

IWBBIO 2015

INTERNATIONAL WORK-CONFERENCE ON
BIOINFORMATICS AND
BIOMEDICAL ENGINEERING

PROGRAM

15-17 April, 2015
Granada (SPAIN)

IWBBIO 2015 Short Program

Wednesday, April 15, 2015		
8:00-8:30	REGISTRATION DESK <i>(start at 8h but it is opened during all the conference)</i>	
8:30-10:00	Session A.1: <i>"Computational Genomics"</i>	Session B.1: <i>"Computational Methods for Biomedical Image Analysis"</i>
10:00-10:30	COFFEE BREAK	
10:30-12:00	Session A.2: <i>"SS12: Advances in Drug Discovery"</i>	Session B.2: <i>"SS2: Quantitative and Systems Pharmacology"</i>
12:00-13:00	OPENING PLENARY LECTURE: Prof. Xavier Estivill	
13:00-15:00	LUNCH	
15:00-16:00	Session A.3: <i>"Computational Proteomics"</i>	Session B.3: <i>"SS7 Part I: Interdisciplinary puzzles of measurements in biological systems"</i>
16:00-17:00	Session A.4: <i>"SS8: Biological Networks: Insight from interactions"</i>	Session B.4: <i>"SS7 Part II: Interdisciplinary puzzles of measurements in biological systems"</i>
17:00-18:00	Session A.5/B.5: Poster Session I	
20:00	Light dinner at Palacio de los Cordova	

Thursday, April 16, 2015		
8:30-10:00	Session A.6: <i>"SS4: Advances in Computational Intelligence for Bioinformatics and Biomedicine"</i>	Session B.6: <i>"Bioengineering and Bioinformatics for healthcare and diseases"</i>
10:00-10:30	COFFEE BREAK	
10:30-12:00	Session A.7: <i>"SS5: Tools for Next Generation Sequencing data analysis"</i>	Session B.7: <i>"e-Health"</i>
12:00-13:00	PLENARY LECTURE: Prof. Alfonso Valencia	
13:00-15:00	LUNCH	
15:00-16:15	Session A.8: <i>"Bioinformatic Applications in Genomics"</i>	Session B.8: <i>"Applications of e-Health for diseases"</i>
16:15-17:00	Session A.9: <i>"Computational Applications in Next Generation Sequencing"</i>	Session B.9: <i>"SS14: Ambient Intelligence for Bioemotional Computing"</i>
17:00-17:30	Session A.10/B.10:	
17:30-18:00	Poster Session II	
20:00	Gala Dinner at Hotel Alhambra Palace	

Friday, April 17, 2015		
8:30-9:30	Session A.11: <i>"SS1: Expanding Concept of Chaperone Therapy for Inherited Brain Disease"</i>	Session B.11: <i>"SS10: Towards an effective telemedicine: an interdisciplinary approach"</i>
9:30-10:30	Session A.12: <i>"SS11-Part I: High Performance Computing in Bioinformatics, Computational Biology and Computational Chemistry"</i>	Session B.12: <i>"SS6: Dynamics networks in system medicine"</i>
10:30-11:00	COFFEE BREAK	
11:00-12:30	Session A.13: <i>"SS11-Part II: High Performance Computing in Bioinformatics, Computational Biology and Computational Chemistry"</i>	Session B.13: <i>"Computational systems for modelling biological and biomedical processes"</i>
12:30-13:30	CLOSING PLENARY LECTURE: Prof. Patrick Aloy	
13:30-15:00	LUNCH	
15:00-16:00	Session A.14: <i>"Biological Sequence Analysis and Alignments"</i>	Session B.14: <i>"Computational Methods for Biomedical Signal Analysis "</i>
16:30	Visit to the Alhambra	

NOTES:

- All **Sessions A** will be held in Salón de Grados, Edificio Mecenas (just 20 meters from the Facultad de Ciencias).
- All **Sessions B** will be held in Salón de Grados, Facultad de Ciencias.
- The **Poster Sessions** will be held in the Hall of Facultad de Ciencias.
- The **Plenary Lectures** will be held at Aula Magna, Facultad de Ciencias.

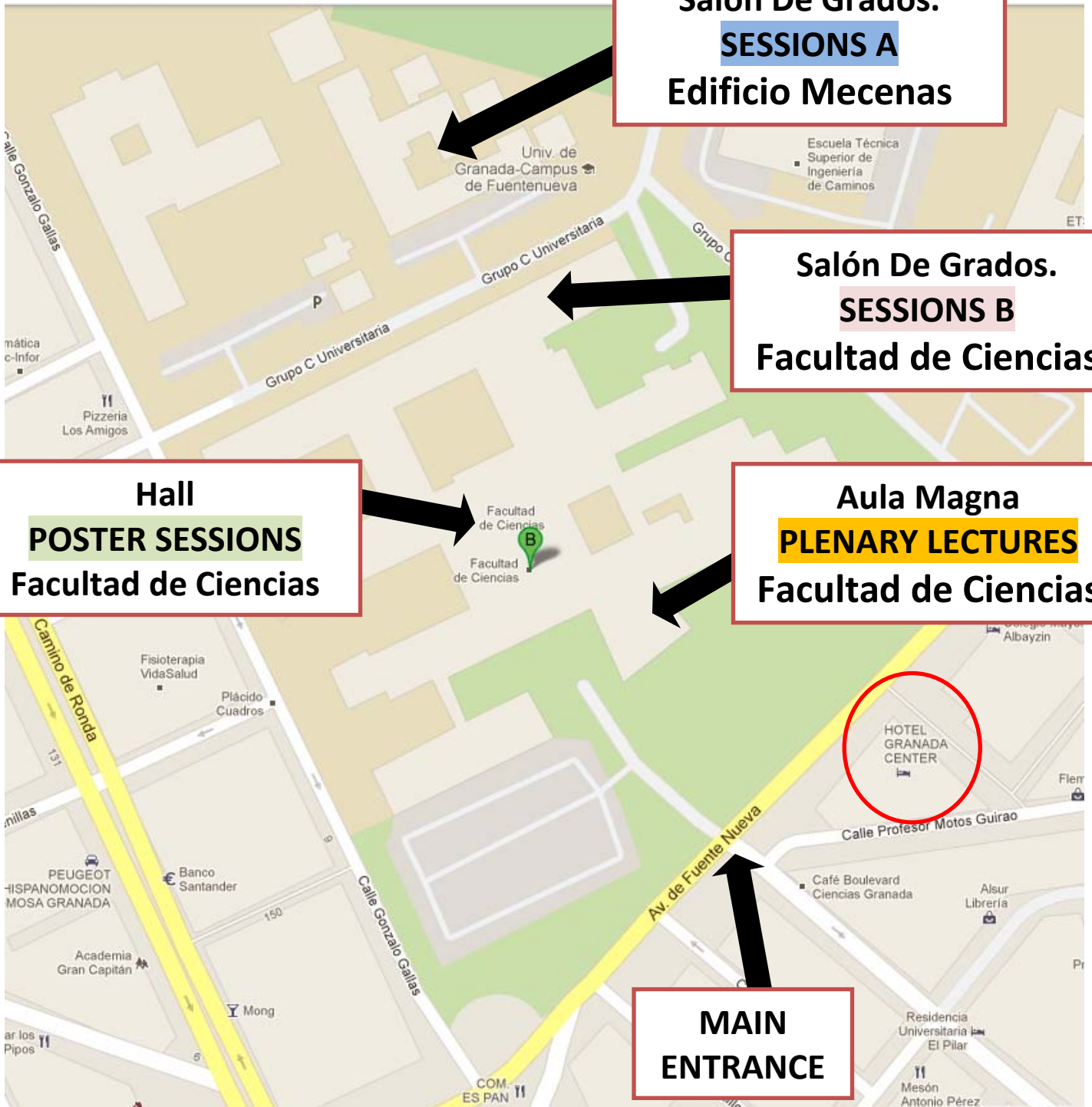
Salón De Grados.
SESSIONS A
Edificio Mecenás

