17th Applied Stochastic Models and Data Analysis International Conference (ASMDA2017)

6-9 June, 2017, De Morgan House, London, UK

Program

Session / Room	Date / Time	Authors / Talk Title / Event	Authors / Talk Title / Event
	8:00-9:15	**Tuesday June 6**	**Registration**
Lecture Theatre	9:15-9:30	**Opening Ceremony**	
Lecture Theatre	**9:30-10:20**	**Honorary Speech (Chair: Pieter M. Kroonenberg)** **Gilbert Saporta** Conservatoire National des Arts et Métiers (CNAM) Paris, France	**50 years of data analysis: from EDA to predictive modelling and machine learning**
	10:20-10:40		**Coffee Break**
Lecture Theatre	**10:40-11:20**	**Plenary Session (Chair: Sally McClean)** **Robert J. Elliott** Haskayne School of Business, University of Calgary, Canada and Centre for Applied Financial Studies, University of South Australia, Adelaide, Australia	**MALLIAVIN CALCULUS IN A BINOMIAL FRAMEWORK**
Lecture Theatre	**11:20-12:00**	**Plenary Session (Chair: Valérie Girardin)** **Fabrizio Ruggeri** CNR IMATI, Italy	**Recent Advances in Adversarial Risk Analysis**
	12:30-13:30		**Lunch**

SCS1	Tuesday June 6	SPECIAL AND CONTRIBUTED SESSIONS SCS1	
Hardy Room	13:30-15:15	**Invited Session Chair: Raimondo Manca and Dmitrii Silvestrov**	**Semi-Markov Processes: Models and Algorithms**
		Doubly Recurrent Algorithms for Mixed Power-Exponential Moments of Hitting Times for Semi-Markov Processes	Dmitrii Silvestrov, Raimondo Manca
		Asymptotic Recurrent Algorithms for Nonlinearly Perturbed Semi-Markov Processes	Sergei Silvestrov, Dmitrii Silvestrov
		Modeling trading duration, volume and returns by means of vector indexed semi-Markov chains	Guglielmo D'Amico, Filippo Petroni
		Optimal provision of a dispatchable energy source for wind energy management: dependence on the wind energy model	Guglielmo D'Amico, Filippo Petroni, Robert Adam Sobolewski
		Financial risk distribution in European Union	Guglielmo D'Amico, Stefania Scocchera, Loriano Storchi
		Hitting Times for Claim Number in Car Insurance Setting	Guglielmo D'Amico, Fulvio Gismondi, Jacques Janssen, Raimondo Manca, Filippo Petroni, Dmitrii Silvestrov
		Step semi-Markov models and application to manpower management	Vlad Stefan Barbu, Guglielmo D'Amico, Raimondo Manca, Filippo Petroni

Cayley Room	13:30-15:00	**Invited Session Chair: Vladimir Anisimov**	**Modern trends in predictive modelling clinical trials operation**
		Predictive analytic modelling of clinical trials operation	Vladimir Anisimov
		Estimates for Initializing Enrollment Models	Matthew Austin
		Some issues in predicting patient recruitment in multi-centre clinical trials	Andisheh Bakhshi, Stephen Senn, Alan Phillips
		Human Factors: Coal Face Reality of Recruitment to Clinical Trials	Katharine D Barnard
		Clinical trials simulation: Comparison of Discrete Method, Continuous Method and Copula Method for virtual Patients' generation	Nicolas Savy, Philippe Saint-Pierre, Sébastien Déjean, Stéphanie Savy, Sébastien Marque
		Simulation before, during, and after a clinical trial: A Bayesian approach	Stephen D. Simon

Burnside Room	13:30-15:00	**Special Session Chairs: Giuseppe Giordano and Maria Russolillo**	**Modeling and Exploring Mortality Data. Methods, Software and Applications**
		The Impact of Mortality Projection Models in case of flexible retirement schemes	Mariarosaria Coppola, Maria Russolillo, Rosaria Simone
		Effect of Statin Prescription on Individual and on Population Life expectancy	Elena Kulinskaya, Lisanne Gitsels, Ilyas Bakbergenuly
		Methodological issues in the three-way decomposition of mortality data	Giuseppe Giordano, Steven Haberman, Maria Russolillo
		Longevity trends and their impact on life expectancy and annuity values – how fast are they changing?	Steven Haberman, Zoltan Butt
		Modelling non-anticipated longevity shocks under Lee-Carter Model	Eliseo Navarro, Pilar Requena

Sylvester Room	13:30-15:00	**Chairs: Valery Antonov, Anatoly Kovalenko**	**Demographics I**
		Medical and Demographic Consequences of the Stressful Living Conditions	Valery Antonov, Anatoly Kovalenko, Konstantin Lebedinskii
		Decomposition of marital status differences in life expectancy by age in the Czech Republic	Tomas Fiala, Jitka Langhamrova
		Reliability of decrease rates for cardiovascular mortality in Russia	Tamara P. Sabgayda, Victorya G. Semyonova

	AR-DENFIS for Mortality Data	Gabriella Piscopo
	Using deepest dependency paths to enhance life expectancy estimation	Irene Albarrán, Pablo Alonso-González, Ana Arribas-Gil, Aurea Grané
	A bivariate mixed-type distribution with applications to reliability	Alessandro Barbiero
	Some Asymptotic Results for Truncated-Censored and Associated Data	Zohra Guessoum, Abdelkader Tatachak
15:00-15:30	**Coffee Break**	

