



IWBBIO 2013

INTERNATIONAL WORK-CONFERENCE ON
BIOINFORMATICS AND
BIOMEDICAL ENGINEERING

GRANADA (Spain) March 18-20

PROGRAM

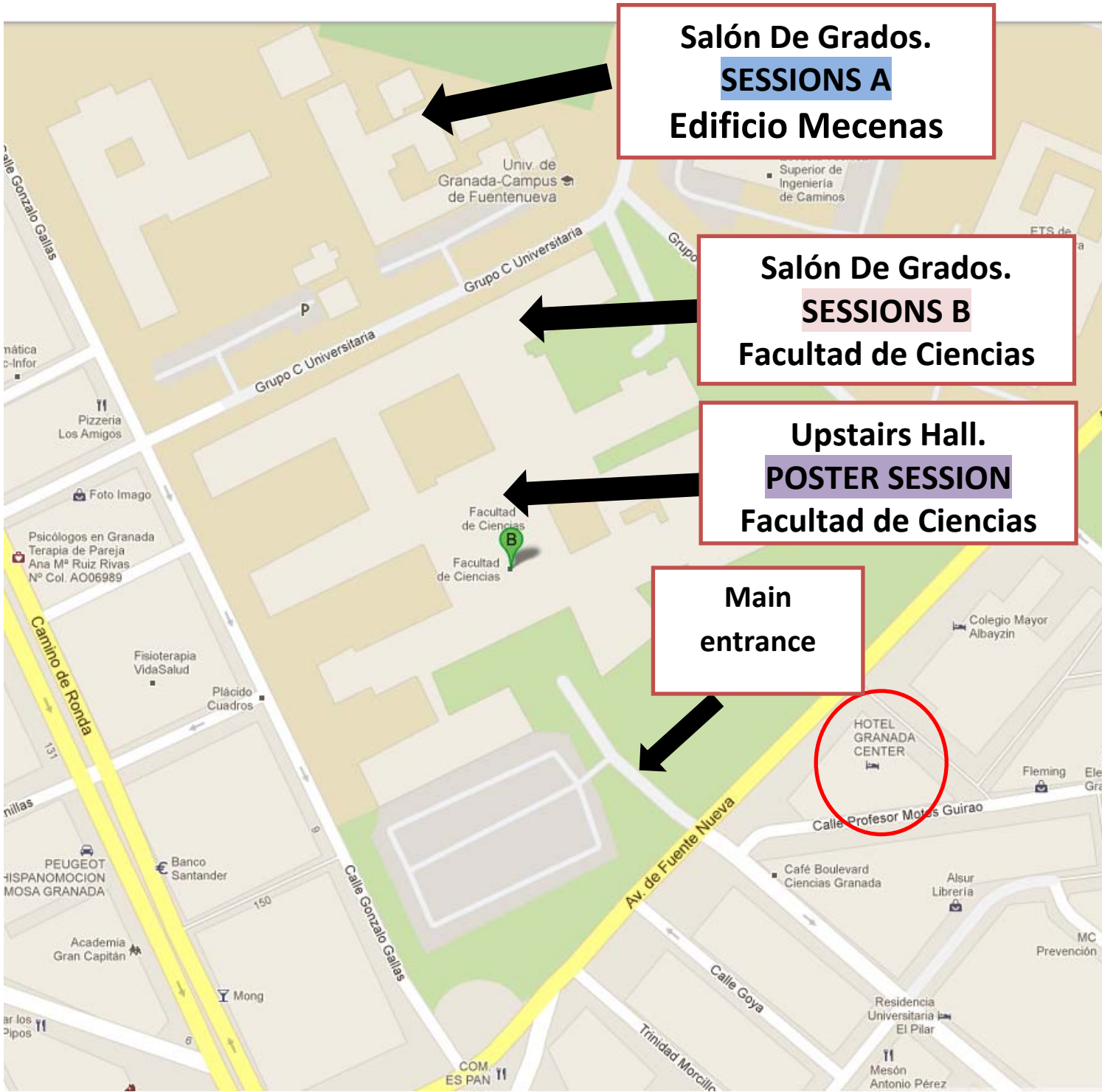
Monday, March 18		
9:00-10:00	Session 1.A. Text Analysis and data mining in Bioinformatics	Session 1.B. Biomedical Devices and Technologies
10:00-11:00	Session 2.A. Next Generation Sequencing (I)	Session 2.B. Artificial Intelligence for Biomedical Signal/Imaging
11:00-11:30	Coffee Break	
11:30-13:00	Session 3.A. Microarray Data for Disease Analysis	Session 3.B. Advanced Methodologies for Tumor Analysis
13:00-14:30	Lunch	
14:30-15:30	Session 4.A. SNPs, Polymorphisms and Mutations	Session 4.B. Biology Systems and Biology Processes Modelling
15:30-16:30		Session 5.B Disease Processes Modelling
16:30-17:30	Session 5.A Poster Session	
19:30	Light dinner at Carmen de los Mártires	