Salón De Grados.
SESSIONS B
Facultad de Ciencias

Hall
POSTER SESSIONS
Facultad de Ciencias

Aula Magna
PLENARY LECTURES
Facultad de Ciencias

MAIN
ENTRANCE



IWBBIO 2015 FULL PROGRAM

Wednesday, April 15, 2015

Session A.1: "Computational Genomics"

Chairman (tentative): Dr. Jean-Fred Fontaine

Improved Core Genes Prediction for Constructing well-supported Phylogenetic Trees in large sets of Plant Species

Bassam Alkindy, Huda Al-Nayyef, Christophe Guyeux, Jean-Francois Couchot, Michel Salomon and Jacques Bahi

A Computational Method for the Rate Estimation of Evolutionary Transpositions

Nikita Alexeev, Rustem Aidagulov and Max Alekseyev

A unified integer programming model for genome rearrangement problems

Giuseppe Lancia, Franca Rinaldi and Paolo Serafini

MicroRNA Target Prediction Based upon Metastable RNA Secondary Structures

Ouala Abdelhadi Ep Souki, Luke Day, Andreas A. Albrecht and Kathleen Steinhofel

Strong Inhomogeneity in Triplet Distribution Alongside a Genome

Michael Sadovsky and Xenia Nikitina

Genome Structure of Organelles Strongly Relates to Taxonomy of Bearers

Michael Sadovsky, Anna Chernyshova, Julia Putinzeva and Vasilina Fedotova

Session B.1: "Computational Methods for Biomedical Image Analysis"

Chairman (tentative): Lucio De Paolis

Accurate Microscopic Blood Cell Image Enhancement and Segmentation

Syed Hamad Shirazi Hamad Shirazi and Imran Razzak

Analysis of Inter-Rater Reliability of the Evaluation of Radiologists Assessment After Image Processing

Kemal Turhan, Burçin Kurt, Sibel Kul and Asli Yazagan

A 3D Voxel Neighborhood Classification Approach within a Multiparametric MRI Classifier for Prostate Cancer Detection

Francesco Rossi, Alessandro Savino, Valentina Giannini, Anna Vignati, Simone Mazzetti, Alfredo Benso, Stefano Di Carlo, Gianfranco Politano and Daniele Regge

Fast Localized Active Contours for left ventricle segmentation in cardiac MRI

Derraz Foued, Pinti Antonio and Miloud Bousahla

Transcatheter Heterotopic Tricuspid Valves Flow Performances measured by 2D and 3D Particle Image Velocimetry

Munirah Ismail, Hwa Liang Leo, Edgar Tay and Foad Kabinejadian

Session A.2: "SS12: Advances in Drug Discovery"

Chairmen: Dr. Horacio Pérez-Sánchez

Improving activity prediction of Adenosine A2B receptor antagonists by machine learning methods

Fahimeh Ghasemi, Alirezza Mehri, Jorge Peña-García, Alfonso Pérez-Garrido, Afshin Fassihi and Horacio Pérez-Sánchez

nBioChip (nano-Biofilm Chip)- A new technology platform for nano-scale microbial culture with applications in high-throughput drug discovery of antimicrobial drugs and diagnostics

Anand Srinivasan, Anand Ramasubramanian and Jose Lopez-Ribot

DIA-DB: a web-accessible database for the prediction of diabetes drugs

Antonia Sánchez-Pérez, Andrés Muñoz, Jorge Peña-García, Nick Bekas, Antigoni Katsikoudi, Andreas G. Tzakos and Horacio Pérez-Sánchez

Molecular docking and Biological evaluation of functionalized benzo[h]quinolines as Colon cancer agents

Ramendra Pratap, Dharmendra Kumar Yadav, Surjeet Singh, Reeta Rai, Naresh Kumar, Han-Sup Uhm, Harpreet Singh and Horacio Pérez-Sánchez

Predicting cross-reactivity from computational studies for pre-evaluation of specific hepatic glycogen phosphorylase inhibitors

V Badireenath Konkimalla

Transport Properties of RNA Nanotubes using Molecular Dynamics Simulation

Shyam Badu, Roderick Melnik and Sanjay Prabhakar

Session B.2: "SS2: Quantitative and Systems Pharmacology - Thinking in a wider "systems-level" context accelerates drug discovery and enlightens our understanding of drug action"

Chairman: Violeta Pérez Nuño

GESSE: Side Effects Prediction from GES Ligand-Target Relationships

Violeta Isabel Perez Nuño

Successes and Pitfalls in Scoring Molecular Interactions

Heloisa Muniz and Alessandro Nascimento

The use of Random Forest to predict binding affinity in docking

Hongjian Li, Kwong-Sak Leung, Man-Hon Wong and Pedro Ballester

Structural determinants in the binding of BB2 receptor ligands: in silico and spectroscopic studies on PD176252 analogues