SCS2	**Tuesday June 6**	**SPECIAL AND CONTRIBUTED SESSIONS SCS2**		
Hardy Room	15:30-16:30	**Invited Session Chair: Mark Brown**		**Diverse topics in applied probability**
		Taylor's Law via Ratios, for Some Distributions with Infinite Mean		Mark Brown
		Sharp Bounds for Exponential Approximations of NWUE Distributions		Mark Brown, Shuangning Li
		Optimal Policies for MDPs with unknown parameters		Michael N. Katehakis
Cayley Room	15:30-16:30	**Invited Session Chairs: M. Molina and E. Yarovaya**		**Stochastic Models for Dynamical Systems I**
		Optimal Sustainable Constant Effort Fishing Policies in Random Environments		Carlos A. Braumann, Nuno M. Brites
		Stochastic Models for Biological Populations with Sexual Reproduction		Manuel Molina, Manuel Mota, Alfonso Ramos
		Defective Galton-Watson processes		Serik Sagitov, Carmen Minuesa
		Operator Models in Theory of Branching Random Walks and their Applications		Elena Yarovaya
Burnside Room	15:30-16:30	**Special Session Chair: Christina Erlwein-Sayer**		**Financial Modelling: regime-switching, sentiment and asset allocation**
		Portfolio strategies and filtering within regime-switching models		Christina Erlwein-Sayer, Stefanie Grimm, Peter Ruckdeschel, Joern Sass, Tilman Sayer
		An Interest-Rate Model with an Unobservable Mean-Reversion Level		Stefanie Grimm, Christina Erlwein-Sayer, Rogemar Mamon
		Electricity spot price modelling using a higher-order HMM		Rogemar Mamon, Heng Xiong
		News Augmented GARCH(1,1) Model for Volatility Prediction		Zryan Sadik, Paresh Date
Sylvester Room	15:30-16:30	**Chair: Valeria D’Amato**		**Risk - Insurance**
		"Money purchase" pensions: modeling non traditional life insurance products		Valeria D’Amato, Emilia Di Lorenzo, Marilena Sibillo, Roberto Tizzano
		Risk factors of Severe Cognitive Impairment in the Czech Republic		Kornélia Cséfalvaiová, Jitka Langhamrová
		A new family of premium principles obtained by a risk-adjusted distribution		Miguel Ángel Sordo, Antonia Castaño, Gema Pigueiras
		At-Risk-of-Poverty or Social Exclusion Rate – Regional Aspects in the Slovak and Czech Republic and International Comparison		Iveta Stankovicová, Jitka Bartošová, Vladislav Bína
		FISS- THE FACTOR BASED INDEX OF SYSTEMIC STRESS		Tibor Szendrei, Katalin Varga
SCS3	**Tuesday June 6**	**SPECIAL AND CONTRIBUTED SESSIONS SCS3**		
Hardy Room	16:30-17:30	**Invited Session Chair: Ekaterina Bulinskaya**		**Stochastic Models for Dynamical Systems II**
		Asymptotic Analysis and Optimization of Insurance Company Performance		Ekaterina Bulinskaya
		On Quantum Information Characterization of Markov and non-Markov Dynamics of Open Quantum Systems		Andrey Bulinski
		Multivariate Risk Models and Their Applications		Yury Khokhlov, Olga Rumyantseva
		Stochastic Forecast Model of Severe Storm Wind over Territory of Northern Europe and England		Elvira Perekhodtseva

Cayley Room	16:30-17:30	**Invited Session Chair: Stephane Chretien**	**Optimisation Methods for Machine Learning**
		Online robust PCA	Hervé Cardot, Antoine Godichon-Baggioni
		Non-Convex structured Robust PCA	Stephane Chretien
		Robust Ranking via Eigenvector and Semidefinite Programming Synchronization	Mihai Cucuringu
		SNIPE for Memory-Limited PCA with Incomplete Data: From Failure to Success	Armin Eftekhari, Laura Balzano, Michael B. Wakin, Dehui Yang

Burnside Room	16:30-17:30	**Chair: Jan Ámos Víšek**	**Regression Issues**
		Are the leverage point the most terrible problem in regression?	Jan Ámos Víšek
		The Flexible Beta Regression Model	Sonia Migliorati, Agnese M. Di Brisco Andrea Ongaro
		Statistical analysis of regression models under grouping of the dependent variable	Helena Ageeva, Yuriy Kharin
		Formulation of the Mean Squared Error for Logistic Regression. An Application with Credit Risk Data	Eva Boj del Val, Teresa Costa Cor

Sylvester Room	16:30-17:30	**Invited Session Chairs: Aglaia Kalamatianou and Franca Crippa**	**Data analysis in the Social Sciences**
		Measuring latent variables in space and/or time. A latent markov model approach	Gaia Bertarelli, Franca Crippa, Fulvia Mecatti
		Random effects models in item analysis: exploring applications in autobiographical memory	Angela Tagini
		Random Utility Models in a stated preference approach. Some considerations on the transition from university to work	Paolo Mariani, Andrea Marletta, Mariangela Zenga
		Joint models for time-to-event and bivariate longitudinal data: a likelihood approach	Marcella Mazzoleni, Mariangela Zenga

	17.30-		**Welcome Reception**

Wednesday June 7

SCS4	Wednesday June 7	SPECIAL AND CONTRIBUTED SESSIONS SCS4	
Hardy Room	8.30-10.00	**Invited Session Chairs: Adele H Marshall and Sally McClean**	**Healthcare Session**
		A discrete piecewise multi-state survival model: Application to breast cancer	Juan Eloy Ruiz Castro, Mariangela Zenga
		Some results on the detection of CpG islands via hidden semi Markov modelling	Zacharias Kyritsis, Aleka Papadopoulou, Sally McClean
		Modelling patient waiting time in emergency departments using Coxian phase-type distributions	Adele H. Marshall, Laura M. Boyle, Mark Mackay
		Improving Rexpokit's Krylov Subspace Matrix Exponential Methods for Markov Processes	Meabh G. McCurdy, Karen J. Cairns, Adele H. Marshall
		The variances and covariances of the macro state sizes via the micro state sizes in semi Markov modeling for a healthcare system	Aleka Papadopoulou, Sally McClean, Zacharias Kyritsis, Lalit Garg
Cayley Room	8.30-10.15	**Invited Session Chair: Rustam Ibragimov**	**Theory of Majorization, Stochastic Inequalities and Their Applications**
		Diversification Analysis in Value at Risk Models under Heavy-Tailedness and Dependence	Suzanne Burns
		Income Inequality and Price Elasticity of Market Demand: The Case of Crossing Lorenz Curves	Marat Ibragimov, Rustam Ibragimov, Paul Kattuman, Jun Ma
		Optimal Bundling Strategies for Complements and Substitutes with Heavy-Tailed Valuations and Related Problems	Rustam Ibragimov, Artem Prokhorov, Johan Walden
		Exact Lower Bounds for the Agnostic Probably-Approximately-Correct (PAC) Machine Learning Model	Aryeh Kontorovich, Iosif Pinelis
		Majorization and Stochastic Orders in Secure Communications	Pin-Hsun Lin, Holger Boche, Eduard Jorswieck
		On Boundary Crossing By Stochastic Processes	Victor de la Peña
		Schur properties of convolutions of gamma random variables with applications in RandNLA	Farbod Roosta-Khorasani
Burnside Room	8.30-10.15	**Chair: Mark Brown**	**Demographics II**
		Fitting Markovian binary trees using global and individual demographic data	Sophie Hautphenne, Katharine Turner, Melanie Massaro
		Accounting for model uncertainty in mortality projection	Andrés Benchimol, J. Miguel Marin, Irene Albarrán, Pablo Alonso-González
		Migration component in health losses of population in Russian megapolis (for example of Moscow)	Victorya G. Semyonova, Tamara P. Sabgayda, Svetlana Yu. Nikitina
		Prospective scenarios of death coverage of the Northeast Brazil	Neir Antunes Paes, Alisson dos Santos Silva
		Further exploration of the existence of a limit to human life span	Christos H. Skiadas, Charilaos Skiadas
		Dealing with Inaccuracies and Limitations of Empirical Mortality Data in Small Populations	K. Zafeiris, A. Kostaki
		Health estimates for some countries of the rapid developing world	K. N. Zafeiris, C. H. Skiadas
Sylvester Room	8.30-10.15	**Invited Session Chair: Maria Symeonaki**	**LABOUR MARKET TRANSITIONS**
		Employers' assessments on hiring: results from a vignette experiment	Dimitris Parsanoglou, Aggeliki Yfanti
		Fuzzyfying Labour Market States	Maria Symeonaki
		A neuro-fuzzy approach to measuring attitudes	Maria Symeonaki, Aggeliki Kazani, C. Michalopoulou
		Labour Market flows in Europe: Evidence from the EU-LFS	Maria Symeonaki, Glykeria Stamatopoulou, Maria Karamessini

