International Society for Business and Industrial Statistics (ISBIS) Satellite Conference with Focus on Quality Control and Improvement

Emanuel Pimentel Barbosa (1951-2014), In Memoriam

July 22- July 24, 2015, University of Campinas, Brazil

<u>Program</u>

July, 22

Room 1	10:00-12:00 14:00-16:00 16:30-18:30	Short-Course Advanced Methods in Statistical Process Control	Emmanuel Yashchin, IBM T. J. Watson Research Center, USA.

July, 23

Room 1	09:30-10:30	Keynote Conference: Statistical Aspects of Early Warning Systems	Emmanuel Yashchin, IBM T. J. Watson Research Center, USA

July, 24

Room 1	11:15-12:15	Keynote Conference: Rain Dance: Role of Randomization in Clinical Trials	Carlos Alberto de Bragança Pereira & Sergio Wechsler, University of São Paulo, Brazil

Wednesday-July 22

Room	Time		
Hall	08:00-09:45	Registration	-
Room 1	10:00-12:00	Short-Course – 1st Session Advanced Methods in Statistical Process Control	Emmanuel Yashchin, IBM T. J. Watson Research Center, USA.
	12:00-14:00	Lunch Time	
Room 1	14:00-16:00	Short-Course – 2nd Session Advanced Methods in Statistical Process Control	Emmanuel Yashchin, IBM T. J. Watson Research Center, USA.
Hall	16:00-16:30	Coffee-Break	
Room 1	16:30-18:30	Short-Course – 3rd Session Advanced Methods in Statistical Process Control	Emmanuel Yashchin, IBM T. J. Watson Research Center, USA.
Hall	18:45-20:00	Welcome Reception	

Thursday-July 23

Hall	08:00-08:30	Registration	
Room 1	08:30-9:15	Opening Ceremony	
Room 1	09:30-10:30	Keynote Conference: Statistical Aspects of Early Warning Systems	Emmanuel Yashchin, IBM T. J. Watson Research Center, USA
Hall	10:30-10:45	Short Coffee-Break	
Room 1	11:00-12:30	Chair: Nalini Ravishanker, University of Connecticut, Storrs, USA	Time Series Modeling with Applications in Business and Finance
Invited Session	1	Particle Learning for Bayesian Non-Parametric Markov Switching Stochastic Volatility Model	Hedibert F. Lopes, Insper, Brazil
	2	State Space Modeling of Multivariate Time Series of Counts	Refik Soyer, George Washington University, USA
	3	Clustering Nonlinear and Nonstationary Financial Time Series	Nalini Ravishanker, University of Connecticut, USA
Room 2	11:00-12:30	Chair: Roger Nelsen, Lewis & Clark College, USA- V.A. González-López, University of Campinas, Brazil	Theory and Applications of Copulas
Invited Session	1	A p-variate dependence test based on the size of the longest increasing path in a sample	J. E. García, University of Campinas, Brazil
	2	A statistical tool for management based on copula conditional expectation	Mariela Fernández, BM&FBovespa, Brazil

Thursday-July 23

Room 3	11:00-12:30	Chair: David Banks, Duke University, USA	Applications in Business and Economics
Invited Session	1	Dynamic Text Networks	David Banks, Duke University, USA
	2	Modeling Competing Risks in the Presence of Long Term Survivors	Mercy Marimo, University of the Witwatersrand, South Africa
	3	Link Between the Default Rate and the Economic Situation	Lao Kenao, Ministry of Agriculture, Togo

	12:30-14:00	Lunch Time	

Room 1	14:15-15:15	Chair: Bianca Zadrozny, IBM Research, Brazil	Statistical Methods for Predictive Modeling using Sensor Data
Invited Session	1	Bus Travel Time Predictions Using Additive Models	Matthias Kormaksson, IBM Research, Brazil
	2	A Data Driven Method For Sweet Spot Identification In Shale Plays Using Well Log Data	Bianca Zadrozny, IBM Research, Brazil

