

StatMod2020

Statistical Modeling with Applications

November 6-7, 2020

"Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics, Bucharest, Romania

PROGRAM

ATTENTION: the times in this program are as per Romanian time zone!

Friday, November 6, 2020

10:00-10:30 Opening Remarks and Welcome

SESSION "STATISTICAL METHODS" (1)

Chairman: Valentin PATILEA (ENSAI Rennes & CREST, France)

10:30-10:50

Cristian PREDĂ (Univ. of Lille, France & "Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics, Romania)

"One dimensional discrete scan statistics for dependent models and some related problems"

joint work with Alexandru AMĂRĂOAREI (Univ. of Bucharest, Romania)

10:50-11:10

Steven GOLOVKINE (ENSAI Rennes & CREST, France)

"Multivariate functional data clustering using unsupervised binary tree"

joint work with Nicolas KLUTCHNIKOFF (IRMAR, Univ. Rennes 2, France) and Valentin PATILEA (ENSAI Rennes & CREST, France)

11:10-11:30

Raluca VERNIC (Ovidius Univ. of Constanta & "Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics, Romania)

"A neural network approach to prediction from some composite regression models"
joint work with Elena PELICAN (Ovidius Univ. of Constanta, Romania)

11:30-11:50

Yousri SLAOUI (LMA, Univ. of Poitiers-Futuroscope, France)

"Functional data prediction and classification"

11:50-12:10 BREAK

SESSION "ENTROPY, DIVERGENCE MEASURES AND APPLICATIONS" (1)

Chairman: Alex KARAGRIGORIOU (Univ. of the Aegean, Greece)

12:10-12:30

Thomas GKELSINIS (LMRS, Univ. of Rouen-Normandy, France)

"Theoretical aspects and practical implications on measures of weighted information"
joint work with Vlad Stefan BARBU (LMRS, Univ. of Rouen-Normandy, France), Alex KARAGRIGORIOU (Univ. of the Aegean, Greece)

12:30-12:50

Sorina-Cezarina SFETCU (Univ. of Bucharest, Romania)

"Ordering properties concerning Tsallis quantile entropy"

12:50-13:10

Costel BĂLCĂU (Univ. of Pitești, Romania)

"Applications of extended cumulative entropies in image processing"

joint work with Doru CONSTANTIN (Univ. of Pitești, Romania), Vasile PREDA ("Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics & "Costin C. Kiritescu" National Institute of Economic Research & Univ. of Bucharest, Romania)

13:10-14:40 LUNCH

SESSION "DISTRIBUTIONS AND APPLICATIONS"

Chairman: Gheorghiu ZBĂGANU ("Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics, Romania)

14:40-15:00

Eugen PIRCALABELU (UC Louvain, Institute of Statistics, Biostatistics and Actuarial Sciences, Belgium)

"Community detection on probabilistic graphical models with group-based penalties"
joint work with Gerda CLAESKENS (KU Leuven, ORSTAT & Leuven Statistics Research Center, Belgium)

15:00-15:20

Luigi-Ionuț CATANĂ (Univ. of Bucharest, Romania)

"Stochastic order of a multivariate uniform distributions family"
joint work with Anișoara RĂDUCAN ("Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics)

15:20-15:40

Gheorghiu ZBĂGANU ("Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics, Romania)

"Broken stick models"

15:40-16:00 BREAK

SESSION "STOCHASTIC PROCESSES"

Chairman: Ciprian TUDOR (Univ. of Lille, France)

16:00-16:20

Guglielmo D'AMICO (Univ. "G. d'Annunzio" of Chieti-Pescara, Italy)

"On the computation of some interval reliability indicators for semi-Markov systems"
joint work with Raimondo MANCA (Univ. of Rome, "La Sapienza", Italy), Filippo PETRONI (Marche Polytechnic Univ., Italy), Selvamuthu DHARMARAJA (Indian Institute of Technology Delhi, India)

16:20-16:40

Maria LESHCHINSKAIA (Tomsk State Univ., Russia)

"Efficient estimation of non-parametric signals observed with the Levy noises of small intensity"

joint work with Evgenii PCHELINTEV (Tomsk State Univ., Russia), Serguei PERGAMENHTCHIKOV (LMRS, Univ. of Rouen-Normandy, France)

16:40-17:00

Evgenii PCHELINTEV (Tomsk State Univ., Russia)

"Improved estimation methods for the conditional Gaussian Ornstein-Uhlenbeck non parametric regression models based on discrete data"

joint work with Serguei PERGAMENHTCHIKOV (LMRS, Univ. of Rouen-Normandy, France), Maria LESHCHINSKAIA (Tomsk State Univ., Russia)

17:00-17:20

Ciprian TUDOR (Univ. of Lille, France)

"Parameter identification for the Hermite Ornstein-Uhlenbeck process"

joint work with Obayda ASSAAD (Univ. of Lille, France)