	Investigating Southern Europeans' Perceptions of Their Employment Status	Aggeliki Yfanti, Catherine Michalopoulou, Aggelos Mimis, Stelios Zachariou
	On the Measurement of Early Job Insecurity in Europe	Maria Symeonaki, Glykeria Stamatopoulou, Maria Karamessini
10:00-10:30		**Coffee Break**

SCS5	Wednesday June 7	SPECIAL AND CONTRIBUTED SESSIONS SCS5	
Hardy Room	10.30-11.30	**Chair: Christos Skiadas, Co-Chair: Claude Lefèvre**	**Demographics III**
Invited Talk	10:30-11:00	**Jean-Marie Robine** Université Montpellier 2, Place Eugène Bataillon, Montpellier, France	Is the longevity revolution compatible with our models of healthy ageing and/or successful ageing?
Contributed Talk	11:00-11:15	Using Child, Adult, and Old-age Mortality to Establish a Life-table Database for Developing Countries	Nan Li, Hong Mi, Patrick Gerland
Contributed Talk	11:15-11:30	Estimation of the Healthy Life Expectancy in Italy through a Simple Model based on Mortality Rate	Christos Skiadas, Maria Felice Arezzo
Cayley Room	10.30-11.30	**Invited Session Chair: Hanna Livinska**	**Queueing models**
		Switching Processes in Queueing Models	Vladimir Anisimov
		Sojourn time and busy period in a discrete-time queueing system with different arrival information	Ivan Atencia
		On Multi-Channel Stochastic Networks with Time-Dependent Input Flows	Hanna Livinska, Eugene Lebedev
		Diffusion Approximation of a Loss Queueing System	Nikolaos Limnios
Burnside Room	10.30-11.30	**Chair: M. J. Valderrama**	**Data Analysis I**
		The use of deviance plots for non-nested model selection in diverse models	Pieter M. Kroonenberg
		Bibliometric variables determining the quality of a dentistry journal	Pilar Valderrama, Manuel Escabias, Evaristo Jiménez-Contreras, Alberto Rodríguez-Archilla
		Highly dimensional classification using Tukey depth and bagdistance	Milica Bogicevic, Milan Merkle
		“Big Data” Triangle and Modern Data Analysis	Subhadeep (“Deep") Mukhopadhyay
Sylvester Room	10.30-11.30	**Chair: Gaida Pettere**	**Models**
		Non-Metric Partial Least Squares for Non-linear Structural Equation Model estimation	Giorgio Russolillo, Laura Trinchera
		The Extended Flexible Dirichlet model: a simulation study	Roberto Ascari, Sonia Migliorati, Andrea Ongaro
		Computing the Mutual Constrained Independence Model	Thomas Delacroix, Philippe Lenca, Stéphane Lallich
		A joint mixed model for longitudinal data involving time-varying covariates	Reza Drikvandi
		Behaviour of Multivariate Tail Dependence Coefficients	Gaida Pettere, Ilze Zarina, Irina Voronova

SCS6	Wednesday June 7	SPECIAL AND CONTRIBUTED SESSIONS SCS6	
Hardy Room	11.30-12.45	**Invited Session Chair: Robert Serfling**	**L-Moment and Quantile Methods in Multivariate and Time Series Analysis**
		L-Comoments: Theory and Applications	Robert Serfling
		Multivariate L-moments Statistical inference, with hydrological applications	Fateh Chebana
		A Gini-based time series analysis and test for reversibility	Amit Shelef, Edna Schechtman
		Multivariate L-moments defined through transport	Alexis Decurninge
		Quantile Spectral Analysis of Time Series	Tobias Kley
Cayley Room	11.30-12.45	**Invited Session Chairs: Anatoliy Malyarenko and Sergei Silvestrov**	**Stochastic methods in engineering, physics, and financial mathematics**
		Lie Symmetries of the Black – Scholes Type Equations in Financial Mathematics	Asaph K. Muhumuza, Silvestrov Sergei, Anatoliy Malyarenko
		Heavy-tailed fractional Pearson diffusions	N.Leonenko
		Saturn rings: fractal structure and random field model	Martin Ostoja-Starzewski, Anatoliy Malyarenko
		Tensor Random Fields in Conductivity and Classical or Microcontinuum Theories	Martin Ostoja-Starzewski, Anatoliy Malyarenko
		Foreign Exchange Risk Analysis Using GARCH-EVT Model with Markov Switching	Carolyne Ogutu, Betuel Canhanga, Pitos Biganda, Ivivi Mwaniki, Anatoliy Malyarenko
		Option pricing and model calibration under multifactor stochastic volatility and stochastic interest rate - an asymptotic expansion approach	Canhanga B., Malyarenko A., Ni Y., Rancic M., Silvestrov S.
Burnside Room	11.30-12.45	**Chair: Teresa Oliveira**	**Measurement - Control - Entropy**
		Optimal control of a pest population through geometric catastrophes	Theodosis D. Dimitrakos, Epaminondas G. Kyriakidis
		Real-time monitoring and control of industrial processes using electrical tomography data	Robert G Aykroyd
		Goodness-of-fit tests based on entropy. Application to DNA replication.	Justine Lequesne, Valérie Girardin, Philippe Regnault
		Dynamic measurement of poverty: modeling and estimation	Guglielmo D'Amico, Philippe Regnault
		A stochastic single vehicle routing problem with a predefined sequence of customers and delivery of two similar products	Epaminondas G. Kyriakidis, Theodosis D. Dimitrakos, Constatinos Karamatsoukis
Sylvester Room	11.30-12.45	**Chair: M.J. Valderrama**	**Data Analysis Workshop**
		Statfda, an easy to use tool for functional data analysis without expert knowledge	M. Escabias, Ana M. Aguilera, M. C. Aguilera-Morillo, M.J. Valderrama
		The attendance is free. Please hold you PC to follow the examples	
	12:30-13.30		**Lunch**
Excursion	13.30-19.30		**Half Day Excursion**

