147th ICB SEMINAR

Tenth International Seminar

STATISTICS AND CLINICAL PRACTICE

Chairmen:

Prof. Leon Bobrowski
Prof. Zdenek Valenta
Dr. Cornelia Enăchescu

WARSAW, May 15 – 18, 2016

PROGRAMME OF THE SEMINAR

Sunday, **May 15**

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*GET TOGETHER PARTY FOR LECTURERS
AND ACCOMPANYING PERSONS*
16:30 – 18:00

Monday, **May 16**

**OPENING OF THE SEMINAR
11:00 – 11:15
WELCOME ADDRESS by Piotr Ładyżyński** *(Poland)*
Director of the International Center of Biocybernetics

Chair: **Cornelia Enăchescu**

11:15 - 11:50 Michael Genin, Cristian Preda, Allain Duhamel, Corinne Gower-Rousseau *(France)*
"Isotonic spatial scan statistics: application to the epidemiology of Crohn's disease in northern France"

11:50 - 12:25 Cristian Preda, **Vincent Vandewalle** *(France, Romania)*
"Clustering categorical functional data"

12:25 - 13:00 Bogdan Alexe *(Romania)*
"Using a bivariate scan statistics for detecting disease clusters"

13:00 - 14:00   *LUNCH BREAK*

Chair: **Cristian Preda**

14:00 - 14:30 Cornelia Enachescu, **Denis Enachescu** *(Romania)*
"IRIS biometrics: adaptive resonance networks for indexing and retrieving data"

14:30 - 15:00 Zdenek Valenta, P. Ošťádal, D. Vondráková, M. Průcha,
A. Kruger, M. Janotka *(Czech Republic)*
"Survival and 30 – days cerebral performance in patients with successful cardiopulmonary resuscitation following cardiac arrest: statistical inference in the presence of incomplete data"

15:00 - 15:30 Łukasz Mierzejewski, <u>Wojciech Niemiro</u>, Wojciech Rejchel,
Marta Zalewska *(Poland)*
"Infections caused by CLOSTRIDIUM DIFFICILE: feature selection via ORDINAL REGRESSION"

Tuesday, May 17

Chair: **Zdenek Valenta**

10:00 - 10:30 <u>Małgorzata Ćwiklińska-Jurkowska</u>, Anna Wolińska-Welcz
(Poland)
"Dimensionality reduction and visualization of genomic data"

10:30 - 11:00 <u>Oniśko Agnieszka</u> *(Poland)*
"Modeling uncertain medical knowledge with Bayesian networks: engineering and applications"

11:00 - 11:30   Leon Bobrowski *(Poland)*
"Biclustering through collinear patterns extraction"

11:30 - 12:00 <u>Paul Munro</u> *(USA)*
"A framework for combining unsupervised and supervised learning procedures"

12:00 - 13:00   Jose Carlos Ferreira *(Portugal)*
"Brace yourself. Big data, really big, is coming!! An appraisal of genomic data studies and a summary of newly launched genomic initiatives"

13:00 - 14:00   *LUNCH BREAK*

POSTER SESSION
14:30 – 16:00

Chair: **Oniśko Agnieszka**

I. Chmiel, M. Górkiewicz, Faculty of Health Science, Jagiellonian University of Krakow, (Poland)
"Combining two correlated variables into one factor: an application to obesity measurements"

M. Ćwiklińska-Jurkowska, Collegium Medicum, Bydgoszcz, Nicolaus Copernicus University, Toruń, (Poland)
"Ensembles of variables selection and combined classifiers for medical discrimination based on genes expression data sets"

M. Górkiewicz[1], J.N. Peña-Sánchez[2], I. Chmiel[1], [1]Faculty of Health Sciences, Jagiellonian University of Krakow, Krakow, (Poland), [2]Dept. of Community Health and Epidemiology, University of Saskatchewan, Saskatoon, (Canada)
"Item response theory methods can support validity of 4cornersat scale for career satisfaction of physicians"