17:20-17:40 BREAK

SESSION "STATISTICAL APPLICATIONS" (1)

Chairman: Ionuț BEBU (George Washington Univ., USA)

17:40-18:00

Filippo PETRONI (Marche Polytechnic Univ., Italy)

"Actuarial methods for hedging wind power variability"

joint work with Guglielmo D'AMICO (Univ. "G. d'Annunzio" of Chieti-Pescara, Italy), Fulvio GISMONDI ("Guglielmo Marconi" Univ., Italy)

18:00-18:20

Mathilde SAUTREUIL (MICS, CentraleSupélec, Univ. Paris-Saclay, France)

"Study of neural networks to predict the survival in oncology"

joint work with Sarah LEMLER, Paul-Henry COURNÈDE (MICS, CentraleSupélec, Univ. Paris-Saclay, France)

18:20-18:40

Lamia HAMMADI (LabSIPE, ENSA of El Jadida, Morocco)

"Hidden Markov models for risk time series in customs supply chain"

joint work with Vlad Stefan BARBU (LMRS, Univ. of Rouen-Normandy, France), Eduardo SOUZA DE CURSI (LMN, INSA of Rouen, France)

18:40-19:00

Ionuț BEBU (George Washington Univ., USA)

"Statistical considerations in studies with composite outcomes"

Saturday, November 7, 2020

SESSION "ENTROPY, DIVERGENCE MEASURES AND APPLICATIONS" (2)

Chairman: Romică TRANDAFIR (Technical Univ. of Civil Engineering of Bucharest, Romania)

09:00-09:20

Mihăiță DRĂGAN (Univ. of Bucharest, Romania)

"Neural networks classified using Tsallis entropy"

09:20-09:40

Muhammad SHERAZ (Institute of Business Administration Karachi, Pakistan)

"Extensive and non-extensive entropy measures with financial applications"

joint work with Vasile PREDA ("Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics & "Costin C. Kiritescu" National Institute of Economic Research & Univ. of Bucharest, Romania), Silvia DEDU (Bucharest Univ. of Economic Studies, Romania)

09:40-10:00

Romică TRANDAFIR (Technical Univ. of Civil Engineering of Bucharest, Romania)
"Estimations of Tsallis and Kaniadakis dynamic cumulative past entropies for power function distribution"
joint work with Mihaela PĂUN, Ioana DĂNILĂ, Aura CASARU (Univ. of Bucharest, Romania)

10:00-10:20 BREAK

SESSION "STATISTICAL METHODS" (2)

Chairman: Bojana MILOŠEVIĆ (Univ. of Belgrade, Serbia)

10:20-10:40

Serguei PERGAMENCHTCHIKOV (LMRS, Univ. of Rouen-Normandy, France)
"Adaptive efficient robust sequential estimation for high dimensional autoregressive models"
joint work with Ouerdia ARKOUN (Sup' Biotech & LMRS, Univ. of Rouen-Normandy, France), Jean-Yves BRUA (LMRS, Univ. of Rouen-Normandy, France)

10:40-11:00

Simona COJOCEA (Univ. of Bucharest, Romania)
"On the variable selection property of the Lasso method when $p \gg n$ "

11:00-11:20

Emmanouil-Nektarios KALLIGERIS (Univ. of the Aegean, Greece)
"Modeling time-series incidence data via a multiple changepoint approach"
joint work with Alex KARAGRIGORIOU (Univ. of the Aegean, Greece), Christina PARPOULA (Panteion Univ. of Social and Political Sciences, Greece)

11:20-11:40

Bogdan BIOLAN (Univ. of Bucharest, Romania)
"About iterative approaches for sparse direction-of-arrival estimation for co-prime arrays with off-grid targets"

11:40-12:00

Christina PARPOULA (Panteion Univ. of Social and Political Sciences, Greece)

"A distribution-free multiple change-point model for Phase I analysis of individual observations"

joint work with Alex KARAGRIGORIOU (Univ. of the Aegean, Greece)

12:00-12:20

Bojana MILOŠEVIĆ (Univ. of Belgrade, Serbia)

"On characterization based goodness-of-fit tests: a review of recent results"

12:20-14:00 LUNCH

SESSION "NUMERICAL SOLUTIONS OF (STOCHASTIC) DIFFERENTIAL EQUATIONS"

Chairman: Denis ENĂCHESCU ("Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics, Romania)

14:00-14:20

Oana LUPAȘCU STAMATE ("Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics, Romania)

"Numerical approach for stochastic differential equations of fragmentation; application to avalanches"

joint work with Lucian BEZNEA (Simion Stoilow Institute of Mathematics of the Romanian Academy & Univ. of Bucharest & Centre Francophone en Mathématiques de Bucarest, Romania), Madalina DEACONU (IECL, Univ. of Lorraine, CNRS & Inria, France)