Room 2	14:15-15:15	Chair: J. E. García and V.A. González-López, University of Campinas, Brazil	Estimation in Partition Markov Models
Invited Session	1	A Copula-Based Partition Markov Procedure	V.A. González-López, University of Campinas, Brazil
	2	Copula-Based Analysis of Rhythm	M. L. Lanfredi Viola Federal University of São Carlos, Brazil

Thursday-July 23

Room 3	14:15-15:15	Chair: Paulo Canas Rodrigues, Federal University of Bahia, Brazil	Recent advances in time series modelling and forecasting
Invited Session	1	Recursive partitioning for mixture models: application to environmental data	Pilar Muñoz Gracia & J. A. Sanchez-Espigares, Universitat Politècnica de Catalunya-BarcelonaTech, Spain
	2	Some Theoretical Aspects of the Multivariate Singular Spectrum Analysis	Rahim Mahmoudvand, Bu-Ali Sina University, Iran

Hall	15:15-15:30	Short Coffee-Break	

Room 1	15:45-17:15	Chair: Raffaele Argiento, National Research Council (CNR), Italy	Enbis Session: Bayesian Models for Engineering Problems
Invited Session	1	Probabilistic Support Vector Regression of Time Series Data for Prognostics in Nuclear Power Plants	Valeria Vitelli University of Oslo, Norway
	2	Semi-Markov Modelling of Electricity Co-generation in Residential Applications with Time-dependent Covariates	Raffaele Argiento, National Research Council (CNR), Italy
	3	Flexible Classes of Linear Degradation Models	Rosangela Helena Loschi, Federal University of Minas Gerais, Brazil

Thursday-July 23

Room 2	15:45-17:15	Chair: Marcel Simis, University of São Paulo, Brazil	Quality Control and Improvement of Stroke Rehabilitation
Invited Session	1	Dependency between clinical assessment and kinematic variables assessed with robotic device	J.E. García & V.A. González-López, University of Campinas, Brazil
	2	Importance of an accurate assessment for motor function in stroke rehabilitation	Thais Terranova, University of São Paulo, Brazil
	3	New technology to measure brain plasticity and its application in rehabilitation	Marcel Simis, University of São Paulo, Brazil

Room 3	15:45-17:15	Chair: Laura Rifo, University of Campinas, Brazil	Inductive Statistics: foundations and applications I
Invited Session	1	Categorical data analysis using a skewed Weibull regression model	Adriano Polpo de Campos, Federal University of São Carlos, Brazil
	2	A Simple Algorithm for Maximum Likelihood Estimation of Population Size under a Heterogeneous Closed Capture-recapture Model	Luis Ernesto Bueno Salasar, Federal University of São Paulo, Brazil
	3	Classifying the origin of archaeological fragments with Bayesian networks	Victor Fossaluza, University of São Paulo, Brazil

Room 4	15:45-17:45	Chair: Victor Leiva, Adolfo Ibáñez University, Chile	Topics on Statistical Applications in Business and Industry
Invited Session	1	A New Direction of Attribute Control Charts for Product Duration	Victor Leiva, Adolfo Ibáñez University, Chile
	2	Birnbaum-Saunders Capability Indices for Industrial Processes	Carolina Marchant, Federal University of Pernambuco, Brazil
	3	An Optimized Methodology with Dependent Demand for Food Industry	Fernando Rojas, University of Valparaíso, Chile
	4	Birnbaum-Saunders Control Charts	Juan A. Vega, University of Tarapacá,

		Applied to Pharmaceutical Industry	Chile

	18:00	Conference Photo in Front of IMECC	
CPV Hotel	18:30	Conference Dinner	Buy your ticket in Registration Desk

Friday, July 24

Hall	08:30-09:00	Coffee-Break	
Room 1	09:00-10:30	Chair: David Banks, Duke University, USA	Topics in Computational Advertising
Invited Session	1	Convex Biclustering	Genevera Allen, Rice University, USA
	2	Active Learning to Rank Using Pairwise Supervision. Application in Financial Risk Evaluation	Hongfei Li, IBM T. J. Watson Research Center, Yorktown Heights, NY, USA

