Summer School

Clustering and Classification

Rimini, May 22nd -26th 2017

Department of Statistical Sciences
Rimini Campus
University of Bologna

Scientific Committee:

Prof. Maurizio Vichi
 (University of Rome La Sapienza)

Prof. Cinzia Viroli
 (University of Bologna)

Prof. Paolo Giordani
 (University of Rome La Sapienza)

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 (University of Catania)

Prof. Angela Montanari
 (University of Bologna)

Prof. Roberto Rocci
 (University of Rome Tor Vergata)

Organizing Committee:

Prof. Cinzia Viroli
 (University of Bologna)

Dr. Laura Anderlucci
 (University of Bologna)

Dr. Mariagiulia Matteucci
 (University of Bologna)

Prof. Stefania Mignani
 (University of Bologna)

Important Information

Participation to the Summer school on Classification and Data Analysis is limited to **max** thirty (**30**) **participants**.

Registration Fee: **€250**.
Fee includes school attendance and tutorial participations.
For further information (lunches, accommodation, venue etc.) please visit the webpage:
https://events.unibo.it/CladagSchool

Registration Deadline: **April 30th 2017**

Applications must be submitted by filling the form at
https://events.unibo.it/cladag-school/registration/

Once received the application, further technical details will be provided in order to finalise the registration.

CLADAG
*CLAssification and Data Analysis Group
of the Italian Statistical Association*

SIS
Italian Statistical Association

1st International Summer School on Classification and Data Analysis

Rimini

May 22nd - 26th 2017

Department of Statistical Sciences
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Piazzetta Teatini, 10 – Rimini

Summer School – Edition 2017

The "Clustering and Classification" summer school – organised by the CLADAG (the classification group of the Italian Statistical Society) – is designed to introduce clustering and classification methods to advanced undergraduate students, PhD students and postdoctoral researchers that are interested in the topic.

The Summer School is structured in theoretical lessons, tutorials and invited talks on specific themes. Each day will consist on theoretical lectures in the morning, and interactive discussions, scientific seminars and tutorials in the afternoon.

Our lecturers are leading international experts in the field and it is a great opportunity to learn from their fundamental contributions:

Prof. Hans H. Bock
Institute of Statistics, RWTH Aachen University, D-52056 Aachen

Prof. Berthold Lausen
Department of Mathematical Sciences, University of Essex, Colchester, CO4 3SQ, UK

Main Topics

Supervised classification:
- Bayes Classifier
- Linear Discriminant Analysis (LDA)
- Logistic Regression
- k-Nearest-Neighbours Classification
- Resampling Methods and Estimation of Misclassification Error and Area Under the Curve (AUC)
- Tree-based Classifiers
- Feature Selection Methods
- Ensemble Methods: Bagging, Random Forest and Boosting
- Selected Ensembles: Node Harvest and Optimal Trees Ensembles
- Random projection ensemble classification
- Neural Networks and Deep Learning

Clustering/Non-supervised classification:
- Partitioning, fuzzy, and hierarchical clustering approaches
- Similarity and dissimilarity measures
- Basic and empirical methods
- Model-based clustering: Fixed partition model, mixture model, maximum likelihood approach
- k-means algorithm, EM-algorithm and extensions
- Evaluation and validation models, Pareto solutions
- Two-way/multi-way classification
- Clustering with dimension reduction, factorial cluster analysis
- Special cases: contingency tables, time series, document clustering, symbolic data

Host

Department of Statistical Sciences

University of Bologna – Rimini Campus

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Contact us:

For any information please contact us at the email address:

stat.cladagschool@unibo.it

or visit the page:

https://events.unibo.it/CladagSchool