Antonio Carrieri, Danilo Belviso, Rocco Caliendo, Enza Lacivita, Mauro Nisio, Piero Mastroianni, Vito Gallo and Marcello Leopoldo

An integrated computational framework that predicts potential combinatorial targets for personalized cancer treatment

Tapesh Santra, Melinda Halasz and Walter Kolch

Nucleic Acid-Drug Interactions: An Electrochemical Approach

*Dominika Janiszek, Monika Karpinska, Andrzej Niewiadomy, Agnieszka Girstun,
Hanna Elzanowska, Magdalena Maj-Zurawska and Pawel Kulesza*

OPENING PLENARY LECTURE:

Prof. Xavier Estivill

Genomics and Disease group

Centre for Genomic Regulation (CRG)

Barcelona (SPAIN)

Session A.3: "Computational Proteomics"

Chairman (tentative): Dr. Salvador Ventura

Skin mucus proteome map of European sea bass (*Dicentrarchus labrax*): a non-invasive technique for the search of immune biomarkers

Hector Cordero, Monica Brinchmann, Alberto Cuesta, Jose Mesequer and Maria Angeles Esteban

A pseudo de Bruijn graph representation for discretization orders for distance geometry

Antonio Mucherino

Prediction of Functional Types of Ligands for G Protein-Coupled Receptors with Dynamically Discriminable States Embedded in Low Dimension

Yu-Hsuan Chen and Jung-Hsin Lin

P3D-SQL: Extending Oracle PL/SQL Capabilities Towards 3D Protein Structure Similarity Searching

Dariusz Mrozek and Bozena Malysiak-Mrozek

Session B.3: "SS7 Part I: Interdisciplinary puzzles of measurements in biological systems"

Chairman: Dr. Jan Urban

Measurement in biological systems from the self - organisation point of view

Dalibor Stys, Jan Urban and Petr Cisar

High-resolution 3D reconstruction of organelles from bright-field transmission microscopic images

Renata Rychtarikova, Tomas Nahlik and Dalibor Stys

FRAP & FLIP: Two sides of the same coin?

Stepan Papacek, Jiri Jablonsky, Ctirad Matonoha, Radek Kana and Stefan Kindermann

Noise and baseline filtration in mass spectrometry
Jan Urban

Session A.4: "SS8: Biological Networks: Insight from interactions"

Chairman: Drs. Alfredo Benso and Prashanth Suravajhala

Deciphering the genetic architecture of Type 2 Diabetes through SNP-SNP interaction
Asima Zia, Attya Bhatti, Amjad Ali and Peter John

Inference of Circadian Regulatory Pathways based on Delay Differential Equations
Catherine Higham and Dirk Husmeier

Gene Expression vs Network Attractors
Gianfranco Politano, Alessandro Vasciaveo and Alessandro Savino

Session B.4: "SS7 Part II: Interdisciplinary puzzles of measurements in biological systems"

Chairman: Dr. Jan Urban

Mixture model based efficient method for magnetic resonance spectra quantification
Franciszek Binczyk, Michal Marczyk and Joanna Polanska

Standardization of experimental protocols and data management process
Petr Císar, Dalibor Stys, Stepán Papacek and Jan Urban

BioWES: Scientific data management solution.
Dmytro Soloviov, Petr Cisar and Dalibor Stys

BioWes - from design of experiment, through protocol to repository: control, standardization, and back-tracking.
Antonin Barta, Petr Cisar and Dmytro Soloviov

Session A.5/B.5: Poster Session I

Pseudoknots Prediction on RNA Secondary Structure using Term rewriting
Linton Chowdhury and Mohammad Ibrahim Khan

A Segmentation-Free Model for Heart Sound Feature Extraction
Haiyang Wang, Guangpei Li and Mingchui Dong

IMPACT OF HEALTH APPS IN HEALTH AND COMPUTER SCIENCE PUBLICATIONS. A SYSTEMATIC REVIEW FROM 2010 TO THE PRESENT DAY
Guillermo Molina Recio, Laura Garcia-Hernandez, A. Castilla Melero, Juan M. Palomo-Romero, R. Molina Luque, A. A. Sánchez Muñoz, A. Arauzo-Azofra and L. Salas-Morera

A Hyperanalytic Wavelet Based Denoising Technique for Ultrasound Images
Cristina Stolojescu-Crisan

From Single Fibre Action Potential to Surface Electromyographic Signal: A Simulation Study
Messaoudi Noureddine and Bekka Rais El'Hadi

Master Clock in Schizophrenic Subjects with VIPR2 Duplication

Jesus Miro-Bueno and Anil K. Seth

A flexible denormalization technique for data analysis above a deeply-structured relational database: biomedical applications

Stanislav Stefanic and Matej Lexa

PloidyQuantX: a quantitative microscopy imaging tool for telomere mapping at cell and organ level

Xavier Sevillano, Marc Ferrer, Mary-Paz González-García, Irina Pavelescu and Ana I. Caño-Delgado

Automated extraction of food intake indicators from continuous meal weight measurements

Vasileios Papapanagiotou, Christos Diou, Billy Langlet, Ioannis Ioakimidis and Anastasios Delopoulos

System Development Ontology to Discover Lifestyle Patterns Associated with NCD

María Somodevilla-García, María De La Concepcion Perez De Celis Herrero and Dr Ivo H. Pineda Torres

Local Search for Multiobjective Multiple Sequence Alignment

Maryam Abbasi, Luis Paquete and Francisco B. Pereira

Awareness, perception and usage of mobile applications for health and wellness

Diogo Calçada and Henrique M G Martins

Health Technology Assessment Models Utilized in the Chronic Care Management

Ondrej Gajdos, Ivana Juricková and Radka Otawová

Using Entropy Cluster-based Clustering for finding potential Protein Complexes

Viet-Hoang Le and Sung-Ryul Kim

Modelling the hippocampus in MRI using the alpha-stable distribution

Diego Salas-Gonzalez, Elmar W. Lang, Juan M. Górriz and Javier Ramírez

Prediction of human gene - phenotype associations by exploiting the hierarchical structure of the Human Phenotype Ontology

Giorgio Valentini, Sebastian Kohler, Matteo Re, Marco Notaro and Peter Robinson

Using multivariate analysis and bioinformatic tools to elucidate the functions of a cyanobacterial global regulator from RNA-Seq data obtained in different genetic and environmental backgrounds

Jose I. Labella, Francisco Rodríguez-Mateo, Javier Espinosa and Asunción Contreras

THE HYPERCHOLESTEROLEMIC SWINE TO STUDY EXPERIMENTAL ATHEROGENESIS: STATISTICAL-MODEL BASED ASSOCIATIONS BETWEEN MOLECULAR FACTORS AND PLAQUE MORPHOLOGY

Silvia Rocchiccioli

IVUS/micro-CT/histomorphometry integrated model for coronary profiling of plaque formation/progression: a proof of concept experimental study.