Tuesday, March 19		
9:00-10:00	Session 6.A. SS1: Data Processing and Pipelining in NGS	Session 6.B. eHealth (I)
10:00-11:00	Session 7.A. Next Generation Sequencing (II)	Session 7.B. eHealth (II)
11:00-11:30	Coffee Break	
11:30-12:15	Invited Talk: Dr. Guy Cochrane, <i>European Bioinformatics Institute (EBI)</i>	
12:15-13:15	Session 8.A. Regulation, miRNA and Motifs (I)	Session 8.B. Biomedical Engineering I
13:15-14:30	Lunch	
14:30-16:00	Session 9.A. Regulation, miRNA and Motifs (II)	Session 9.B. Biomedical Engineering II
16:00-17:00	Session 10.A. SS2: Machine Learning for Bioinformatics in the Pre/Post NGS Era	Session 10.B. Biomedical Sensors and Activity Recognition
19:30	Gala dinner at Palacio de Santa Paula	

Wednesday, March 20	
9:00-10:00	Session 11.B. Data Mining , Semantics and Ontologies (I)
10:00-11:00	Session 12.B. Data Mining , Semantics and Ontologies (II)
11:00-11:30	Coffee Break
11:30-12:45	Session 13.B Computational Proteomics (I)
12:45-13:15	Invited Talk: Dr. Julia Hoeng (sbv IMPROVER) <i>From Rat to Human: Understanding the Limits of Animal Models of Human Biology.</i>
13:15-14:30	Lunch
14:30-15:30	Session 14.B. Computational Proteomics (II) Closing Ceremony
16:15-20:00	Social Event: Visit to Alhambra

NOTE:

- 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 Session** will be held in the upstairs hall, Facultad de Ciencias.



Salón De Grados.
SESSIONS A
Edificio Mecenas

Salón De Grados.
SESSIONS B
Facultad de Ciencias

Upstairs Hall.
POSTER SESSION
Facultad de Ciencias

**Main
entrance**

**HOTEL
GRANADA
CENTER**

Table of Contents

Session 1.A. Text Analysis and data mining in Bioinformatics.

Chairman: Dr. Miguel Andrade Navarro

Incremental revision of biological networks from texts

Dragana Miljkovic, Vid Podpecan, Tjasa Stare, Igor Mozetic, Kristina Gruden and Nada Lavrač

Predicting Flu Incidence from Portuguese Tweets

José Carlos Santos and Sérgio Matos

Are citations a complete measure for the usage of knowledge claims?

Gemma Elizabeth Derrick, Carmen Lopez Illesca and Koen Jonkers

Session 2.A. Next Generation Sequencing (I).

Chairman: Dr. M. Gonzalo Claros

High-throughput sequencing of immunoglobulin genes: Life without a template

Miri Michaeli, Michal Barak, Lena Hazanov, Hila Noga and Ramit Mehr

Unbiased comparison of alignment tools for splice junction detection from RNA-Seq data

Alberto Gatto, Fátima Sánchez Cabo, Carlos Torroja Fungairiño and Enrique Lara Pezzi

Clinical detection of human probiotics and human pathogenic bacteria by using a novel high-throughput platform based on next generation sequencing

Chih-Min Chiu, Feng-Mao Lin, Tzu-Hao Chang, Wei-Chih Huang, Chao Liang, Wei-Yun Wu, Tzu-Ling Yang, Shun-Long Weng and Hsien-Da Huang

Session 3.A. Microarray Data for Disease Analysis.