Thursday June 8

Invited Talks (Chair:)

Hardy Room	8:30-9:00	**Carlos A. Coelho** Centro de Matemática e Aplicações (CMA-FCT/UNL) and Mathematics Dept, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Portugal	The Likelihood Ratio Test for the Equality of Mean Vectors when the Covariance Matrices are Block Compound Symmetric
Hardy Room	9:00-9:30	**M. Ivette Gomes** CEAUL and DEIO, Faculdade de Ciências, Universidade de Lisboa, Portugal Co-authors (Paula Reis, Lúisa Canto e Castro, Sandra Dias)	Penultimate Approximations in Extreme Value Theory and Reliability of Large Coherent Systems
Hardy Room	9:30-10:00	**Claude Lefèvre** ISFA, Lyon and ULB, Belgium	Epidemic Risk and Insurance Coverage
	10:00-10:30		**Coffee Break**
Hardy Room	10:30-11:10	**Keynote Talk (Chair: P.-C.G. VASSILIOU)** **Sally Mcclean** Computer Science Research Institute, Ulster University, United Kingdom	Markov and semi-Markov models for Health and Social Care Planning
Hardy Room	11:10-11:50	**Keynote Talk (Chair: Sally McClean)** **P.-C.G. VASSILIOU** Dept of Statistical Sciences, University College London, United Kingdom	LAWS OF LARGE NUMBERS FOR NON-HOMOGENEOUS MARKOV SYSTEMS
Hardy Room	11:50-12.30	**Keynote Talk (Chair: Nikolaos Limnios)** **Anatoliy Swishchuk** Dept of Mathematics and Statistics, University of Calgary, Canada	Financial Mathematics: Historical Perspectives and Recent Developments

SCS7	**Thursday June 8**	**SPECIAL AND CONTRIBUTED SESSIONS SCS7**	
Cayley Room	8.30-10.00	**Invited Session Chair: Vilijandas Bagdonavičius**	**Accelerated life models and their applications I**
		ALT modeling when the AFT model fails	Vilijandas Bagdonavičius, Rūta Levulienė
		Semi-parametric consistent estimators for recurrent event times models based on parametric virtual age functions	Eric Beutner, Laurent Bordes, Laurent Doyen
		Statistical Inference in a model of Imperfect Maintenance with Geometric Reduction of Intensity	J.-Y. Dauxois, S. Gasmi, O. Gaudoin
		Stratified logrank test under missing data	Jean-François Dupuy, Rim Ben Elouefi
		A new generalized class of bivariate distributions based on latent random variables	Manuel Franco, Juana-Maria Vivo, Debasis Kundu
		Towards prediction of catastrophic failure events of laser-induced damage in optical laser elements	Povilas Grigas, Rūta Levulienė, Vilijandas Bagdonavičius, Andrius Melninkaitis
Burnside Room	8.30-10.15	**Invited Session Chair: Giuseppina Albano**	**Stochastic models in dynamic systems**
		A semiparametric model in environmental data	Giuseppina Albano, Michele La Rocca, Cira Perna

		Diffusions and generalised logistic dynamics	Antonio Barrera-García, Patricia Román-Román, Francisco Torres-Ruiz
		Optimal portfolio strategies and derivative products under insider information	Bernardo D'Auria, Carlos Escudero Liebana
		Linear Approximation of Nonlinear Threshold Models	Francesco Giordano, Marcella Niglio, Cosimo D. Vitale
		On Fractional stochastic modeling for biological dynamics	Enrica Pirozzi
		Some remarks on the Prendiville model in the presence of catastrophes	Virginia Giorno, Serena Spina
Sylvester Room	8.30-10.00	**Invited Session Chair: Krzysztof Kolowrocki**	**Safety and Reliability of Critical Infrastructures and Complex Systems I**
		Designing critical infrastructure network with cascading for predefined safety level	Agnieszka Blokus-Roszkowska, Krzysztof Kolowrocki
		Analysis of the crude oil transfer process and its safety	Agnieszka Blokus-Roszkowska, Bozena Kwiatuszewska-Sarnecka, Pawel Wolny
		Statistical identification of critical infrastructure accident consequences process, Part 1, Process of initiating events	Magda Bogalecka, Krzysztof Kolowrocki
		Statistical identification of critical infrastructure accident consequences process, Part 2, Process of environment threats	Magda Bogalecka, Krzysztof Kolowrocki
		Statistical identification of critical infrastructure accident consequences process, Part 3, Process of environment degradation	Magda Bogalecka, Krzysztof Kolowrocki
		Modelling spread limitations of oil spills at sea	Sambor Guze, Krzysztof Kolowrocki, Jolanta Mazurek
	10:00-10:30		**Coffee Break**
SCS8	**Thursday June 8**	**SPECIAL AND CONTRIBUTED SESSIONS SCS8**	
Cayley Room	10.30-11.30	**Chair: Leda D. Minkova, Co-Chair: Zdeněk Fabián**	**Distributions**
		Bivariate Non-central Polya-Aeppli process and applications	Leda D. Minkova
		The score correlation coefficient	Zdeněk Fabián
		A simple test of monotonicity and monotonicity-related properties	Javier Hidalgo, Tatiana Komarova
		Improved Bounds for the Probability of Causation	A. Philip Dawid, Monica Musio
Burnside Room	10.30-11.30	**Invited Session Chair: Vilijandas Bagdonavičius**	**Accelerated life models and their applications II**
		On multiple step stress model under order restriction	Debasis Kundu, Rahul and Namita Gautam
		Residuals for the modelling of covariate effects in accelerated life models	Jan Terje Kvaløy, Bo Henry Lindqvist, Stein Aaserud
		A generalized distribution family of the Freund bivariate exponential model	Juana-Maria Vivo, Manuel Franco, Debasis Kundu
		Outlier detection and identification when the number of outliers is unknown	Lina Petkevicius, Vilijandas Bagdonavicius
Sylvester Room	10.30-11.30	**Chair: Jozef Komorník, Co-Chair: Samuel Kosolapov**	**Data Analysis - Applications**
		Analysis of Dependencies between Growth Rates of GDP of V4 Countries Using 4--dimensional Vine Copulas	Jozef Komorník, Magda Komorníková, Tomáš Bacigál
		Efficiency Evaluation of Multiple-Choice Exam	Evgeny Gershikov, Samuel Kosolapov