Gualtiero Pelosi

Fabrication of Wrinkle Surfaces on Bio-Polymeric Substrates by Using Ion Implantation

Taejin Kang

QT interval measurement using Empirical Mode Decomposition

Hadj Slimane Zine-Eddine

Bioinformatics and Molecular Studies the three Glyceraldehyde-3-Phosphate Dehydrogenase (GAPDHs) of *Pseudomonas Syringae* pv tomato DC3000

Bouchra Elkhalfi, Aurelio Serrano and Abdelaziz Soukri

A genome browser for visualization and analysis of alternative polyadenylation

Yumin Zhang, Chuang Zhao and Xiaohui Wu

Molecular Modeling study of alkaloid from roots of *Toddalia Asiatica* as inhibitors of HIV1 Reverse Transcriptase: A Molecular Modeling Approach

Asif Naqvi, Mayank Sharma, Aditi Mathur, Bharti Sisodia, Rashmi Pareek, Shabnam Saroj, Deeksha Gupta, Abhinav Rathi and Sonam Mishra

Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) an extracellular infection-induced Protein of the phytopathogenic proteobacterium *Pseudomonas syringae* pv tomato DC3000

Bouchra El Khalfi, Aurelio Serrano and Abdelaziz Soukri

Structure-Based Virtual screening of LuxT Quorum Sensing inhibitors against pathogenic *Vibrio alginolyticus*

Sasikala Dakshinamurthy

Molecular Insights of active site surface based screening in identifying potent inhibitors against the HCV-PR through Structural Mapping and Molecular Dynamics Simulation

Chandrabose Selvaraj

Application of Dempster-Schafer Method in Family-Based Association Studies

Farid Rajabli, Unal Goktas and Gul Inal

NEW ALGORITHM FOR ASSESSMENT OF FREQUENCY DURATION OF MURMURS USING HILBERT-HUANG TRANSFORM

Omari Tahar and Bereksi-Reguig Fethi

USSD technology a low cost asset in complementing Public Health Workers' work processes

Munyaradzi Zhou, Marlien Herselman and Alfred Coleman

Inhibition of Ebola Virus by Potent anti-Ebola miRNAs in silico

Prof. Omar Bagasra, Zhabiz Golkar and Roshan Battaria

COMPARISON OF THE CYTOTOXIC EFFECTS OF RG108 (A DNA METHYLTRANSFERASE INHIBITOR) ALONE AND COMBINATION WITH NERVE GROWTH FACTOR ON PC-12 Adh CELLS

Selin Engur, Elif Kaya, Miris Dikmen and Yusuf Ozturk

A DNA METHYLTRANSFERASE INHIBITOR RG108 POTENTIATES NGF-INDUCED NEURITE OUTGROWTH OF PC-12 Adh CELLS

Elif Kaya, Selin Engur and Miris Dikmen

Capturing the mechanism of action of antipsychotic drugs at G protein-coupled receptors (GPCRs) by means of Markov State Model analysis

Ismael Rodriguez-Espigares, Nuria Plattner, Juan Manuel Ramirez-Anguita, Frank Noe, Ferran Sanz-Carreras and Jana Selent

GESSE: Side Effects Prediction from GES Ligand-Target Relationships

Violeta Isabel Perez Nueno

The Time and Location Patterns of In-Hospital Mortality According to the Admitted Department

In-Cheol Kim, Yoon-Nyun Kim, Hyoung-Seob Park, Chang-Wook Nam, Seong-Wook Han, Seung-Ho Hur and Ju-Young Kim

Effects of Circadian Rhythm on Hospital Death Pattern Difference Between Cancer and Cardiovascular Disease

In-Cheol Kim, Yoon-Nyun Kim, Hyoung-Seob Park, Seong-Wook Han, Chang-Wook Nam and Seung-Ho Hur

Cytokine Levels in Patients with Atopic Eczema

Linda Krause, Vagkan Mourantchanian, Kilian Eyerich, Bettina Knapp, Fabian Theis and Stefanie Eyerich

Thursday, April 16, 2015

Session A.6: "SS4: Advances in Computational Intelligence for Bioinformatics and Biomedicine"

Chairman: Dr. Alfredo Vellido

A Weighted Cramers V Index for the Assessment of Stability in the Fuzzy Clustering of Class C G Protein-Coupled Receptors

Alfredo Vellido, Christiana Halka and Angela Nebot

Multigenetic risk quantification for SNP array based direct-to-consumer genomic services

Svetlana Bojic and Stefan Mandic-Rajcevic

MicroOn and MicroOndb: A software suite and a database for prediction and validation of miRs involved in cancer

Sumit Biswas and Ram Kothandan

Computational inference in systems biology

Benn Macdonald and Dirk Husmeier

A Price we Pay for Inexact Dimensionality Reduction

Sarunas Raudys, Vytautas Valaitis, Zidrina Pabarskaite and Gene Biziuleviciene

Finding unknown nodes in phylogenetic graphs

Luis Evaristo Caraballo, José-Miguel Díaz-Báñez and Edel Pérez-Castillo

Session B.6: "Bioengineering and Bioinformatics for healthcare and diseases"

Chairman: Dr. Jose Luis Oliveira

Parametric study of ventricular catheters for hydrocephalus

Ángel Giménez, Marcelo Galarza, Olga Pellicer, José Valero and José M. Amigó

Artificial Neural Networks in Acute Coronary Syndrome Screening

M. Rosário Martins, Teresa Mendes, José Grañeda, Rodrigo Gusmo, Henrique Vicente and José Neves

Multilayer clustering: Biomarker driven segmentation of Alzheimer's disease patient population

