate sign tests for sphericity: Dealing with skewness and dependent observations](#)

**HO0217: J. Visagie**, F. Lombard, C. Pretorius

[On estimating the mode of an angular distribution](#)

## Parallel session I: HiTECCoDES2024

Sunday 24.3.2024 16:10 - 17:25

### Session HI026

#### Financial econometrics

Chair: Leopold Soegner

Room: Amphitheater 1

Sunday 24.3.2024 16:10 - 17:25

Organizer: HiTEC COST Action

**HI0159: L. Soegner**, M. Wagner

[Open-end monitoring of structural breaks in the cointegration VAR](#)

**HI0166: T. Tsenova**

[Extracting insights from large and complex datasets: Examples of dimensionality reduction by applying economic theory](#)

**HC0170: W. Barreto-Souza**, F. Mendes, S. Ndreca

[Gamma-driven Markov processes with application to realized volatility](#)

### Session HO016

#### Risk analysis and machine learning applications

Chair: Robertas Alzbutas

Room: Amphitheater 2

Sunday 24.3.2024 16:10 - 17:25

Organizer: Robertas Alzbutas

**HO0198: I. Dunduliene**, R. Alzbutas

[Machine learning and uncertainty analysis for remaining value estimation](#)

**HO0197: M. Lukauskas**

[Data clustering methods and large language models applications](#)

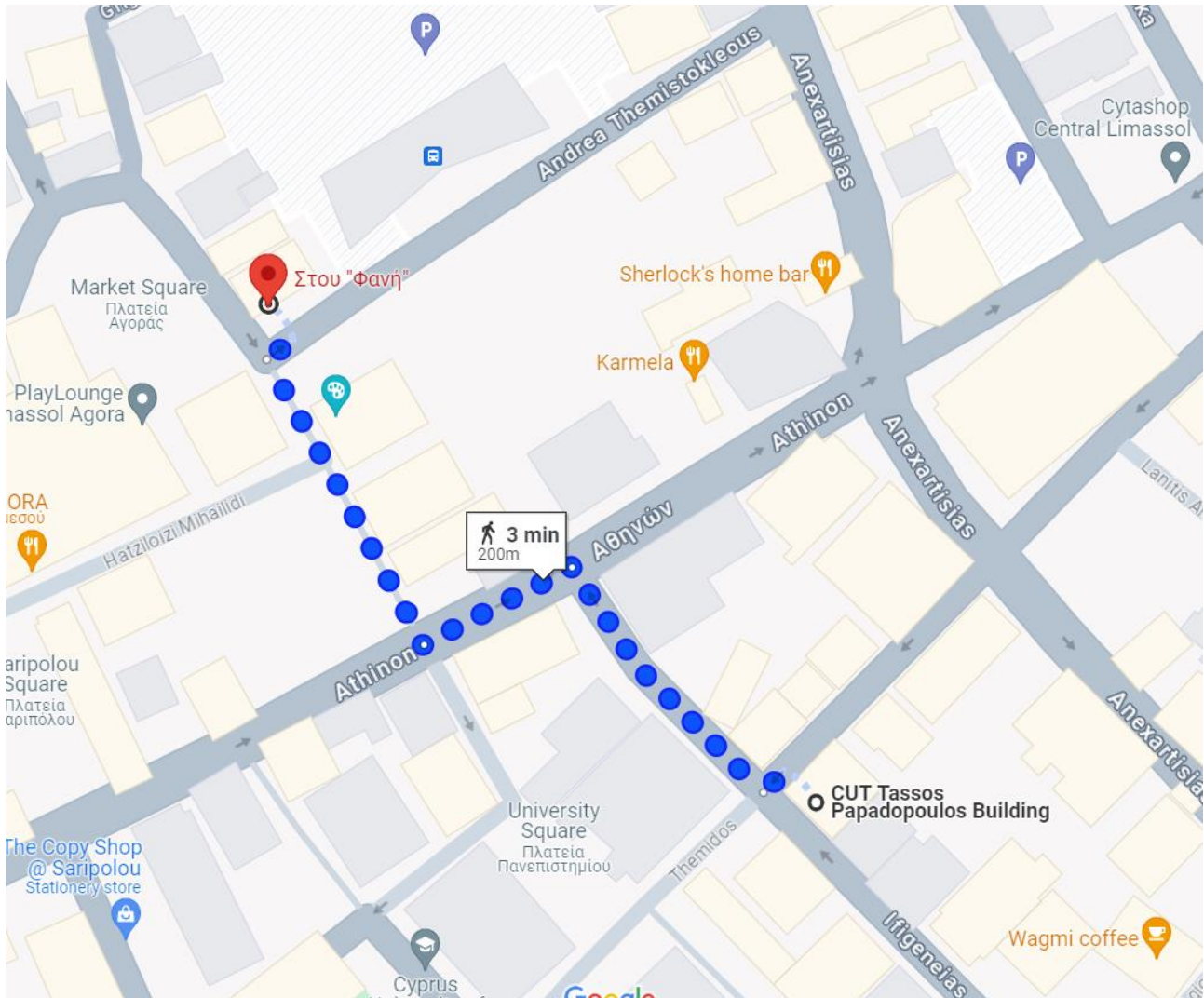
**HO0200: M. Kavaliauskas**

[Delayed payment modelling using machine learning methods](#)



## MAPS

### Lunch – Στου Φανή







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## Dinner – Kipriakon

