Scientific Program
XVII-th International Summer Conference
on Probability and Statistics,
Seminar on Statistical Data Analysis,
Workshop on Branching Processes and Applications,
Pomorie, Bulgaria, 25 June—1 July, 2016

25 June, Saturday: *Arrival*

26 June, Sunday, Morning

09:30 – 10:00 Opening

Stochastic Models
Chair: Nikolay Yanev
10:00 –10:30 **Opening lecture:**
LOPEZ-MIMBELA, J.A. Perpetual integral functionals of Brownian motion and blowup of semilinear systems

Coffee Break

Chair: George Yanev
11:00 - 11:30 YAKYMIV, A. Distribution of the order in some classes of random mappings
11:30 - 12:00 BARTOSZEK, K. A punctuated stochastic model of adaptation

26 June, Sunday, Afternoon
Biostatistics
Chair: Jose Alfredo Lopez-Mimbela
16:00–16:30 **Keynote lecture:** HAYNATZKI, G. Statistical model of microenvironment-dependent carcinogenesis: estimation and applications
16:30–16:50 ZHELYAZKOVA, M. A Bayesian spatial analysis of mumps data in Bulgaria (CoA: YORDANOVA, R., SLAVTCHOVA-BOJKOVA, M.)

Coffee Break

Chair: Maya Zhelyazkova
17:30–17:50 PRODANOVA, K. Stochastic model of the relationship pharmacological effect - drug plasma concentration for new Bulgarian antihipotensive agent
17:50–18:10 STOIMENOVA, E. Comparison of partially ranked lists with application to RNA-seq data (CoA: PALEJEV, D.)

19:00 – 23:45 **Welcome Party**

27 June, Monday, Morning
Probability Distributions and Applications
Chair: Doncho Donchev

09:00–09:30 **Keynote lecture: SAVOV, M.** Bernstein-Gamma functions and their applications in probability theory

09:30–09:50 **KOLKOVSKA, E.** Penalty functions for perturbed risk processes

09:50–10:10 **MINKOVA, L.** Polya-Aeppli of order K risk model

Coffee Break

Chair: Velika Dragieva

10:40–11: 00 **CHOBANOV, G.** Randomness uncertainty and ergodicity in nature and society: towards a sustainable society ethics in a non-ergodic world

11:00–11:20 **KOSTADINOVA, K.** On the bivariate compound Polya process (CoA **MINKOVA, L**)

11:20–11:50 **KOPANOV, P.** Gamma distribution, random impulses in differential equations and p-moment exponential stability (CoA: **HRISTOVA, S.**)

27 June, Monday, Afternoon
Stochastic Models and Inferences
Chair: Vessela Stoimenova

15:00–15:30 **Keynote lecture: YANEV, G.** Monotone empirical Bayes estimators for the reproduction parameter of Borel-Tanner distributions

15:30–15:50 **DONCHEV, D.** A noisy drift forecast and trading policies for high-frequency markets

15:50–16:10 **KOLEVA, D.** Special application of Mellin transform to contingent claims pricing (CoA: **MILEV, M.**)

Coffee Break
Chair: Maroussia Slavtchova-Bojkova

16:40–17:00 **TZANINIS, S.** The problem of the preservation of the distribution of compound mixed renewal processes under a change of measure

17:00–17:20 **DRAGIEVA, V.** On the successful and blocked calls in one finite queueing system with losses

Social program
19:00 – Non-random walk to the port.