Dragan Gamberger, Bernard Zenko, Alexis Mitelpunkt and Nada Lavrac

Mortality Prediction with Lactate and Lactate Dehydrogenase

Yasemin Zeynep Avci, Kemal Turhan, Asli Yazagan and Asim Orem

Building Bayesian Networks with Statistical Inference to Model Temporal Order and Dependencies of Somatic Mutations

Ugur Toprak, Serbulent Unsal and Kemal Turhan

Predicting human protein substrates for *Toxoplasma gondii* rhopty kinases through multiple tests of spectral alignment

Gladys Salcedo, Ailan Arenas and Andrey Montoya

Session A.7: "SS5: Tools for Next Generation Sequencing data analysis"

Chairman: Drs. M. Gonzalo Claros and Javier P. Florido

Integrated variable selection from multi-omics experiments using machine learning

Sonia Tarazona, Mónica Clemente-Císcar and Ana Conesa

DEgenes Hunter - A self-customised gene expression analysis workflow for non-model organisms

Isabel González Gayte, Rocío Bautista Moreno and M. Gonzalo Claros

Bioinformatics Analyses to Separate Highly Divergent mRNAs from Unknown Sequences in de novo Assembled Transcriptomes

David Velasco, Pedro Seoane and M. Gonzalo Claros

The FDA's experience with emerging genomics technologies - past, present and future

Weida Tong

ngsCAT: an easy-to-use tool to assess the efficiency of targeted enrichment sequencing

Javier P. Florido, Francisco Javier López-Domingo, Antonio Rueda, Joaquín Dopazo and Javier Santoyo-López

Evaluation of combined genome assemblies: a case study with fungal genomes

Mostafa Abbas, Ponnuraman Balakrishnan and Qutaibah Malluhi

Session B.7: "e-Health"

Chairman: Dr. Orestis Baos

A Semantic Layer for Unifying and Exploring Biomedical Document Curation Results

Pedro Sernadela, Pedro Lopes, David Campos, Sérgio Matos and José Luis Oliveira

e-Health Informed Foreign Patient and Physician Communication: The Perspective of Informed Consent

Echo Huang, Shao-Fu Liao and Shing-Lung Chen

Empirical Analysis of the Effect of eHealth on Medical Expenditures of Patients with Chronic Diseases

Masatsugu Tsuji and Yusuke Kinai

A LOD-based service for extracting Linked Open Emergency Healthcare Data

Mikaela Poullymenopoulou, Flora Malamateniou and George Vassilacopoulos

Data Reduction for Medical Education Program Evaluation Questionnaire

Kemal Turhan, Burçin Kurt, Asli Yazagan, Ugur Toprak and Program Evaluation Working Group

The Medical Information System - The Perspective Tool for Realization of Quality Assurance Programs

Ekaterina Kldiashvili

PLENARY LECTURE:
Prof. Alfonso Valencia
Structural Computational Biology group
Spanish National Cancer Research Center (CNIO)
Madrid (SPAIN)

Session A.8: "Bioinformatic Applications in Genomics"

Chairman: Dr. Michael Sadovsky

Integrative bioinformatic analyses of gene and miRNA expression genome-wide profiles from hippocampus of Alzheimer's disease patients

Francisco Jose Campos-Laborie, Sara Aibar, Rosana Chehin, Rita Raisman-Vozari, Dulce Papy-Garcia and Javier De Las Rivas

Novel associations of closely related disorders with phenotypes, genes or chemicals using text and data mining

Carol Perez-Iratxeta, Josef Priller, Eike Spruth, Miguel A. Andrade-Navarro and Jean-Fred Fontaine

Applications of Proteochemometrics to Cancer Cell Line Sensitivity Modelling.

Isidro Cortes-Ciriano, Gerard J.P. van Westen, Bouvier Guillaume, Michael Nilges, John P Overington, Andreas Bender and Therese E Malliavin

Pharmacological deacetylation by HDAC inhibition

Assam El-Osta

Session B.8: "Applications of e-Health for diseases"

Chairman (tentative): Dr. Ekaterina Kldiashvili

Development of a High Fundamental Frequency (HFF) Piezoelectric Immunosensor for early and sensitive detection of tuberculosis

Angel Montoya, Carmen March, Yeison J. Montagut, María J. Moreno, Juan J. Manclús, Antonio Arnau, Yolanda Jiménez, Marisol Jaramillo, Paula A. Marín and Róbinson A. Torres

Development of an Auditory Cueing System to Assist Gait in Patients with Parkinson's Disease

Vania Guimaraes, Rui Castro, Ana Barros, Joao Cevada, Angels Bayés, Sheila García and Berta Mestre

Evolutionary Multiobjective Feature Selection in Multiresolution Analysis for BCI

Julio Ortega, Javier Asensio-Cubero, John Q. Gan and Andrés Ortiz

The Mining Minds Platform: a Novel Person-Centered Digital Health and Wellness Framework

Oresti Banos, Muhammad Bilal Amin, Wajahat Ali Khan, Muhammad Afzel, Mahmood Ahmad, Maqbool Ali, Taqdir Ali, Rahman Ali, Muhammad Bilal, Manhyung Han, Jamil Hussain, Maqbool Hussain, Shujaat Hussain, Tae Ho Hur, Jae Hun Bang, Thien Huynh-The, Muhammad Idris, Dong Wook Kang, Sang Beom Park, Hameed Siddiqui, Le-Va Vui, Muhammad Fahim, Asad Masood Khattak, Byeong Ho Kang and Sungyoung Lee

Augmented Reality in Radiofrequency Ablation of the Liver Tumours

Lucio Tommaso De Paolis, Francesco Ricciardi and Cosimo Luigi Manes

Session A.9: "Computational Applications in Next Generation Sequencing"

Chairman: Dr. Sonia Tarazona

Computationally assessing RNA-protein binding affinity in lncRNAs

Carmen Navarro, Carlos Cano, Marta Cuadros and Armando Blanco

Comprehensive study of bivalent chromatin marks on promoters in mammalian embryonic stem cells.