		Analysis of the determinants and outputs of innovation in the Nordic countries	Cátia Rosário, António Augusto Costa, Ana Lorga da Silva
		Air pollution variability within an alpine Italian province	Giuliana Passamani, Matteo Tomaselli

SCS9	Thursday June 8	SPECIAL AND CONTRIBUTED SESSIONS SCS9	
Cayley Room	11.30-12.45	**Invited Session Chair: James R. Bozeman**	**Mathematical Aspects of Voting**
		Ordinal regression with geometrical objects predictors. An application to predict the garment size of a child	Sonia Barahona, Pablo Centella, Ximo Gual-Arnau, María Victoria Ibañez, Amelia Simó
		Why Elections are Hard: A Game Theoretic Examination of Complex Strategic Interactions Among Multiple Political Candidates	Meredithe A. Jessup II, Darryl K. Ahner
		Redistricting Spain. A proposal for an unbiased system	Jose M. Pavía, Alberto Penadés
		Partisan bias in multimember districts	Alberto Penadés
		Experiment with a Survey-Based Election to the Student Parliament of the Karlsruhe Institute of Technology	Andranik Tangian
		Measuring the Shape of Voting Districts with Unchangeable Boundary	James R. Bozeman, Ryleigh E. Costigan, Abby Salvadore
Burnside Room	11.30-12.15	**Invited Session Chair: Marcello Chiodi**	**Some recent development on space-time modelling**
		Clustering of spatially dependent data streams based on histogram summarization	Antonio Balzanella, Rosanna Verde, Antonio Irpino
		An ANOVA-type procedure for replicated spatial and spatio-temporal point patterns	Jorge Mateu, Jonatan Gonzalez-Monsalve, Ute Hahn, Bernardo Lagos
		Some extensions in space-time LGCP: application to earthquake data	Marianna Siino, Giada Adelfio, Jorge Mateu
	12.15-12.45	**Session Chair: A.N. Gorban**	**New Methods in Data Analysis**
		Piece-wise Quadratic Approximations of Subquadratic Error Functions for Machine Learning	A.N. Gorban, E.M. Mirkes, A. Zinovyev
		Blessing of Dimensionality: One-Trial Correction of Legacy AI Systems in High Dimension	A.N. Gorban, I. Romanenko, R. Burton, I.Y. Tyukin
	Poster	Sparsity Against Exponential Complexity: Parallel Implementation of Separate Testing of Inputs. Authorship Attribution via Sparse Stochastic Context Trees Modeling	Paul Grosu, Mikhail Malyutov, Javed Aslam, Hanai Sadaka, Virgil Pavlu, and Tong Zhang
Sylvester Room	11.30-12.45	**Chair: Valery Antonov**	**Chaos-Fractals-Neural**
		Identifying the boundaries application in the study of HRV	Valery Antonov, Artem Zagainov
		Interpolation using local iterated function systems	Somogyi,I., Soos, A.
		Development and application of multifractal analysis for EEG studies in a state of meditation and background	Dmitrieva L.A, Zorina D.A, Kuperin Yu.A., Smetanin N.M.
		Modeling of EEG signals by using artificial neural networks with chaotic neurons	Dmitrieva L.A, Kuperin Yu.A, Mokin P.V
	12:30-13.30		**Lunch**

SCS10	**Thursday June 8**	**SPECIAL AND CONTRIBUTED SESSIONS SCS10**	
Hardy Room	13.30-15.15	**Invited Session Chair: Nikolaos Limnios**	**New Trends in Markov and non-Markovian Models**
		Asymptotic Analysis of Queueing Models by a Synchronization Method	Larisa Afanaseva
		Stability Analysis of a Queueing Cluster Model with a Regenerative Input Flow	Larisa Afanaseva, Elena Bashtova
		Stability Analysis of Multiserver Queueing System with a Regenerative Interruption Process	Larisa G. Afanasyeva, Andrey Tkachenko
		Limit Theorems for Infinity Chanel Queueing Systems with a Regenerative Input Flow	Elena Bashtova, Ekaterina Chernavskaya
		Limit Theorems for Queueing Systems with Different Service Disciplines	Svetlana Grishunina
		A Semimartingale Characterization of Semi-Markov Processes and Branching Processes with Transport of Particles	Nikolaos Limnios, Elena Yarovaya
Cayley Room	13.30-15.15	**Chair: Gilbert Saporta, Co-Chair: Cristian Preda**	**Data Analysis II**
		Prediction for regularized clusterwise multiblock regression	Stéphanie Bougeard, Ndeye Niang, Gilbert Saporta
		Clustering variables with nonlinear relationships: an approach based on polynomial transformation and a dynamic mixed criteria	Christian Derquenne
		Thinking by classes and their symbolic description in Data Science	E. Diday
		Insolvency as opportunity: a marketing perspective on time-dependent credit risk.	Caterina Liberati, Furio Camillo
		Grouping Property and Relative Importance of predictors in Linear Regression	Henri Wallard
		Contributions of Gilbert Saporta to functional data analysis	Cristian Preda
		Importance of factors contributing to work-related stress: comparison of four metrics	Mounia N. Hocine, Natalia Feropontova, Ndèye Niang, Karim Aït-Bouziad, Gilbert Saporta
Burnside Room	13.30-15.15	**Chair: Jim Freeman, Co-Chair: Harald Hruschka**	**Models and Modeling**
		Random network evolution models	István Fazekas, Csaba Noszály, Attila Perecsényi, Bettina Porvázsnyik
		Hidden Variable Models for Market Basket Data	Harald Hruschka
		Estimating Heterogeneous Time-Varying Parameters in Brand Choice Models	Winfried J. Steiner, Bernhard Baumgartner, Daniel Guhl, Thomas Kneib
		On GARCH models with temporary structural changes	Norio Watanabe, Fumiaki Okihara
		An SEM approach to modelling housing values	Jim Freeman, Xin Zhao
		The infinite horizon ruin probability in the Cramer-Lundberg model with two-sided jumps.	ELEFTHERIOS THEODOSIADIS, GEORGE TSAKLIDIS
		Nano-Sols Shelf-Life Prediction via Accelerated Degradation Model	Sheng-Tsaing Tseng
Sylvester Room	13.30-15.00	**Invited Talks (Chair: Robert G Aykroyd)**	
	13.30-14.00	**Christian Hennig** Dept of Statistical Science, UCL, United Kingdom	Cluster validation: how to think and what to do?