Chairman: Dr. Sidahmed Benabderrahmane

Comparative analysis of the annotation systems of *Mus musculus* 3 high density expression microarray

Anna Cichonska, Roman Jaksik, Joanna Polanska and Wiesława Widlak

Chromothripsis-like patterns are recurring, but heterogeneously distributed features in cancer: A survey of 22,347 genomic copy number profiles

Haoyang Cai, Nitin Kumar, Homayoun C. Bagheri, Christian von Mering, Mark D. Robinson and Michael Baudis

Synergies of genes in Alzheimer's disease

Isabel A. Nepomuceno-Chamorro and Jesús S. Aguilar-Ruiz

Analysis of Cancer Microarray Data using Constructive Neural Networks and Genetic Algorithms

Rafael Marcos Luque Baena, Daniel Urda, Jose Luis Subirats, Leonardo Franco and Jose M. Jerez

Session 4.A. SNPs, Polymorphisms and Mutations.

A Proposal of BGWAS (Bigenome-Wide Association Study)-Combined analysis of nuclear GWAS and mitochondrial haplogroup for metabolic syndrome and heart failure-

Licht Toyo-Oka, Teruhiko Toyo-Oka, Manfred Richter, Toshiaki Nakajima, Toru Izumi, Shun-Ei Kyo, Minoru Ono, Sawa Kostin, Jutta Schaper and Katsushi Tokunaga

NTreceptorDB: a Database of Polymorphisms and Disease-Gene Associations in Behavioral Disorders

Aliyu Kabir Musa, Ekrem Varoglu and Bahar Taneri

Seeking for Genetic Signature of Radiosensitivity - Methods for Data Analysis

Joanna Zyla, Joanna Polanska, Paul Fannon, Robert Bulman, Simon Bouffler and Christophe Badie

Frequent pathological human mutations: a survey

Marco Cammisa, Antonella Correria, Giuseppina Andreotti and Maria Vittoria Cubellis

New Structure in Genomes Manifests in Triplet Distribution Alongside a Sequence

Michael Sadovsky and Eugene Mirkes

Session 5.A. Poster Session.

Analyzing the adoption, diffusion, and the technological stages of the medical imaging equipment: predicting the technological obsolescence in the Valencian Community.

Natividad Guadalajara Olmeda, Elena De La Poza Plaza, Carla Sancho Mestre, Luís Martí Bonmatí, David Vivas Consuelo, Francisco Reyes Santias and Marta Dos Anjos Martins-Ramos

Determining the impact of Vitamin E & Selenium supplementation on gene expression in the brains of mice infected with T. gondii

Shrikant Pawar

Identification of MiRNAs as specific biomarkers in prostate cancer diagnostics : A combined in silico and molecular approach

Firdous Khan and Dr Ashley Pretorius

White Blood Cells Identification and Classification from Leukemic Blood Image

Lorenzo Putzu and Cecilia Di Ruberto

Quantification and monitoring of visual disturbances for patients with cataracts using Halo v1.0 software

Carolina Ortiz, José J. Castro, Aixa Alarcón, Margarita Soler and Rosario G. Anera

Approach on affective valence detection from EEG signals based on global field power measure and SVM-RFE algorithm

Antonio R Hidalgo-Muñoz, Miriam López, Ana Maria Tomé, Ana Teresa Pereira and Isabel M Santos

A Visual Test Based on a Freeware Software for Quantifying and Displaying Night-Vision Disturbances: Study in Subjects after Alcohol Consumption

Jose J. Castro, Carolina Ortiz, Antonio M. Pozo and Rosario G. Anera

Subcellular Localization Algorithm Based On Fluorescence Microscopy Images

Chao Li, Xue-Hong Wang, Li Zheng and Ji-Feng Huang

Serum YKL-40: A possible biomarker in bronchial asthma?