14:20-14:40

Alexandru AGAPIE (Bucharest Univ. of Economic Studies, Romania)

"Evolutionary algorithms on continuous space. Uniform mutation inside the sphere"

joint work with Ovidiu SOLOMON (Bucharest Univ. of Economic Studies & Institute of Solid Mechanics, Romania)

14:40-15:00

Denis ENĂCHESCU ("Gheorghe Mihoc-Caius Iacob" Institute of Mathematical

Statistics and Applied Mathematics, Romania)

"Monte Carlo methods for solving parabolic partial differential equations"

15:00-15:20 BREAK

SESSION "FINANCE AND INSURANCE APPLICATIONS"

Chairman: Raluca VERNIC (Ovidius Univ. of Constanta & "Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics, Romania)

15:20-15:40

Rokas GYLYS (Vilnius Univ., Lithuania)

"Modelling uncertainty inhuman mortality projections using state-space Lee-Carter"

15:40-16:00

Bice DI BASILIO (Univ. "G. d'Annunzio" of Chieti-Pescara, Italy)

"A semi-Markovian approach to drawdown based measures"

joint work with Guglielmo D'AMICO (Univ. "G. d'Annunzio" of Chieti-Pescara, Italy),
Filippo PETRONI (Marche Polytechnic Univ., Italy)

16:00-16:20

Elena-Grațîela ROBE-VOINEA (Naval Academy "Mircea cel Bătrân", Constanța, Romania)

"Solving actuarial problems with FastCalc V.0.1."

16:20-16:40

Marius RĂDULESCU ("Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics, Romania)

"Single period portfolio selection models with transaction costs and initial holdings"

joint work with Constanta Zoie RADULESCU (National Institute for Research and Development in Informatics, Romania)

16:40-17:00 BREAK

SESSION "COVID APPLICATIONS"

Chairman: Silvia DEDU (Bucharest University of Economic Studies)

17:00-17:20

Bogdan ALEXE ("Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics & Univ. of Bucharest, Romania)

"Does the lack of supporters affect the home team advantage in football matches? The COVID-19 pandemic case."

joint work with Denis ENACHESCU ("Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics, Romania)

17:20-17:40

Maroua BOUBRED (LSMSA, Univ. Dr. Moulay Tahar of Saïda, Algeria)

"Semi-Markov model applied to Algeria Coronavirus data"

joint work with Fatiha MOKHTARI (LSMSA, Univ. Dr. Moulay Tahar of Saïda, Algeria)

17:40-18:00 BREAK

SESSION "STATISTICAL APPLICATIONS" (2)

Chairman: Luiza BĂDIN (Bucharest Univ. of Economic Studies & "Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics, Romania)

18:00-18:20

Aida TOMA (Bucharest Univ. of Economic Studies & "Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics, Romania)

"Model selection criteria based on pseudodistances"

joint work with Alex KARAGRIGORIOU (Univ. of the Aegean, Greece), Paschalini TRENTOU (Univ. of the Aegean, Greece)

18:20-18:40

Andreas MAKRIDES (Univ. of Uclan, Cyprus & Univ. of the Aegean, Greece)

"Statistical inference in models with parameter dependence"

joint work with Vlad Stefan BARBU (LMRS, Univ. of Rouen-Normandy, France),
Alex KARAGRIGORIOU (Univ. of the Aegean, Greece)

18:40-19:00

Badreddine BOUMARAF (Univ. of Souk-Ahras, Algeria & Univ. of Badji Mokhtar of
Annaba, Algeria & LMRS, Univ. of Rouen-Normandy, France)

"Estimation of Beta-Pareto distribution based on several optimization methods"

joint work with Nacira SEDDIK-AMEUR (Univ. of Badji Mokhtar of Annaba, Algeria),
Vlad Stefan BARBU (LMRS, Univ. of Rouen-Normandy, France)

19:00-19:20

Chafiàa **AYHAR** (LSMSA, Univ. Dr. Moulay Tahar of Saïda, Algeria)

"Reliability of semi-Markov systems"

joint work with Fatiha MOKHTARI (LSMSA, Univ. Dr. Moulay Tahar of Saïda, Algeria),
Saâdia RAHMANI (LSMSA, Univ. Dr. Moulay Tahar of Saïda, Algeria), Vlad Stefan
BARBU (LMRS, Univ. of Rouen-Normandy, France)

19:20-19:40

Luiza BĂDIN (Bucharest Univ. of Economic Studies & "Gheorghe Mihoc-Caius Iacob"
Institute of Mathematical Statistics and Applied Mathematics, Romania)

"An integrative framework for evaluating scientific research"

joint work with Silvia DEDU, Anca-Teodora ȘERBAN OPRESCU, Florentin ȘERBAN
(Bucharest Univ. of Economic Studies, Romania)