A. Korzyńska, L. Roszkowiak, J. Zak, D. Pijanowska, Nałęcz Institute of Biocybernetics and Biomedical Engineering PAS, Warsaw, (Poland)
"Software framework for validation of segmentation results (VoS)"

M. Krętowska, Faculty of Computer Science, Bialystok University of Technology, (Poland)
"Oblique survival trees and competing risks"

T. Łukaszuk[1], L. Bobrowski[1,2], [1]Faculty of Computer Science, Bialystok University of Technology, [2]Nałęcz Institute of Biocybernetics and Biomedical Engineering PAS, Warsaw, (Poland)
"Application of the Relaxed Linear Separability method for the analysis of genomic data"

P. Malinowski[1]; W. Dąbrowski[2]; B. Karolinczak[2], [1]Medical University of Bialystok, Białystok, (Poland), [2]Bialystok Technical University, Białystok, (Poland)
"Comparison of support vector regression and classical transformed linear model in constructed wetland treatment context"

K. Sałapa[1], T. Darocha[2,3,4], J. Majkowski[3], T. Sanak[3,5,6], P. Podsiadło[4,7], S. Kosiński[2,3,8], R. Drwiła[2,3], [1]Depeartment of Bioinformatics and Telemedicine, Jagiellonian University Medical College, Krakow, (Poland), [2]Severe Accidental Hypothermia Center, Dept. of Anesthesiology and Intensive Care, the John Paul II Hospital, Jagiellonian University Medical College, Krakow, (Poland), [3]Foundation Heat for Life, Krakow, (Poland), [4]Polish Medical Air Rescue, Warsaw, (Poland), [5]Dept. of Disaster Medicine and Emergency Care, Medical College of Jagiellonian University, Krakow, (Poland), [6]Dept. of Combat Medicine, Military Institute in Warsaw, (Poland), [7]Polish Society for Mountain Medicine and Rescue, Szczyrk, (Poland), [8]Dept. of Anesthesiology and Intensive Care, Pulmonary Hospital, Zakopane, (Poland)
"Assessing agreement between two measurement methods of core body temperature"

Wednesday, May 18

STATISTICAL STANDARDS IN MEDICAL RESEARCH PROJECTS AND PUBLICATIONS

*The special session addressed to medical doctors
organized by the Polish National Group
of the International society for Clinical Biostatistics (ISCB)*

Chair: **Ewa Kawalec**

10:00 - 10:30 **Juan Nicolas Peña-Sánchez[1], <u>Maciej Górkiewicz[2]</u>,** [1]Dept. of Community Health and Epidemiology, University of Saskatchewan, (Canada), [2]Faculty of Health Sciences, Jagiellonian University of Krakow, (Poland)
"Scale of career satisfaction in medicine"

10:30 - 11:00 **Maciej Polak,** Institute of Public Health, Faculty of Health Sciences, Jagiellonian University Medical College (Poland)
"Meta-analysis in biomedical research"

11:00 - 11:30 **<u>Urszula Cwalina</u>, Dorota Jankowska, Anna Justyna Milewska, Dorota Citko, Robert Milewski,** Dept. of Statistics and Medical Informatics, Medical University of Bialystok, (Poland)

„The selection of a representative sample in medical research"

11:30 - 12:00   *COFFEE BREAK*

12:00 - 13:15   **Krystyna Szafraniec,** Institute of Public Health, Faculty of Health Sciences, Jagiellonian University Medical College, Krakow, (Poland)
"Multivariable analysis. The essentials"

13:15 - 13:30   **Anna Wolińska-Welcz,** Maria Curie-Skłodowska University, Lublin, (Poland)
„Statistical inference in multivariate analysis of medical data"

13:30 - 13:45   Discussion and questions from medical doctors

13.45 - 14:00   Current ISCB information and close of the session