14.00-14.30	**Romney B Duffey** DSM Associates Inc., USA	Search and Recall: Statistical Learning Theory
15:00-15:30		**Coffee Break**

SCS11	Thursday June 8	SPECIAL AND CONTRIBUTED SESSIONS SCS11	
Hardy Room	15:30-16:30	**Invited Talks (Chair:)**	
	15:30-16:00	**Giovanni Barone Adesi** Università della Svizzera italiana, Switzerland	Risk measures based on option prices and changes in the jump process of asset returns
	16:00-16:30	**Jeffrey Hunter** School of Engineering, Computer and Mathematical Sciences, Auckland University of Technology, New Zealand	Mean First Passage Times in Markov Chains – How best to compute?

Cayley Room	15:30-16:30	**Chair: Markos Koutras**	**Distributions**
		The Compound Run Length Distribution: Properties and Applications	Athanasios C. Rakitzis, Markos V. Koutras
		Compound distributions associated with order statistics	Markos V. Koutras, Vasileios M. Koutras
		A biparametric version of the Univariate Generalized Waring distribution	Jose Rodríguez-Avi, Maria José Olmo-Jiménez, Valentina Cueva-Lopez
		Adaptive MCMC for Multivariate Stable Distributions	Ingrida Vaiciulyte

Burnside Room	15:30-16:30	**Scan Statistics and Applications Invited Session Chair: Jie Chen**	**Scan Statistics and Applications**
		Using scan statistics for the change detection in Granger causality	Jie Chen, Thomas Ferguson, Paul Jorgensen
		Scan Statistics for Disease Clusters with Risk Adjustments	Wendy Lou
		Scan statistics for dependent models	Cristian Preda

Sylvester Room	15:30-16:30	**Chair: Yiannis Dimotikalis, Co-Chair: Lino Sant**	**Estimators - Distributions - Forecasting**
		Choosing tuning instruments for Generalized Rubin-Tucker Lévy Measure Estimators	Lino Sant, Mark Anthony Caruana
		Entropic Analysis of Mixture Binomial Distributions applied to Online Ratings	Yiannis Dimotikalis
		Forecasting with functional data: case study	Laurynas Naruševicius, Alfredas Rackauskas
		Distribution of specific costs of agricultural production in the European Union: an approach based on the quantile regression method	Dominique Desbois

SCS12	Thursday June 8	SPECIAL AND CONTRIBUTED SESSIONS SCS12	
Hardy Room	16:30-17:30	**Invited and Keynote Talks (Chair: Jean-Marie Robine)**	
	16:30-17:00	**Rebecca Kippen** School of Rural Health, Monash University, Australia	Projecting life expectancy: A global history
	17:00-17:30	**Tapan K. Nayak** Dept of Statistics, George Washington University, USA	Event and Its Location Detection in a Wireless Sensor Network

Cayley Room	16:30-17:30	**Invited Session Chair: Anatoliy Swishchuk**	**Stochastic Models in Finance and Energy Finance**

		Stochastic Correlation in Energy Markets	Luis Seco
		A local approach based on risk measures for the hedging of variable annuities	Denis-Alexandre Trottier, Frédéric Godin, Emmanuel Hamel, Richard Luger
		Stochastic Modelling and Pricing of Energy Markets' Contracts with Local Stochastic Delayed and Jumped Volatilities	Anatoliy Swishchuk
		Merging and diffusion approximation of stochastic epidemic models	Mariya Svishchuk
Burnside Room	16:30-17:30	**Chair: Josef Arlt, Co-Chair: George Tsaklidis**	**Filtering - Forecasting - Graphs**
		Using an extended Tobit Kalman filter in order to improve the motion recorded by Microsoft Kinect	K. Loumponias, N. Vretos, P. Daras, G. Tsaklidis
		Estimation of two sided asset return jumps via constraint Kalman filtering	Ourania Theodosiadou, GeorgeTsaklidis
		The Problem of the SARIMA Model Selection for the Forecasting Purpose	Josef Arlt, Peter Trcka, Markéta Arltová
		Extremes in Random Graphs Models of Complex Networks	Natalia Markovich
Sylvester Room	16:30-17:30	**Chair: Samuel Kosolapov**	**Bayes - Monte-Carlo**
		Bayesian Multidimensional Item Response Theory Modeling Using Working Variables	Alvaro Montenegro, Luisa Parra
		Robust Bayesian analysis using classes of priors	Sánchez-Sánchez, M., Sordo, M. A., Suárez-Llorens, A.
		Monte-Carlo Accuracy Evaluation of Pintograph-based Laser Cutting Machine	Samuel Kosolapov
PS	17.30-	**POSTER SESSION** (The list is at the end of the program)	**POSTER SESSION**
	21.00-23.30		**Farewell Dinner**

Friday June 9

SCS13	Friday June 9	SPECIAL AND CONTRIBUTED SESSIONS SCS13	
Hardy Room	8.30-10.15	**Chair: Dimitrios Sotiropoulos**	**Data Analysis III**
		Selecting speech spectrograms to evaluate sounds in development	Dimitrios Sotiropoulos
		An intervention analysis regarding the impact of the introduction of budget airline routes to Maltese tourism	Maristelle Darmanin, David Suda
		Prevalence of Pediatric High Blood Pressure: a Preliminary Estimate	M. Filomena Teodoro, Carla Simão
		Utilizing Customer Requirements' Data to Link Quality Management and Services Marketing Objectives	Andreas C. Georgiou, Kamvysi Konstantina, Gotzamani Katerina Andronikidis Andreas
		Monitoring the compliance of countries on emissions mitigation, using dissimilarity indices	Ketzaki Eleni, Rallakis Stavros, Farmakis Nikolaos, Eftichios Sartzetakis
		The Feed Consumption and the Piglets' Growth during the Rearing Period Observed in 2015 VS Expected in 2005	Marijan Sviben
		Resolving a dynamic winner determination problem (WDP) by dynamic programming	Asli Larbi, Aider Méziane

