

# Program at a glance of the IWSM 2009

## June 15, 2009

08h00 -- 08h10: Transfer downtown → UTT

08h10 -- 08h40: Registration/beverages

08h40 – 09h10: Opening Session

09h20 – 10h20: SQA Editor's Special Invited Paper Presentation

Chair: Nitis Mukhopadhyay, University of Connecticut, USA

**Albert N. Shiryaev,**

**Quickest detection of the spontaneous appearing effects - fifty years later**

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10h30 – 12h30: Four parallel sessions

### **Sequential Design in Clinical Trials** [10h30 – 12h30]

Organizer: Steve Coad, Queen Mary, University of London, UK and William F. Rosenberger, George Mason University, USA

Chair: Steve Coad, Queen Mary, University of London, UK

Anastasia Ivanova

Adaptive Dose-finding

Feifang Hu, Edison Choe and Lu Xia

Sample Size of Randomized Clinical Trial: A Simulation Study

Alessandra Giovagnoli, Alessandro Baldi Antognini

Ethics and Inference in Binary Response Clinical Trials: Admissible Allocations and Response-adaptive Randomization

Yolanda Barbachano, Steve Coad

The Use of Group Sequential Tests with Designs which Adjust for Imbalances in Prognostic Factors

Discussion: Discussant William F. Rosenberger

### **Detection of Multiple Changes** [10h30 – 12h30]

Contributed session

Chair: TBD

Pierre Bertrand, Mehdi Fhima

Filtered Derivative with p-value Method for Multiple Change-point Detection

Edgard M. Maboudou, Douglas M. Hawkins

Fitting Multiple Change-Point Models to a Multivariate Gaussian Model

Krzysztof Szajowski

A detection of at least two disorders in random sequences

Wojciech Sarnowski, Krzysztof Szajowski

Unspecified Distributions in Disorder Problem

### **Sequential Estimation for Dependent Observations** [10h30 – 12h30]

Organizer: Leonid Galtchouk, Strasbourg University, France

Chair: Vladimir Dragalin, Global Biostatistics, Wyeth Research

Jean-Yves Brua  
Sequential Nonparametric Pointwise Estimation of the Drift in Ergodic Diffusion Processes

Dominique Fourdrinier, Victor Konev, Sergey Pergamenschikov  
Truncated Sequential Estimation of the Parameter of a First Order Autoregressive Process With Dependent Noises

Leonid Galtchouk, Victor Konev  
On Asymptotic Normality of Sequential LS-estimates of Unstable Autoregressive Processes

Leonid Galtchouk, Sergei Pergamenschikov  
Adaptive Sequential Estimation for Ergodic Diffusion Processes in Quadratic Metric

**Sequential Inference and Methodologies – I** [10h30 – 12h30]

Organizer: Nitis Mukhopadhyay, University of Connecticut, USA

Chair: T. N. Sriram, University of Georgia, Athens, USA

Nitis Mukhopadhyay, Debanjan Bhattacharjee  
On SPRT and RSPRT for the Unknown Mean in a Normal Distribution Whose Variance Is a Multiple of the Mean

Andrey Novikov  
Optimal Sequential Procedures with Bayes Decision Rules

Tumulesh K. S. Solanky  
Multistage Methodologies for Partitioning a Set of Exponential Populations

Yoshikazu Takada  
Selecting the Best Normal Population Better Than a Standard under the Unequal Variance Case

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**Lunch:** 12h30 -- 14h00

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14h00 – 16h00: Four parallel sessions

**Clinical Trials and Optimal Design Experiments** [14h00 – 16h00]

Contributed session

Chair: TBD

Elodie Blondiaux, Eric Derobert  
A New Method for a One-Shot Unblinded Sample Size Reassessment in Two-Group Trials: How & When ?