Sarla Naglot, Dr.Krishna Dalal, Dr.Praveen Aggarwal, Dr.Rima Dada and Dr.Sharmishtha Dey

Phytochemical screening and insilico approach for identification of anti stress activity of compounds from medicinal plants

Jayasimha Rayalu Daddam, Muralidhara Rao Dowlathabad and Subba Rao Dakinedi

Protein-Protein Interaction Network Clustering Using Particle Swarm Optimization

Iman Sharafuddin, Mehrdad Mirzaei, Masoud Rahgozar and Ali Masoudi-Nejad

Best practices for SNV and methylation calling from bisulfite sequencing data

Guillermo Barturen, Jose L. Oliver and Michael Hackenberg

The molecular level energy calculation and Molecular dynamics studies on structurally similar HTLV and HIV protease enzymes using HIV-PR inhibitors

Chandrabose Selvaraj and Sanjeev Kumar Singh

G2P Knowledge Centre: An integrated genotype-phenotype data access portal and online collaborative network

Adam Webb and Anthony Brookes

Improved conversion rates for SNP genotyping of nonmodel organisms

Darrell Conklin, Iratxe Montes, Aitor Albaina and Andone Estonba

Using intelligent system for medical decision-making to magnetic resonance imaging

Olga Valenzuela, Francisco Ortuño, Fernando Rojas, Hector Pomares, Jose Luis Bernier, Luis Javier Herrera and Alberto Guillen

Choice Impact of Soft Analysis Tools in Genes Selection

Ouafae Kaissi, Ahmed Moussa, Brigitte Vannier and Abdellatif Amrani Ghacham

Computational Approach to Predict Inter-Species Oral Protein-Protein Interactions

Edgar D. Coelho, Joel P. Arrais, Sergio Matos, Nuno Rosa, Maria José Correia, Marlene Barros and Jose Luis Oliveira

Fuzzy logic for physiological modeling: application to the anesthetic process

Ayoze Marrero, Juan Mendez, José Reboso and Ana León

Cloud Care: A Remote Health Monitoring System

Balamurugan Sanjeevirayar and Ajay M P

Human physiological response to intensity of somatosensory stimulation Applied to the ankle tendon

Ha-Ju So, Ki-Young Kwak, Seong-Hyun Kim and Dong-Wook Kim

Adaptive and Linear Energy Based Detector for a Virtual Mouse Control

Alexandre Balbinot, Guilherme Corseti and Amanda Balbinot

Feature preprocessing improves Support Vector Machine accuracy for seizure detection in neonatal EEG

Guy Bogaarts, Erik Gommer, Jos Reulen, Werner Mess, Danny Hilkmann and Vivianne van Kranen-Mastenbroek

Towards Modelling the Processes of a Minimal Protocell

Walter Riofrio

A bioinformatics assay on Catalase epitopes of *Helicobacter pylori*

Niloufar Rashidi and Hajieh Ghasemian Safaei

Computational metabolic engineering of *Arabidopsis thaliana* for increased biomass production

Georg Basler, Abdelhalim Larhlimi, Sergio Grimbs and Zoran Nikoloski

Comparison of Allergen Databases for In Silico Allergenicity Assessment

Najaf Allahyari Fard, Zarrin Minucheher and Amir Mousavi

Portable system for force measurement of long-term monitoring during human gait

Rômulo Sehnen, Alexandre Balbinot and Amanda Balbinot

Therapeutic gymnastic: Effects on the quality of life at two months in postpartum period

Antonio Pinti, Racha Doya, Bruno Lenne, Eric Watelain, Hechmi Toumi and Cyril Garnier

Information System for Pharmaceutical Management using medicine-related problems classification

Jose Luis Trillo Mata, Pablo Méndez, Mireia Candel Molina, Patricia Alargada López and Mercedes Franco-Donat

heart sounds and heart murmurs separation

Atbi Amina, Debbal Sidi Mouhamed and Meziani Fadia

In Silico Allergenicity Assessment of Novel Proteins Derived from GMHR Crops

Najaf Allahyari Fard

Fast assessment of the correlation between coverage-like genomic features and its statistical significance