Cayley Room	8.30-10.15	**Chair: Sergei Silvestrov, Co-Chair: Nikolay Novitsky**	**Models and Modeling II**
		A comprehensive study of Lattice Pricing beyond Black and Scholes	Carolyne Ogutu, Karl Lundengård, Ivivi Mwaniki, Sergei Silvestrov, Patrick Weke
		Context-specific independence in technology study	Federica Nicolussi, Manuela Cazzaro
		Modelling a dynamic size biased sampling	P. Economou, G. Tzavelas, A. Batsidis
		Modelling Dietary Exposure to Chemical Components in Heat-Processed Meats	Stylianos Georgiadis, Lea Sletting Jakobsen, Bo Friis Nielsen, Anders Stockmarr, Elena Boriani, Lene Duedahl-Olesen, Tine Hald, Sara Monteiro Pires
		PROBABILISTIC MODELING OF HYDRAULIC CONDITIONS IN PIPELINE SYSTEMS UNDER A RANDOM SET OF BOUNDARY PARAMETERS AT NODES	Nikolay N.Novitsky, Olga V.Vanteyeva
		PROBABILISTIC MODELING OF HYDRAULIC CONDITIONS OF PIPELINE NETWORKS UNDER RANDOM COMPOSITION OF BOUNDARY CONDITIONS AT NODES	Novitsky N.N., Vanteyeva O.V.
		An approximation to social wellbeing evaluation using structural equation modeling	Leonel Santos-Barrios, Mónica Ruiz-Torres, William Gómez-Demetrio, Ernesto Sánchez-Vera, Ana Lorga da Silva, Francisco Martínez-Castañeda

Burnside Room	8.30-10.15	**Invited Session Chair: Krzysztof Kolowrocki**	**Safety and Reliability of Critical Infrastructures and Complex Systems II**
		Port oil transport critical infrastructure safety approximate evaluation	Krzysztof Kolowrocki, Joanna Soszynska-Budny
		Safety prediction of critical infrastructure impacted by climate-weather change process	Krzysztof Kolowrocki, Joanna Soszynska-Budny
		Simplified approach to safety prediction of port oil transport critical infrastructure related to operation process	Krzysztof Kolowrocki, Joanna Soszynska-Budny
		Embedded Semi-Markov process as reliability model of two different units renewal cold standby system	Franciszek Grabski
		Climate-weather change process realizations uniformity testing for maritime ferry operating area	Ewa Kuligowska, Mateusz Torbicki

		Climate-weather change process realizations uniformity testing for port oil piping transportation system operating area	Ewa Kuligowska, Mateusz Torbicki
		Identification and prediction of climate-weather change process for port oil piping transportation system and maritime ferry operation areas after successful uniformity testing	Ewa Kuligowska, Mateusz Torbicki

Sylvester Room	8.30-10.15	**Chair: Yiannis Dimotikalis**	**Stochastic Processes**
		Comparison of Stochastic Processes	Jesús, E. García, V.A. González-López
		Stochastic Distance between Burkitt lymphoma/leukemia Strains	Jesús, E. García, V.A. González-López
		A multi-mode model for stochastic project scheduling with adaptive policies based on the starting times and project state	Pedro Godinho
		An Application of Data Mining Methods to the Analysis of Bank Customer Profitability and Buying Behavior	Pedro Godinho, Joana Dias, Pedro Torres
		Parameters Estimation of Stochastic Differential Equations Using First Passage Times and Inverse Gaussian Law	Samia MEDDAHI, Khaled KHALDI
		Topic detection using the DBSCAN-Martingale and the Time Operator	Ilias Gialampoukidis, Stefanos Vrochidis, Ioannis Kompatsiaris, Ioannis Antoniou
		Asymptotic Rate for Weak Convergence of Random Walk with a Generalized Reflecting Barrier	Tahir Khaniyev, Basak Gever, Zulfiye Hanalioglu
		Asymptotics for a conditional quantile estimator under censoring and association	Wafaa Djelladj, Abdelkader Tatachak

	10:00-10:30		**Coffee Break**

SCS14	Friday June 9	SPECIAL AND CONTRIBUTED SESSIONS SCS14	
Hardy Room	10:30-11:30	**Invited Talks (Chair: Dimitrios Sotiropoulos)**	
	10:30-11:00	**Griselda Deelstra, Matthieu Simon** Service Sciences Actuarielles, Département de Mathématique, Université libre de Bruxelles, Belgium	Multivariate European option pricing in a Markov-modulated Lévy framework
	11:00-11:30	**Tõnu Kollo, Meelis Käärik, Anne Selart** Institute of Mathematics and Statistics, University of Tartu, Estonia	Asymptotic confidence regions of parameters of the skew normal distribution

Cayley Room	10:30-11:30	**Chair: Sergei Silvestrov, Co-Chair: Robert G Aykroyd**	**Theoretical Issues**
		Numerical Stability of the Escalator Boxcar Train under reducing System of Ordinary Differential Equations	Tin Nwe Aye, Linus Carlsson, Sergei Silvestrov
		Evaluation of Stopping Criteria for Ranks in Solving Linear Systems	Benard Abola, Pitos Biganda, Christopher Engström, Sergei Silvestrov
		Estimation of a Two Variable Second Degree Polynomial	Papatsouma Ioanna, Farmakis Nikolaos, Ketzaki Eleni
		PageRank and Perron-Frobenius Theory in Analysis of Non-negative Matrices	Benard Abola, Sergei Silvestrov

Burnside Room	10:30-11:30	**Chair: Y. Kaniovski**	**Theory**
		Dependent credit-rating migrations: a heuristics for estimating unknown parameters	Y. Kaniovski, Y. Kaniovskyi, G. Pflug
		Limit Theorems for Compound Renewal Processes: Theory and Applications	Nadiia Zinchenko
		A spectral analysis of the Weierstrass-Mandelbrot function on the Cantor set	Emanuel Guariglia, Xiaomin Qi, Sergei Silvestrov
		Bismut's way of the Malliavin Calculus for large order generators on a Lie group	Rémi Léandre