Jay Myung, Mark Pitt, Yun Tang, Dan Cavagnaro  
Bayesian Adaptive Optimal Design of Psychology Experiments

Luc Pronzato  
Penalized and Response-adaptive Optimal Designs, With Application to Dose Finding

Ying Yan, Steve Coad  
Estimation of Secondary Parameters following Sequential Tests for Multivariate Data

**Sequential Monitoring for Dependent Observations I** [14h00 – 16h00]

Organizer: Marie Hušková, Charles University Prague, Czech Republic

Chair: Marie Hušková, Charles University Prague, Czech Republic

Alexander Aue, Lajos Horváth, Matthew Reimherr  
Delay Times of Sequential Procedures for Multiple Time Series Regression Models

Marie Hušková, Zuzana Prášková, Josef Steinebach  
Delay Time in Monitoring Jump Changes in Linear Models

Josef Steinebach, Alexander Schmitz  
On the Monitoring of Changes in Linear Models with Dependent Errors

Claudia Kirch, Marie Hušková  
Bootstrapping Sequential Change-Point Tests

**Sequential Methodologies for Applications** [14h00 – 16h00]

Contributed session

Chair: TBD

Alexia Briassouli, Ioannis Kompatsiaris  
Change Detection for Video

Mitra Fouladirad, Antoine Grall  
On-line Condition-Based Maintenance

Elena A. Grebenuk  
Monitoring of Stationary and Non-stationary Processes: On - Line Detection of the Structural Shifts

Jan Kalina  
Locally Most Powerful Tests Based on Sequential Ranks

**Sequential Testing and Optimal Stopping – I** [14h00 – 16h00]

Organizers: George V. Moustakides, University of Patras, Greece and Alexander Tartakovsky,  
University of Southern California, USA

Chair: George V. Moustakides, University of Patras, Greece

Boris Darkhovsky  
Change-point Problem for High-order Markov Chain under Composite Hypotheses

Savas Dayanik, Semih Sezer  
Multisource Bayesian Sequential Hypothesis Testing

Sung Won Han, Yajun Mei, Kwok-Leung Tsui  
Early Detection of a Change in Poisson Rate after Accounting for Population Size Effects

Alexander Tartakovsky, Aleksey Polunchenko, George Moustakides  
Design and Comparison of Shiryaev-Roberts- and CUSUM-Type Change-Point Detection Procedures

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16h00 - 16h20: coffee breaks

16h20 - 16h30: Transfer UTT → downtown

17h00 - 18h30: Visit of downtown

19h00 - 22h00: Reception at the Town Hall (downtown)

# June 16, 2009

08h00 - 08h10: Transfer downtown → UTT

08h10 - 08h30: Registration

08h30 – 09h30: Plenary session

Chair: TBD

**Moshe Pollak**

**The Shiryaev-Roberts Changepoint Detection Procedure in Retrospect - Theory and Practice**

09h30 – 10h00: coffee breaks

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10h00 – 12h00: Four parallel sessions

## **Online Flutter Monitoring: Adaptive and Sequential Estimation and Detection Techniques**

[10h00 – 11h30]

Organizer: Michèle Baseville, IRISA, France

Chair: Igor Nikiforov, UTT, France

Pierre Vacher, Béatrice Jacquier, Aurélien Cordeau, Alain Bucharles  
Flutter Fight Tests: a Challenging Benchmark for Real-time Methods

Tadeusz Uhl

Real Time Flight Flutter Monitoring – Algorithms and Implementation

Michèle Basseville, Laurent Mevel, Rafik Zouari

Variations on CUSUM Tests for Flutter Monitoring

## **Sequential Inference and Methodologies – II** [10h00 – 12h00]

Organizer: Nitis Mukhopadhyay, University of Connecticut, USA

Chair: Harry Staines, Boehringer-Ingelheim, Reims, France

Basil M. de Silva, L. Sandamali Dharmasena

Sequential Kernel Regression

Guido Knapp, Joachim Hartung

Adaptive Confidence Intervals of Desired Length and Power for Normal Means

Amitava Mukherjee

Semi-Sequential Rank Based Test for Location for Bivariate Population

T. N. Sriram

Sequential inference (robust estimation) in finite mixture models and time series

## **Sequential Monitoring for Dependent Observations – II** [10h00 – 11h30]

Organizer: Josef Steinebach, University of Cologne, Germany

Chair: Josef Steinebach, University of Cologne, Germany

Edit Gombay

Sequential Monitoring Algorithms for Time Series

Allan Gut, Josef Steinebach

Sequential Detection of Change-Points in Counting Processes

Ansgar Steland

On Local Linear Surveillance of Trend Stability and Asymptotic Results for the Stopped Detectors