Anna Mantsoki and Anagha Joshi

Supporting Bioinformatics Applications with Hybrid Multi-Cloud Services

Ahmed Abdullah Ali, Mohamed El-Kalioby and Mohamed Abouelhoda

Session B.9: "SS14: Ambient Intelligence for Bioemotional Computing"

Chairman: Drs. Natividad Martinez, Juan A. Ortega and Ralf Seepold

Externalising Moods and Psychological States to Smooth Pet-robot/Child Interaction through Bluetooth Communication

Ferran Larriba, Cristóbal Raya, Cecilio Angulo, Jordi Albo-Canals, Marta Díaz and Roger Boldú

Patient Lifecycle Management: An Approach for Clinical Processes

Alberto Salido López, Carmelo Del Valle Sevillano and María José Escalona Cuaresma

Advertising liking recognition technique applied to neuromarketing by using low-cost eeg headset

Luis Miguel Soria Morillo, Juan Antonio Alvarez-García, Luis Gonzalez-Abril and Juan Ortega

Heart Rate Variability indicating Stress visualized by Correlations Plots

Wilhelm Daniel Scherz, Juan Ortega, Natividad Martinez Madrid and Ralf Seepold

Emotions and Diabetes

Charrise M. Ramkissoon and Josep Vehí

Session A.10/B.10: Poster Session II

A genetic algorithm for motif finding based on statistical significance

Josep Basha Gutierrez, Martin Frith and Kenta Nakai

Energy Efficiency Study of representative Microcontrollers for Wearable Electronics

Gregor Rebel, Francisco Estevez and Peter Gloesekoetter

HvDBase: a web resource on Hydra Vulgaris transcriptome.

Daniela Evangelista, Kumar Parijat Tripathi, Valentina Scuotto and Mario Rosario Guarracino

A new approach to obtain EFMs using graph methods based on the shortest path between end nodes

Jose Francisco Hidalgo Céspedes, Francisco De Asís Guil Asensio and Jose Manuel García Carrasco

Transcriptome-mining identification and in silico analysis of olive (*Olea europaea* L.) pollen NADPH oxidase homologous involved in allergy inflammation

Maria J. Jimenez-Quesada, Jose A. Traverso, Adoracion Zafra, Jose C. Jimenez-Lopez, Rosario Carmona, M. Gonzalo Claros and Juan D. Alche

Identification of distinctive variants of the olive pollen allergen Ole e 5 (Cu,Zn Superoxide Dismutase) throughout the analysis of the olive pollen transcriptome

Adoracion Zafra, Rosario Carmona, Jose C. Jimenez-Lopez, M. Gonzalo Claros and Juan D. Alche

Lupin allergy: uncovering structural features and epitopes of β -conglutin proteins in *Lupinus angustifolius* L. with a focus on cross-allergenic reactivity to peanut and other legumes

Jose C. Jimenez-Lopez, Elena Lima-Cabello, Su Melser, Rhonda C. Foley, Karam B. Singh and Juan D. Alche

A mobile application to enhance adherence to hormonal treatment in breast cancer survivors through a competitive social game

Maria De La Concepcion Perez De Celis Herrero, Enrique Soto-Perez-De-Celis, Felipe Orihuela-Espina, Yanin Chavarri Guerra, Maria Teresa Gutierrez Martinez, Alejandro Herrera de La Luz, Maria J. Somodevilla and Ivo H. Pineda Torres

Hierarchical Assembly of Pools

Riccardo Vicedomini, Francesco Vezzi, Simone Scalabrin, Lars Arvestad and Alberto Policriti

Statistical integration of p-values for enhancing discovery of radiotoxicity gene signatures.

Anna Papiez, Sylwia Kabacik, Christophe Badie, Simon Bouffler and Joanna Polanska

Non-canonical imperfect base pair predictor: the RNA 3D structure modeling process improvement.

Jacek Smietanski

A simple hair removal algorithm from dermoscopic images

Damian Borys, Paulina Kowalska, Mariusz Frackiewicz and Ziemowit Ostrowski

XTENS - a JSON-based digital repository for Biomedical Data Management

Massimiliano Izzo, Gabriele Arnulfo, Maria Carla Piastra, Valentina Tedone, Luigi Varesio and Marco Massimo Fato

Automatic segmentation system of emission tomography data based on classification system

Sebastian Student, Marta Danch-Wierzchowska, Kamil Gorczewski and Damian Borys

Cost-effectiveness studies in cardiology: application of medical devices

Radka Otawova, Vojtech Kamensk, Pavla Hasenohrlova and Vladimír Rogalewicz

Automated measurement of the density of vessels and Ki67-positive cells on whole slide images

Christophe Deroulers, Mathilde Badoual, Volodia Dangouloff-Ros and Pascale Varlet

SimpLiSMS: A Simple, Lightweight and Fast Approach for Structured Motifs Searching

Ali Alatabbi, Shuhana Azmin, Md. Kawser Habib, Costas Iliopoulos and M. Sohel Rahman

Predicting sub-cellular location of proteins based on hierarchical clustering and hidden Markov models

Jorge Alberto Jaramillo-Garzón, Jacobo Castro-Ceballos and César Germán Castellanos

Evaluation of example-based measures for multi-label classification performance

Andrés Felipe Giraldo Forero, Jorge Alberto Jaramillo-Garzón and German Castellanos

An event-driven architecture for biomedical data integration and interoperability

Pedro Lopes and José Luis Oliveira

New insights in echocardiography based left-ventricle dynamics assessment

Susana Brás, Augusto Silva, José Ribeiro and José Luís Oliveira

Ontologies: A Basis for Integrating, Organizing and Representing Biological Data

Muhammad Tariq Pervez, Masroor Ellahi Babar and Tanveer Hussain

Intellectual Property Protection for Bioinformatics and Computational Biology

Dennis Fernandez, Antonia Maninang, Shumpei Kobayashi, Shashank Bhatia and Carina Kraatz

Medical Planning: Sterilization Department Design

Khaled Sayed

Inhibition of inflammatory reactions mediated by the CD36 receptor via Fyn kinase signaling pathway in the case of atherosclerosis

Zineb Tarhda and Ibrahimi Azeddine

Cluster Estimation on a Dendrogram

Mohammad Sajjad Ghaemi, Bruno Agard and Vahid Partovi Nia

Application of kappa statistics in sequential tests for family-based design

Farid Rajabli

A Practical Tool for Aligning Biological Signals using Various Warping Methods

Ahmet Elbir, Mustafa Duran and Fethullah Karabiber

Dose calculation in a mouse lung tumor and in secondary organs during radiotherapy treatment: A Monte Carlo study