Room 2	09:00-10:30	Chairs: Fabrizio Ruggeri, National Research Council (CNR), Italy Nalini Ravishanker, University of Connecticut, USA Emmauel Yashchin, IBM, USA	ASMBI Discussion Paper Session
Invited Session	Discussants:	Raffaele Argiento, National Research Council (CNR), Italy	Rosangela Loschi, Federal University of Minas Gerais, Brazil
		Talk: Cumulative Damage Distributions: New Developments and Goodness-of-fit	Speaker: Victor Leiva, Adolfo Ibáñez University, Chile

Room 3	09:00-11:00	Chair: Laura Rifo, University of Campinas, Brazil	Inductive Statistics: foundations and applications II
Invited Session	1	Data analysis for Weibull variates interval censured	Teresa Cristina Martins Dias, Federal University of São Carlos, Brazil
	2	A Non-inferiority Test for Survival Response Assuring the Control of Type I Error	Juliana Cobre, University of São Paulo, Brazil

	3	Implementation of censored regression models for survival analysis	Danilo L. Lopes, Federal University of São Carlos, Brazil
	4	Bayesian inference for the memory in diffusion processes	Laura Rifo, University of Campinas, Brazil

Friday, July 24

Room 4	09:00-11:00	Chair: Vera Tomazella, Federal University of São Carlos, Brazil	
Short Communication Student Session	1	Bivariate rotated Clayton copula SUR Tobit model: a modified inference function for margins, interval estimation and a financial application	Paulo H. Ferreira, Federal University of São Carlos, Brazil
	2	A geometric problem in bayesian model selection	Fernando Corrêa, University of São Paulo, Brazil
	3	Case-Deletion Diagnostics for Quantile Regression Using the Asymmetric Laplace Distribution	Luis Enrique Benites Sánchez, University of São Paulo, Brazil
	4	Unified Kumaraswamy-G Cure Rate Models	Ricardo Rocha, Federal University of São Carlos, Brazil
	5	Application of blind source separation methods to process monitoring using control charts	Guilherme Dean Pelegrina, University of Campinas, Brazil

Room 1	11:15-12:15	Keynote Conference: Rain Dance: Role of Randomization in Clinical Trials	Carlos Alberto de Bragança Pereira & Sergio Wechsler, University of São Paulo, Brazil

	12:15-14:00	Lunch Time	

Room 1	14:15-15:15	Chair: Nalini Ravishanker, University of Connecticut, USA	Time Series Modeling Approaches

Invited Session	1	Simulated Maximum Likelihood in a Markov Switching Stochastic Volatility Model	Bovas Abraham, University of Waterloo, Canada
	2	Fuzzy Sets Approach in Mathematical Finance and Applications	Aerambamoorthy Thavaneswaran, University of Manitoba, Canada

Friday, July 24

Room 2	14:15-16:15	Chair: Alan De Genaro, University of São Paulo and CETIP, Brazil	Monte Carlo Simulations, GPUs and Finance
Invited Session	1	Accelerating Derivatives Contracts Pricing Computation with GPGPUs	Alexandre Barbosa, BM&FBOVESPA, Brazil
	2	Systematic multi-period stress scenarios with an application to CCP risk management	Alan De Genaro, University of São Paulo and CETIP, Brazil
	3	Volatility Index and Risk Premium	Marcos Eugenio Da Silva, University of São Paulo, Brazil

Room 3	14:15-15:15	Chair: Luis Gustavo Esteves, University of São Paulo, Brazil	Statistical Inference
Invited Session	1	Estimation of Causal Functional Linear Regression Models	José Carlos Simon de Miranda, University of São Paulo, Brazil
	2	On Making Statistical Inference under Model Nonidentifiability	Luís Gustavo Esteves, University of São Paulo, Brazil

Room 1	16:15-16:30	Ending Ceremony	