**Optimal Stopping and Applications** [10h00 – 12h00]

Contributed session

Chair: TBD

F. Thomas Bruss, Yvik C. Swan

A continuous Time Approach to Robbins' Problem and Open Questions

Cheng-Der Fuh, Sheng-Feng Luo, Ju-Fang Yen

A Continuity Correction under Jump-Diffusion Models with Applications in Finance

Albrecht Irle

On Forward Improvement Iteration for Stopping Problems

Maben Rabi, Karl H. Johansson

Optimal Stopping for Updating Controls

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**Lunch** 12h30 -- 14h00

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14h00 – 15h00: Plenary session

Chair: TBD

**Marie Hušková**

**Sequential nonparametric estimation**

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15h10 – 17h10: Four parallel sessions

**Treatment Selection Designs in Clinical Trials** [15h10 – 16h40]

Organizer: Steve Coad, Queen Mary, University of London, UK

Chair: Anastasia Ivanova, University of North Carolina, USA

Martin Posch, Willi Maurer, Frank Bretz

Issues in Type I Error Rate Control in Adaptive Clinical Trials with Treatment Selection

Susan Todd, Tim Friede, Nigel Stallard, Nicholas Parsons, Elsa Valdés-Márquez, Jeremy Chataway, Richard Nicholas

Adaptive Clinical Trials Incorporating Treatment Selection and Evaluation: Methodology and Applications in Multiple Sclerosis

Gernot Wassmer

Computational Aspects of Testing and Estimation Procedures in Multi-armed Designs with Treatment Selection

**Control Charts – Revisited** [15h10 – 17h10]

Organizer: Wolfgang Schmid, European University, Germany

Chair: Wolfgang Schmid, European University, Germany

Eva Andersson, Marianne Frisen

On-line Detection of Onset of an Outbreak - a Semiparametric approach

Marianne Frisen, Eva Andersson

Optimality Aspects of Multivariate Control Charts

Sven Knoth

CUSUM, EWMA, and Shiryaev-Roberts under Drift

Manuel Cabral Morais, Yarema Okhrin, Wolfgang Schmid

What Happens to EWMA Control Charts When  $\lambda$  Converges to Zero?

**Two-Stage and Sequential Estimation** [15h10 – 16h40]

Organizer: Shelley Zacks, Binghamton University, USA

Chair: Shelley Zacks, Binghamton University, USA

Joseph Glaz

Nonparametric Repeated Significance Tests with Random Sample Size

Shelemyahu Zacks, Nitis Mukhopadhyay

On Exact and Asymptotic Properties of Two-Stage Estimation of the Normal Mean under LINEX Loss

Shelemyahu Zacks

Sequential Estimation of the Mean of a Normal Distribution under LINEX Loss

**Sequential Methods in Sensor Networks** [15h10 – 17h10]

Organizers: Yajun Mei, Georgia Tech, USA and Cheng-Der Fuh, Institute of Statistical Science, Academia Sinica, Taiwan

Chair: Yajun Mei, Georgia Tech, USA

Giorgos Fellouris, George Moustakides

Decentralized Sequential Hypothesis Testing in Discrete Time

Olympia Hadjiliadis, Hongzhong Zhang, H. Vincent Poor

One Shot Schemes in Decentralized Systems with Discrete and Continuous time Observations

Ram Rajagopal, XuanLong Nguyen, Sinem Coleri Ergen, Pravin Varaiya

Theory of Simultaneous Fault Detection for Multiple Sensors

Cheng-Der Fuh, Yajun Mei

Quickest Change Detection in Hidden Markov Models for Sensor Networks

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17h10 – 17h30: coffee breaks

17h30 – 18h45: Plenary session

**Celebration of Sequential Analysis**

**Part I** : 17h30 – 18h00

**Abraham Wald Prize in Sequential Analysis Ceremony**

Chair: Nitis Mukhopadhyay

**Part II** : 18h00 – 18h45:

**Albert Shiryaev's 75th Birthday Felicitation**

Chair: Alexander Tartakovsky

19h00 -- 21h30: Reception at the UTT

21h30 -- 21h40: Transfer UTT → downtown

# June 17, 2009

08h00 - 08h10: Transfer downtown → UTT

08h10 - 08h30: Registration

08h30 – 09h30: Plenary session

Chair: TBD

**Vladimir Dragalin**

**Adaptive designs in dose-ranging clinical trials**

09h30 – 10h00: coffee breaks

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10h00 – 12h00: Four parallel sessions