Sylvester Room	10:30-11:30	**Chair: Lino Sant, Co-Chair: Doncho Donchev**	**Markov - Stochastic**
		Modelling grade seniority in manpower planning: Markov or semi-Markov?	Philippe Carette, Marie-Anne Guerry
		Rates of approximation of integral functionals of Markov processes with applications	Iurii Ganychenko
		Brownian motion exit densities for general one-sided boundaries	Doncho Donchev
		A Realized p-Variation Random Function As a Statistical Diagnostic for Semimartingales	Lino Sant

SCS15	Friday June 9	SPECIAL AND CONTRIBUTED SESSIONS SCS15	
Hardy Room	11:30-12:20	**Keynote Talk (Chair: Christos Skiadas)**	
		N. Balakrishnan Department of Mathematics and Statistics, McMaster University, Hamilton, Ontario, Canada	Multivariate Stochastic comparisons in Actuarial Science and Applications

Cayley Room	11:30-12:30	**Chair:**	**Queues - Renewal - Inventory - Neural**
		Robust Analysis of Retrial Queues	Lounes Ameur, Louiza Berdjoudj, Karim Abbas
		Join Moments for the Backward and Forward recurrence times	Losidis Sotirios, Konstadinos Politis
		The Epistemic Uncertainty Analysis for the Inventory Management System with (Q,r) Policy	Massinissa Soufit, Karim Abbas
		Estimation the Key Value of Shift Cipher by Neural Networks – A Case Study	Eylem Yucel, Ruya Samli

Burnside Room	11:30-12:30	**Chair: Sergei Silvestrov**	**Data Analysis - Matrix**
		PageRank re-calculation methods based on specific types of changes in a graph	Christopher Engström, Sergei Silvestrov
		Stepwise Regression – an Application in Earthquakes Localization	E. Guariglia, G. Pucciarelli, S. Silvestrov
		Data Analysis of Nanoliquid Thin Film Flow over an Unsteady Stretching Sheet in Presence of External Magnetic Field	Prashant G Metri, Sergei Silvestrov
		Extreme points of ordinary and generalized Vandermonde determinants	Jonas Österberg, Sergei Silvestrov, Karl Lundengård
		Fractional Derivative of the Gabor-Morlet wavelet – an Application in Volcanology	E. Guariglia, G. Pucciarelli, S. Silvestrov

Sylvester Room	11:30-12:30	**Chair:**	
		Odd Log-Logistic Power Lindley Distribution with Theory and Lifetime Data Application	Gamze Özel Kadilar, Emrah Altun, Morad Alizadeh
		Familys' transfers to the divorced elderly	Ekaterina Tretyakova
		On the behavior of the conditional quantile estimator for truncated-associated data	Latifa Adjoudj, Abdelkader Tatachak
		Hazard rate estimator for right censored data under association	Samra Dhiabi, Ourida Sadki
		Greece and India the countries of great heritages: Facing critical socio-economic crisis	Barun Kumar Mukhopadhyay

	12:30	**Closing Ceremony**	
	12:30-13.30		**Lunch**

Excursion	Saturday June 10 (9:00-19:00)	Full Day Excursion

PS	Poster Titles	Poster Authors
	How to compute the rise time of the acquisition of consonants	Elena Babatsouli
	Influence of Missing Data on The Estimation of The Number of Components of a PLS Regression	F. Bertrand, T.A. Nengsih, M. Maumy-Bertrand, N. Meyer
	Empirical Power Study of the Jackson Exponentiality Test	Frederico Caeiro, Ayana Mateus
	Some remarks on limit results of the theory of discrete time branching processes	Azam A. Imomov
	The Mathematical Modeling of the Global Climatic Migration	Talgat R. Kilmatov
	Financial risk management modeling via random order statistics	V. M. Koutras, M. V. Koutras
	A New Distribution For The Fatigue Lifetime	Gamze Özel, Selen Cakmakyapan
	Comparing generalized mixed effects models with RE-EM tree method in corporate financial distress prediction	Lukáš Sobíšek, Maria Stachova
	Frost Prediction in Apple Orchards Based Upon Time Series Models	Monika A. Tomkowicz, Armin O. Schmitt
	Results on Multivariate Risk-Adjusted Survival Time CUSUM and EWMA Control Charts	Athanasios Sachlas, Stelios Psarakis, Sotiris Bersimis
	TRUNCATION OF MARKOV CHAINS WITH APPLICATIONS TO QUEUEING	Badredine Issaadi, Karim Abbas, Djamil Aïssani
	Price sensitivities for stochastic volatility models	Youssef El-Khatib, Abdulnasser Hatemi-J
	Mathematical aspects of the nuclear glory phenomenon: from backward focusing to Chebyshev polynomials	Vladimir B. Kopeliovich
	Rescaling of quantized skyrmions: from nucleon to baryons with heavy flavor	Vladimir B. Kopeliovich, Irina K. Potashnikovady
	Quantifying the sensitivity of bush bean and maize seed germination to soil oxygen using an oxygen-time threshold model	Behnam Behtari, Adel Dabbag, Mohammadi Nasab
	On the kernel hazard rate estimation under association and truncation	Abdelkader Tatachak, Zohra Guessoum
	The Half-logistic Lomax distribution for lifetime modeling	Masood Anwar, Jawaria Zahoor
	Predicting of least limiting water range (LLWR) of soil using MSECE model	Behnam Behtari, Adel Dabbag Mohammadi Nasab
	Sparsity Against Exponential Complexity: Parallel Implementation of Separate Testing of Inputs. Authorship Attribution via Sparse Stochastic Context Trees Modeling	Paul Grosu, Mikhail Malyutov, Javed Aslam, Hanai Sadaka, Virgil Pavlu, and Tong Zhang
	Assessment of clustering of deaths among families with declining levels of mortality in India, 1992-2006	Mukesh Ranjan, L.K Dwivedi
	TRIBAL DEATH CLUSTERING IN CENTRAL AND EASTERN INDIAN STATES	Mukesh Ranjan, L.K Dwivedi
	Population explosion: challenges in management in the megacities of India	K. Shadananan Nair
	Planning and management of transport resources constraints	Abdelkader Lamamri, Imene Mehamdia
	Probability Weighted Moments Method for Pareto distribution	Frederico Caeiro, Ayana Mateus