Elena Stavrovskaya, Andrey Mironov and Alexander Favorov

Evaluation of Acoustic and Thermal Properties of Ultrasonic Phantoms Made of polyvinyl chloride-plastisol (PVCP)

Luis Maggi, Guillermo Cortela, Marco Antonio von Krüger, Carlos Negreira and Wagner Coelho De Albuquerque Pereira

Use of Ultrasonic Parameters as Adjuvant Tool of Diagnosis and Monitoring of Bone Lesions

Aldo Pereira, Paulo Rosa, Daniel Matusin, Marco von Kruger, Alberto Schanaider and Wagner Pereira

Automatic Detection of Filopodia from Fluorescence Microscopy Images

Sharmin Nilufar, Theodore J. Perkins, Anne Morrow and Jonathan Lee

BG7: A new approach for bacterial genome annotation designed for Next Generation Sequencing data

Pablo Pareja-Tobes, Marina Manrique, Eduardo Pareja-Tobes, Eduardo Pareja and Raquel Tobes

Net7: a new tool for bacterial comparative genomics: massive tracing of vertical and horizontal gene flux between genome elements

Marina Manrique, Pablo Pareja-Tobes, Eduardo Pareja-Tobes, Marta Brozynska, Eduardo Pareja and Raquel Tobes

Bio4J: An Open source biological data integration platform

Pablo Pareja-Tobes, Eduardo Pareja-Tobes, Marina Manrique, Eduardo Pareja and Raquel Tobes

An alignment-free approach for eukaryotic ITS2 annotation and phylogenetic inference

Guillermin Agüero-Chapin, Aminaél Sánchez-Rodríguez, Pedro I. Hidalgo-Yanes, Yunierkis Pérez-Castillo, Reinaldo Molina-Ruiz, Kathleen Marchal, Vitor Vasconcelos and Agostinho Antunes

Whole exome sequencing analysis pipeline for the discovery of mutations causative of human rare diseases

Francisco Javier Lopez Domingo, Antonio Rueda Martin, Javier P. Florido, Alicia Vela Boza, Pablo Arce Garcia, Luis Miguel Cruz Renedo, Javier Escalante, Ana Isabel López Pérez, Federica Trombetta, Guillermo Antiñolo and Javier Santoyo López

PhysioDroid: an app for physiological data monitoring

Oresti Baños, Miguel Damas, Peter Gloessekoetter, Andreas Hermes, Hendrik Mende, Hector Pomares and Ignacio Rojas

Structural vs Practical Identifiability in System Biology

Maria Pia Saccomani

Determining the most suitable multiple sequence alignment methodology by using a set of heterogeneous biological features

Francisco Ortuño, Olga Valenzuela, Hector Pomares and Ignacio Rojas

Optimal Knots Allocation in Smoothing Splines using intelligent system. Application in bio-medical signal processing.

Olga Valenzuela, Miguel Pasadas, Francisco Ortuño and Ignacio Rojas

Session 6.A. SS1: Data Processing and Pipelining in NGS.

Chairman: Dr. Juergen Eils

Data processing on a large scale

Chris Lawrenz, Sylwester Radomski and Jürgen Eils

IT Future of Medicine (ITFoM)

Ralf Sudbrak and Hans Lehrach

e-Bioscience Solutions and Challenges for Next Generation Sequencing Experiments

Barbera van Schaik, Mark Santcroos, Souley Madougou, Aldo Jongejan, Antoine van Kampen and Silvia Olabarriaga

Session 7.A. Next Generation Sequencing (II).

Chairman: Dr. Michael Hackenberg

FQbin: a compatible and optimized format for storing and managing sequence data

Darío Guerrero-Fernández, Rafael Larrosa and M. Gonzalo Claros

Detecting and correcting mis-assembled reads in contigs

Hicham Benzekri, Dario Guerrero, Rocio Bautista and M. Gonzalo Claros

Efficient and Error-Tolerant Sequencing Read Mapping

Piotr Jaroszyński and Norbert Dojer

Session 8.A. Regulation, miRNA and Motifs (I).