**Sequential Inference and Methodologies – III** [10h00 – 11h30]

Organizer: Nitis Mukhopadhyay, University of Connecticut, USA

Chair: Yoshikazu Takada, Kumamoto University, Kumamoto, Japan

Marlo Brown

Monitoring a Poisson Process in Several Categories subject to Changes in the Arrival Rates

Cloud Makasu

FBSDEs with Stopping Times and Optimal Stopping Problems

Ivair Silva, Renato Assuncao, Marcelo Azevedo

Power of the Sequential Monte Carlo Test

**Sequential Change-point Detection and Isolation** [10h00 – 12h00]

Organizer: Igor Nikiforov, UTT, France

Chair: Igor Nikiforov, UTT, France and George V. Moustakides, University of Patras, Greece

Albrecht Irle, Vladimir Lotov

On the Properties of a Multiple Sequential Test

Venkat Chandar, Aslan Tchamkerten, Gregory Wornell

A Novel Asynchronous Communication Paradigm: Detection, Isolation, and Coding

Nadine Hilgert, Ghislain Verdier, Jean-Pierre Vila

A Filtering-based Algorithm for Change Detection in Dynamic Models with Unknown Parameter after Change

Lionel Fillatre, Igor Nikiforov

Sequential Detection and Isolation of Non-orthogonal Alternatives

**Adaptive Sequential Subset Selection Procedures** [10h00 – 11h30]

Organizer: Cheng-Shiun Leu, Columbia University, USA

Chair: Ying Kuen Cheung, Columbia University, USA

Cheng-Shiun Leu, Bruce Levin

A Modification of Bechhofer, Kiefer, and Sobel Subset Selection Procedure

Ying Kuen Cheung

Phase 2 Selection Trials with a Prospective Control

Adin-Cristian Andrei, Susan Murray

Efficiency Considerations in Group Sequential Analyses Based on the Simultaneous Use of Rank-based and Weighted Kaplan-Meier Tests for Paired Censored Survival Data

**Sequential Testing and Optimal Stopping** [10h00 – 12h00]

Contributed session

Chair: TBD

Boris Brodsky

Sequential Detection of Change-Points in Linear Models

Anatoly Zhigljavsky

Application of the Singular Spectrum Analysis for Change-point Detection in Time Series

Mikhail L. Nikolaev, George Yu. Sofronov, Tatiana V. Polushina

Multiple Best Choice Problems

Urs Niesen and Aslan Tchamkerten

Detection of a Stopping Time through Noisy Observations

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**Lunch** 12h30 -- 14h00

14h00 – 15h00: Plenary session

**SQA: Round Table (Organizer: Nitis Mukhopadhyay)**

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15h10 – 17h10: Two parallel sessions

**Sequential Estimation and Sequential Rank Tests** [15h10 – 16h10]

Contributed session

Chair: TBD

Rahul Gupta

Multi-Stage Procedures for Estimation in a Random One Way Model

Edgard M. Maboudou, Douglas M. Hawkins

Algorithm for Sequential Estimation of the Covariance Matrix and some Applications

**Sequential Testing and Optimal Stopping - II** [15h10 – 17h10]

Organizers: Alexander Tartakovsky, University of Southern California, USA and George V.

Moustakides, University of Patras, Greece

Chair: Alexander Tartakovsky, University of Southern California, USA

Jay Bartroff, Larry Goldstein, Yosi Rinott, Ester Samuel-Cahn

The Spend-It-All Region and Small Time Results for the Continuous Bomber Problem

Boris Brodsky

Sequential Detection and Estimation of Change-Point.

George V. Moustakides

Change-time Models and Performance Measures for Sequential Change Detection

Benjamin Yakir

Multi-channel Change-Point Detection Statistic with Applications in DNA Copy-Number Variation

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17h10 – 17h20 coffee breaks

17h20 – 18h00 Closing

18h10 - 18h20 Transfer UTT → downtown