Mahdjoub Hamdi, Malika Mimi and M'Hamed Bentourkia

A novel approach to identify GO terms without a fold-change threshold limitation

Farid Rajabli, Fatih Emekci, Unal Goktas and Gulistan Ozdogan

UX integrated cloud-based medical application for improving lifestyle in users

Alexandru Serban, Mihaela Crisan-Vida, Maria-Corina Serban and Lacramioara Stoicu-Tivadar

Reprogramming of cellular signalling networks following targeted mono- and combination anti-cancer therapy

Alexey Goltsov, Yusuf Deeni, Hilal Khalil, Simon Langdon, David Harrison and James Bown

IRALLER: a Comprehensive Web Server for Bioinformatics Allergenicity Assessment of Novel Proteins

Najaf Allahyari Fard

An Ontology for Dynamic Sensor Selection in Wearable Activity Recognition

Claudia Villalonga, Oresti Banos, Hector Pomares and Ignacio Rojas

Use of Flaviviral Genetic fragment-based Vaccine as a Potential Prevention Strategy for HIV-1: A Computational and Molecular Analyses of HIV-1 Silencing Human microRNAs

Prof. Omar Bagasra, Mahmudul Hasan, Muhammad Sheraz, Mazhar Kanak and Roshan Bhattarai

PROPOSAL FOR INTEROPERABILITY STANDARDS APPLICATIONS IN THE HEALTH SECTOR

Octavio Salcedo Parra and Brayan Reyes

Determination of anti-proliferative effects of secondary metabolites isolated from halotolerant fungi, on colon cancer cells by Real Time Cell Analyze System (Xcelligence)

Zerrin Canturk, Miris Dikmen and Semra Ilhan

Investigation of Anti-Candidal Effect of Halotolerant Fungal Secondary Metabolites

Mustafa Guclu Ozarda, Zerrin Canturk, Miris Dikmen, Selin Engur and Semra Ilhan

In vitro evaluation of the cytotoxic, anti-proliferative, apoptotic and anti-migration properties of Fumagillin on C6 Glioma Cells

Miris Dikmen

Friday April 17, 2015

Session A.11: "SS1: Expanding Concept of Chaperone Therapy for Inherited Brain Disease"

Chairman: Dr. Yoshiyuki Suzuki

Introductory Remarks

Yoshiyuki Suzuki

Development of pharmacological chaperone candidates for Retinitis Pigmentosa and Niemann-Pick type C1 disease.

Tomomi Noguchi-Yachide

Non-cell autonomous therapeutic effects of molecular chaperones on polyglutamine disease models via its exosome-mediated intercellular transmission.

Yoshitaka Nagai, Toshihide Takeuchi and Keiji Wada

RECENT ADVANCES IN CHAPERONE DESIGN FOR LYSOSOMAL STORAGE DISORDERS

José M. García Fernández and Carmen Ortiz Mellet

Session B.11: "SS10: Towards an effective telemedicine: an interdisciplinary approach"

Chairman: Drs. Maria Francesca Romano and Daniel Cesarini

Simplifying tele-rehabilitation devices for their practical use in non-clinical environments.

Daniel Cesarini, Davide Calvaresi, Pasquale Buonocunto, Mauro Marinoni and Giorgio Buttazzo

Non-intrusive monitoring and data analysis for supporting general practitioners in following diseases evolution based on patients' daily (motor) behaviour

Davide Calvaresi, Daniel Cesarini, Mauro Marinoni, Pasquale Buonocunto and Giorgio Buttazzo

Interactive business models for Telerehabilitation after Total Knee Replacement: Preliminary results from Tuscany.

Francesco Fusco and Giuseppe Turchetti

Ontological Personal Healthcare using Medical Standards

Yeong-Tae Song and Neekoo Torkian

Session A.12: "SS11-Part I: High Performance Computing in Bioinformatics, Computational Biology and Computational Chemistry"

Chairman: Dr. Hesham Ali

Applications of High Performance Computing in Bioinformatics, Computational Biology and Computational Chemistry

Horacio Pérez-Sánchez, Afshin Fassih, José M. Cecilia, Hesham H. Ali and Mario Cannataro

Mobile access to on-line analytic bioinformatics tools

Sergio Díaz Del Pino, Tor Johan Mikael Karlsson, Juan Falgueras Cano and Oswaldo Trelles

A GPU solution of the HP Protein Folding Problem based on UEGO

José María García Martínez, Ester Martín Garzón, José María Cecilia, Horacio Perez Sanchez and Pilar Martínez Ortigosa

Enhancing the parallelization of Non-Bonded Interactions Kernel for Virtual Screening on GPUs

Baldomero Imbernón, Antonio Llanes, Jorge Peña-García, Horacio Pérez-Sánchez and José M Cecilia

Session B.12: "SS6: Dynamics networks in system medicine"

Chairman: Dr. Narsis Aftab Kiani

Numerical Investigation of Graph Spectra and Information Interpretability of Eigenvalues

Hector Zenil, Narsis Kiani and Jesper Tegner

Modeling of the Urothelium with an Agent Based Approach

Angelo Torelli, Fabian Siegel, Philipp Erben and Markus Gumbel

NEArender: a new R package for rendering 'omics' data into pathway space using network enrichment analysis

Andrey Alexeyenko, Ashwinipriya Jeggari and Simon Kebede Merid

Flexible and fast linear program to infer signaling networks

Marta Matos, Bettina Knapp, Fabian Theis and Lars Kaderali

Session A.13: "SS11-Part II: High Performance Computing in Bioinformatics, Computational Biology and Computational Chemistry"

Chairman: Drs. Horacio Pérez-Sánchez and Jose M. Cecilia

Identification of Biologically Significant Elements using Correlation Networks in High Performance Computing Environments

Kathryn Dempsey, Sachin Pawaskar and Hesham Ali

isDNA: A tool for real-time visualization of plasmid DNA Monte-Carlo simulations in 3D

Adriano Raposo and Abel Gomes

Computing Biological Model Parameters by Parallel Multi-Core Statistical Model Checking

Toni Mancini, Enrico Tronci, Ivano Salvo, Federico Mari, Annalisa Massini and Igor Melatti