28 June, Tuesday, Morning
Branching Processes and Applications
Chair: Vladimir Vatutin

09:00–09:30 Keynote lecture: **GONZALEZ, M.** Extinction probability of some recessive alleles of X-linked genes in the context of two-sex branching processes (CoA: **MARTINEZ, R., MOTA, M.**)

09:30–09:50 **YANEV, N.** Limiting distributions for alternating regenerative branching processes (CoA: **MITOV, K.**)

Coffee Break

Chair: Gleb Haynatzki
10:30–11:00 **Keynote lecture: del PUERTO, I.** New research lines in controlled branching processes (CoA: **GONZALEZ, M., MINUESA, C.**)
11:00–11:30 Keynote lecture: **MINUESA, C.** Bayesian estimation on controlled branching processes via disparities: robust estimators for the offspring parameters (CoA: **GONZALEZ, M., del PUERTO, I.**)

28 June, Tuesday, Afternoon
Branching Processes and Applications
Chair: Miguel Gonzalez
15:30–16:00 **Keynote lecture: VATUTIN, V.** Family trees for decomposable branching processes
16:00–16:20 **TRAYANOV, P**. On the effect of lifespan distribution on mutation times in continuous-time branching models (CoA: **SLAVTCHOVA-BOJKOVA, M.**)

Coffee Break

Chair: Mladen Savov
17:00–17:20 **MITOV, K.** Markov branching process with immigration (CoA: **YANEV, N.**)
17:20–17:40 **SLAVTCHOVA-BOJKOVA, M.** Modelling of epidemics with vaccination: stochastic monotonicity and continuity properties (CoA: **BALL, F., GONZALEZ M., MARTINEZ, R.**)
17:40–18:00 **TCHORBADJIEFF, A.** Computational assessments of multidimensional branching processes derived from cosmic rays cascades

Social program
19:30 – Bulgarian folk dances performance.

29 June, Wednesday

Excursion - 09:00 – 18:00

30 June, Thursday, Morning

Statistics
Chair: Ines del Puerto
09:00–09:20 **SONIN, I.** Consensus algorithms and Decompostion-Separation theorem
09:20–09:40 **GACOVSKA BARANDOVSKA, A.** Randomly indexed central order statistics through examples and application

Coffee Break

Chair: Eugenia Stoimenova
10:20–10:40 **LERI, M.** Forest fire model on configuration graphs with random node degree distribution
10:40–11:00 **NIKOLOV, N.** Two-sample rank tests based on Lee distance

30 June, Thursday, Afternoon

Statistics
Chair: Plamen Mateev
16:00–16:20 **JANEVSKI, V., KUZMANOVSKI, A., POPESKA, Z., MIHOVA, M.** Using data mining techniques for recognition of Macedonian national dances
16:20–16:40 **KHARIN, Y., ZHURAK, M.** Statistical inferences on binomial conditional autoregressive model of spatio-temporal data

Coffee Break

Chair: Kosto Mitov
17:10–17:30 **ANGELOV, A.** Statistical analysis of interval-censored data in questionnaire surveys
17:30–17:50 **RABHI, A.** Asymptotic normality of conditional distribution estimation in the single index model

19:30 – 24:00   Farewell Diner

1 July, Friday, Morning
Stochastic Models and Applications
Chair: Krasimira Prodanova
09:00–09:20 **JORDANOVA, P.** Compound power series distribution with negative multinomial summands
09:20–09:40 **LAZAROVA, M.** Noncentral Polya-Aeppli process and ruin probability (CoA: **MINKOVA, L.**)

Coffee Break

Chair: Ekaterina Kolkovska
10:20–10:40 **BENCHETTAH, A.** Stochastic Navier-Stokes equation on the 2D- Riemannian manifold (Sphere)
10:40–11:00 **VELEVA, E.** Generation of correlation matrices
11:00–11:20 **ILIJOSKI, B.** A graph based methods for clustering of a morphologically similar words of ruin

11:20- 11:40 Closing and information about proceedings of the conference

Poster Session

ARANGELOV, V., MATEEV P. Animated Map of Mathematics
STOIMENOVA, E., PALEJEV, D. Comparison of partially ranked lists with application to RNA-seq data
STANEVA, A., STOIMENOVA, V. Accelerated EM algorithm and statistical inference for multitype branching processes with multivariate power series offspring distributions

2-3 July, Saturday-Sunday: *Departure*