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Italiadomani PIANO NAZIONALE DI RIPRESA E RESILIENZA
UNIVERSITÀ DI SIENA 1240

International Workshop on "Statistical inference for assessing and monitoring natural resources and biodiversity"

November 8-9, 2022

Room F. Romani, Department of Economics and Statistics

P.za S. Francesco 8, Siena, Italy

PROGRAM

November 8, 2022

9.30 Opening

M Marcheselli, Scientific Committee

R Di Pietra, Canchellor University of Siena

S Bimonte, Head Department of Economics and Statistics

10.00 Invited talk

Chair: F Frati, University of Siena

RB O'Hara, Norwegian University of Science and Technology, Trondheim, Norway

Developing the One True Model(s) for the Distributions of Species

11.00 Coffee break

11.30 Inferential strategies for biodiversity analysis

Chair: A Chiarucci, University of Bologna, Italy

M Cervellini, University of Camerino, Italy, L Fattorini, S Franceschi, University of Siena, Italy, A Chiarucci, M Di Musciano, P Zannini, University of Bologna, Italy

A sampling strategy for assessing habitat coverage at a broad spatial scale

F Baccini, University of Pisa, Italy

Integration of similarity networks for combining multiple relations between biological species

S Fattorini, University of L'Aquila, Italy

Use of the species-area relationship for biodiversity hotspot identification: statistics and biology

R Cazzolla Gatti, University of Bologna, Italy

The new universal index of absolute and effective biodiversity (AED)

13.00 Lunch

14.00 Invited talk

Chair: M Apollonio, University of Sassari, Italy

C Rondinini, Sapienza University of Rome, Italy

Past, present, and projected extinction risk of the world's mammals

15.00 Inferential strategies for animal populations

Chair: S Lovari, University of Siena

F Ferretti, A Rossi, F Bazzoni, C Riggio, R Oliveira, I Leggiero, University of Siena, Italy, B Esattore, Czech University of Life Sciences, Prague, Czech Republic

Fallow deer and wolves: multiple antipredator responses to a recolonising apex predator

R Ambrosini, University of Milano, Italy, N Fattorini, University of Siena, Italy

Quantifying migratory connectivity: current methods and future perspectives **N Fattorini**, L Lazzeri, F Ferretti, University of Siena, Italy

Camera trap-derived detection rates as relative abundance indices: an empirical test for wild ungulates

V La Morgia, B Franzetti, ISPRA, Rome, Italy, F Cagnacci, Fondazione Edmund Mach, S Michele all'Adige, Italy, S Focardi, CNR, Firenze, Italy

Techniques and methods for wildlife monitoring: towards a practical synthesis

16.30 Coffee break

November 9, 2022

9.00 Invited talk

Chair: L Barabesi, University of Siena, Italy

A Fassò, University of Bergamo, Italy

Environmental data production and uncertainty: the statistician's role

10.00 Coffee break

10.30 New methodologies for inference on natural and environmental phenomena

Chair: M Marcheselli, University of Siena

C Calculli , University of Bari, Italy, S Arima, University of Salento, Italy, A Pollice, University of Bari, Italy

A Poisson model for over dispersed spatial counts with misreporting

L Ippoliti, University of Chieti-Pescara, Italy, N Golini, R Ignaccolo, University of Turin, Italy, N Pronello, University of Chieti-Pescara, Italy

Functional zoning of biodiversity profiles

T Di Battista, SA Gattone, University of Chieti-Pescara, Italy, F Fortuna, University of Roma Tre, Rome, Italy, F Maturo, University of Campania, Caserta, Italy

Functional design-based estimation of diversity profiles

RM Di Biase, F Mecatti, University of Milano-Bicocca, Italy

Sequential adaptive strategies for sampling rare, clustered populations

J Rodeschini, University of Bergamo, Italy, P Maranzano, University of Milano-Bicocca, Italy, P Otto, Leibnitz University, Hannover, Germany

Comparison of variable selection method in space-time setting : an application to the analysis on PM2.5 concentration in Lombardy (Northern Italy)

A Evangelista, A Sarra, T Di Battista, University of Chieti-Pescara, Italy, CJ Acal, AM Aguilera, University of Granada, Spain, S Palermi, ARTA, Pescara, Italy

The Group Lasso selection method in FDA setting: an optimal detection of PM 10 predictors

12.30 Lunch

14.00 Invited talk

Chair: P Corona, CREA, Research Centre for Forestry and Wood, Arezzo, Italy

S Saarela, Norwegian University of Life Sciences, Ås, Norway

Statistical methods in connection with NASA's GEDI mission

15.00 Inferential strategies in forest studies

Chair: S Saarela, Norwegian University of Life Sciences, Ås, Norway

A Marcelli, University of Tuscia, Viterbo, Italy, RM Di Biase, University of Milano Bicocca, Italy, P Corona, CREA, Research Centre for Forestry and Wood, Arezzo, Italy, SV Stehman, SUNY College of Environmental Science and Forestry, Syracuse, NY, USA, L Fattorini, University of Siena, Italy

Design-based mapping of land use/land cover classes with bootstrap estimation of precision by nearest-neighbour interpolation

A Tomao, D Giuliarelli, E Masini, L Portoghesi, M Agrimi, University of Tuscia, Viterbo, Italy, P Corona, CREA, Research Centre for Forestry and Wood, Arezzo, Italy, L Fattorini, University of Siena, Italy

The ecosystem disservices of trees on sidewalks. A study based on the urban forest inventory of the Municipality of Viterbo, Italy

P Corona. CREA, Research Centre for Forestry and Wood, Arezzo, Italy, **S Franceschi**, C Pisani, University of Siena, Italy

A design-based critical look of k-NN spatial interpolation

G Chirici, University of Florence, Italy

The evolution of National Forest Inventories in the era of big data and artificial intelligence

16.30 Closing at coffee break