Support Vector Machines Prediction of drug solubility on GPUs

Gaspar Cano, José García-Rodríguez, Jorge Peña-García, Dharmendra Kumar-Yadav, Alfonso Pérez-Garrido and Horacio Pérez-Sánchez

Molecular Dynamics Simulations of Ligand Recognition upon Binding Antithrombin: A MM/GBSA Approach

Xiaohua Zhang, Horacio Perez-Sanchez and Felice Lightstone

Predicting atherosclerotic plaque location in an iliac bifurcation using a hybrid CFD/biomechanical approach

Mona Alimohammadi, Cesar Pichardo-Almarza, Giulia Di Tomaso, Stavroula Balabani, Obiekezie Agu and Vanessa Daz-Zuccarini

Session B.13: "Computational systems for modelling biological and biomedical processes"

Chairman (tentative): Dr. Philipp Erben

The MetaboX library: building metabolic networks from KEGG database

Francesco Maiorano, Luca Ambrosino and Mario Guarracino

Logical Modeling and Analysis of Regulatory Genetic Networks in a Non Monotonic Framework

Nicolas Mobilia, Alexandre Rocca, Samuel Chorlton, Eric Fanchon and Laurent Trilling

Incorporating multiple recurrences in a flowgraph model for bladder carcinoma

Gregorio Rubio, Belen Garcia-Mora, Cristina Santamaria and José Luis Pontones

A Computational Domain-based Feature Grouping Approach for Prediction of Stability of SCF Ligases

Mina Maleki, Mohammad Haj Dezfulian and Luis Rueda

Identifiability of Nonlinear ODE Models in Systems Biology: Results from both Structural and Data-based methods

Maria Pia Saccomani

What makes a protein sequence a prion?

Salvador Ventura

CLOSING PLENARY LECTURE:

Prof. Patrick Aloy

Structural Bioinformatics and Network Biology Group

Institute for Research in Biomedicine (IRB)

Barcelona (SPAIN)

Session A.14: "Biological Sequence Analysis and Alignments"

Chairman: Dr. Francisco Ortuño

Alignment Free Frequency Based Distance Measures for Promoter Sequence Comparison

Kouser, Lalitha Rangarajan, Darshan S Chandrashekar, Kshitish K Acharya and Emin Mary Abraham

Relation between Insertion Sequences and Genome Rearrangements in *Pseudomonas aeruginosa*

Huda Al-Nayyef, Christophe Guyeux, Marie Petitjean, Didier Hocquet and Jacques Bahi

Biological Sequence Alignment and Compression via Shortest Unique Substring Identifiers

Boran Adas, Ersin Bayraktar, Simone Faro, Ibrahim Moustafa and M. Oguzhan Kulekci

Energy-Efficient Architecture For DP Local Sequence Alignment: Exploiting ILP and DLP

Miguel Cruz, Pedro Tomás and Nuno Roma

Session B.14: "Computational Methods for Biomedical Signal Analysis"

Chairman (tentative): Dr. Antonio Pinti

Alpha Rhythm Dominance in Human Emotional Attention States: An Experimentation with 'idling' and 'binding' Rhythms.

Mohammed G Al-Zidi, Jayasree Santhosh and Jamal Rajabi

Optimal Elbow Angle for MMG Signal Classification of Biceps Brachii during Dynamic Fatiguing Contraction

Mohamed Al-Mulla, Francisco Sepulveda and Mohammad Suoud

Feature Selection for Best Identification of Congestive Heart Failure Using Artificial Neural Network

Abdulnasir Yahya Hossen Hossen

VIRTUAL PRESENTATIONS

Virtual Presentation Session

Preliminary Research on Combination of Exponential Wavelet and FISTA for CS-MRI

Yudong Zhang, Shuihua Wang, Genlin Ji and Zhengchao Dong

Towards a More Efficient Discovery of Biologically Significant DNA Motifs

Aqil Azmi and Abdulraakeeb Al-Ssulami

GA-based feature selection with ANFIS approach to breast cancer recurrence

Hamza Turabieh and Muhanna Muhanna

Blind and Visually Impaired students can perform computer-aided molecular design with an assistive molecular fabricator

Valere Lounnas, Hoby Wedler, Tim Newman, Jon Black and Gerrit Vriend

Detection of Pathological Brain in MRI scanning based on Wavelet-entropy and Naive Bayes Classifier

Xingxing Zhou, Shuihua Wang, Wei Xu, Genlin Ji, Preetha Phillips, Ping Sun and Yudong Zhang

Characterization of pneumonia incidence supported by a business intelligence system

Maribel Yasmina Santos, Vera Leite, Antonio Carvalheira and Artur Teles de Araújo

Are wildfires and pneumonia spatially and temporally related?

Maribel Yasmina Santos, Vera Leite, Antonio Carvalheira and Artur Teles de Araújo

An Ensemble of Cooperative Parallel Metaheuristics Gene Selection method for Cancer Classification

Anouar Boucheham and Mohamed Batouche

Linear accelerator bunkers: Shielding Verification

Khaled Sayed and Shereen El-Metwally

Portable Low-cost Heart Attack Detection System using ZigBee Wireless Technology

Khaled Sayed and Shereen El-Metwally

Towards exact segmentation of corneal endothelial cells

Adam Piorkowski and Jolanta Gronkowska-Serafin

Sliding box method for automated detection of the optic disc and macula in retinal images

Dan Popescu, Loretta Ichim and Radu Dobrescu

A model of the dynamics of a population of diabetics with and without complications with optimal control

Wiam Boutayeb, Mohamed E.N. Lamlili, Mohammed Derouich and Abdesslam Boutayeb

The impact of obesity on type 2 Diabetes: Mathematical model

Wiam Boutayeb, Abdesslam Boutayeb and Mohamed E.N.Lamlili

Systematic comparison of machine learning methods for identification of miRNA species as disease biomarkers

Chihiro Higuchi, Toshihiro Tanaka and Yukinori Okada

Heart rate regularity changes in older people with orthostatic intolerance

Marcos Hortelano, Richard B. Reilly, Lisa Cogan and Raquel Cervigón

Entropy analysis of atrial activity morphology to study atrial fibrillation recurrences after ablation procedure

Raquel Cervigón, Javier Moreno, Gastón Schlotthauer and María Eugenia Torres

A Novel Algorithm for Segmentation of Suspicious Microcalcification Regions on Mammograms

Burçin Kurt, Vasif Nabiyev and Kemal Turhan

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