

# IFCS 2022

## Organized Sessions by AMyC Group members

Wednesday 20 July, 12h

### Thematic Track: Robust Methods 2

Chair: *Luis Angel Garcia-Escudero*

How to Mitigate the Effect of Outliers on Balancing Technique. ***Rasool Taban, Maria do Rosario Oliveira, and Claudia Nunes Philippart.***

Outlier Detection in Functional Data. ***Martial Amovin-Assagba, Irene Gannaz, and Julien Jacques.***

Robustified Elastic Net Estimator for Multinomial Regression. ***Fatma Sevinc Kurnaz and Peter Filzmoser.***

Wednesday 20 July, 16.30h

### Thematic Track: Compositional Data Analysis 1

Chair: *Glòria Mateu-Figueras*

A New Regression Model for the Analysis of Microbiome Data. ***Roberto Ascari and Sonia Migliorati***

The Death Process in Italy Before and During the Covid- 19 Pandemic: a Functional Compositional Approach. ***Riccardo Scimone, Alessandra Menafoglio, Laura Sangalli, and Piercesare Secchi***

Sampling Design for Uncovering Natural Laws in Compositional Data. ***Lan Liang, Gloria Mateu-Figueras, and Jan Graffelman***

Thursday 21 July, 9h

### Thematic Track: Fifty Years of Biplots 2

Chair: *Jose Luis Vicente-Villardón*

Some Biplot Alternatives. ***Patrick Groenen***

Biplots in Dimension Reduction and Clustering. ***Alfonso Iodice D'Enza, Angelos Markos, and Michel van de Velden***

Biplots: A Sophisticated Multivariate Approach or a User-Friendly Technique? ***Manuel Rui Alves***

Thursday 21 July, 9h

**Thematic Track: Compositional Data Analysis 2**

Chair: *Jan Graffelman*

PLS-based Principal Balances for Regression and Classification with

High-dimensional Compositional Data. ***Viktorie Nesrstova, Ines Wilms, Karel Hron, Josep Antonio Martin-Fernandez, Peter Filzmoser, and Javier Palarea-Albaladejo***

Clustering Count Data Using Compositional Methods. ***Marc Comas-Cufi, Josep A. Martin-Fernandez, Gloria Mateu-Figueras, and Javier Palarea-Albaladejo***

Friday 22 July, 12h

**Thematic Track: Functional Data Analysis 5**

Chair: *Pedro Delicado*

Generalized Spatio-temporal Regression with PDE Penalization. ***Eleonora Arnone, Elia Cunial, and Laura M. Sangalli***

Impact Point Selection in Semiparametric Bifunctional Models. ***Silvia Novo, German Aneiros, and Philippe Vieu***

Latent Function-on-Scalar Regression Models for Observed Sequences of Correlated Binary Data: a Restricted Likelihood Approach. ***Fatemeh Asgari and Valeria Vitelli***

Friday 22 July, 12h

**Thematic Track: Robust Methods 3**

Chair: *Agustín Mayo Íscar*

Exact Computation of the Angular Halfspace Depth. ***Stanislav Nagy and Rainer Dyckerhoff***

Reconstruction of Atomic Measure Based on Its Simplicial Depth. ***Petra Laketa and Stanislav Nagy***

Optimized Centroids as Robust Tools for Object Localization in Images. ***Jan Kalina and Patrik Janacek***

Friday 22 July, 16.30h

**Thematic Track: Robust Methods 4**

Chair: *Agustín Mayo Íscar*

Some Issues in Robust Clustering. ***Christian Hennig***

Robustness and Initialization Issues in Subspace Clustering. ***Luis Angel Garcia-Escudero and Agustin Mayo-Isacar***

A Likelihood Ratio Test for Choosing Input Parameters in Robust Model Based Clustering. ***Luis Angel Garcia-Escudero, Agustin Mayo-Isacar, Gianluca Morelli, and Marco Riani***

Assessing Common Principal Directions. ***David Rodriguez Vitores and Carlos Matran Bea***

## Participation of AMyC Group members in other organized sessions

Biplots for Categorical and Ordinal Data Based on Logistic Responses. **Jose Luis Vicente-Villardón**. (Session Thematic Track: Fifty Years of Biplots 1, Wednesday 20 July, 11:00h)

Fifty Years of Biplots: Some Remaining Enigmas and Challenges. **Jan Graffelman**. (Session Thematic Track: Fifty Years of Biplots 1, Wednesday 20 July, 11:00h)

Outlier Detection for BIG Functional Data. **Rosa E. Lillo, Oluwasegun T. Ojo, and Antonio Fernandez-Anta** (Session Thematic Track: Functional Data Analysis 1, Wednesday 20 July, 11:00h)

Consistency of Trimmed Estimators of Scatter Under the t-distribution. **Andrea Cerioli, Lucio Barabesi, Luis Angel Garcia-Escudero, and Agustin Mayo-Iscar**. (Session Thematic Track: Robust Methods 1, Wednesday 20 July 11h)

Old and New Constraints in Model Based Clustering. **Luis Angel Garcia Escudero, Agustin Mayo-Iscar, Gianluca Morelli, and Marco Riani** (Session Thematic Track: Model-based Clustering 2, Wednesday 20 July 12h)

A Criterion for Selecting the Number of Time Series Clusters. **Daniel Peña and Ruey Tsay** (Invited Session: Classification of Time Series, Wednesday 20 July 14.30h)

Clustering in FDA Mixing the Epigraph and the Hypograph Indexes with Machine Learning Algorithms. **Belen Pulido Bravo, Alba Maria Franco Pereira, and Rosa Elvira Lillo Rodriguez**. (Session Thematic Track: Functional Data Analysis, Wednesday 20 July 16.30h)

Monitoring Hyperparameter Choice for Robust Cluster Weighted Model. **Francesca Greselin, Andrea Cappelletto, Luis Angel Garcia Escudero, and Agustin Mayo-Iscar**. (Session Thematic Track: Model-based Clustering 3, Wednesday 20 July 16.30h)

Biplot Representation of Partial Least Squares Regression for Binary Responses. **Laura Vicente-Gonzalez and Jose Luis Vicente-Villardón** (Session Thematic Track: Fifty Years of Biplots 3, Friday 22 July 12h)