Chairman: Dr. Mariama El Baroudi

CE3: Customizable and Easily Extensible Ensemble Tool for Motif Discovery

Karina Panucia Tillan, Mauro Leoncini and Manuela Montangero

Homologous miRNAs involved in colorectal cancer affecting the immune system

Fariborz Asghari Alashti and Zarrin Minuchehr

Robust stability of uncertain genetic regulatory networks with multivariable regulation functions

Jiewei Li

A New miRNA Motif Protects Pathways Expression in Gene Regulatory Networks

Alfredo Benso, Stefano Di Carlo, Gianfranco Michele Maria Politano and Alessandro Savino

Session 9.A. Regulation, miRNA and Motifs (II).

Chairman: Dr. Jiewei Li

Scoring of Matrix Gla protein (MGP) promoter variants within predicted transcription elements

Mohammad Najafi and Abazar Roustazadeh

Accounting for Post-Transcriptional Regulation in Boolean Networks Based Regulatory Models

Alfredo Benso, Stefano Di Carlo, Hafeez Ur Rehman, Gianfranco Politano, Alessandro Savino, Giovanni Squillero, Alessandro Vasciaveo and Stefano Benedettini

Comparison of Methylation Density In Different Cancer Types By HumanMethylation450 Methods

Senol Dogan and Hakan Sahin

DAC-driven Integrative Network Regulation and Pathway Coordination in Breast Cancer

Mariama El Baroudi, Dario La Sala, Caterina Cinti and Enrico Capobianco

Session 10.A. SS2: Machine Learning for Bioinformatics in the Pre/Post NGS Era.

Chairman: Dr. Abhay Krishna

Learning classifiers from discretized expression quantitative trait loci

Andrés Masegosa Arredondo, María Del Mar Abad Grau, Serafín Moral Callejón and Fuencisla Matesanz

A multiobjective approach for gene structure prediction

Javier Pérez-Rodríguez, Alexis Germán Arroyo Peña and Javier Martínez Luna

Ant Colony Optimisation for Exploring Logical Gene-Gene Associations in Genome Wide Association Studies

Emmanuel Sapin, Ed Keedwell and Tim Frayling

Text mining 16 million pubmed abstracts with bayesian networks for discovery of novel eye disease genes

Abhay Krishna, Guillermo Antiñolo and Shomi Bhattacharya

Working guide of knowledge mining from ENCODE data in clinical settings

Abhay Krishna, Antonio Ortiz, Vaibhav Bhatia and Shomi Bhattacharya

Session 1.B. Biomedical Devices and Technologies .

Chairman: Dr. Mahmoud Chizari

Statistical Design of Biomedical Devices and Systems

Albert Guvenis

High performance 3D visualization on the Web: a biomedical case study

Jesús Jiménez, Jaime Cruz and Juan Ruiz De Miras

Session 2.B. Artificial Intelligence for Biomedical Signal/Imaging .

Chairman: Dr. Albert Guvenis

One-step wavelet-based processing for wandering and noise removing in ECG signals

Encarnacion Castillo, Diego Pedro Morales, Antonio García, Luis Parrilla, Nuria Lopez-Ruiz and Alberto J. Palma

Incorporation of a variational registration method into a spectroscopy tool

Juan José Fuertes and Fernando López-Mir

Liver Segmentation on CT Images. A Fast Computational Method Based on 3D Morphology and a Statistical Filter

Fernando López-Mir, Pablo González, Valery Naranjo, Eugenia Pareja, Mariano Alcañiz and Jaime Solaz

Session 3.B. Advanced Methodologies for Tumor Analysis .

Chairman: Dr. Jean-Fred Fontaine

Application of Artificial Intelligence in Tumors Sizing Classification for Breast Cancer

Ricardo González-Otal, Jose Luis López-Guerra, Carlos Luis Parra-Calderón, Alicia Martínez-García, Alberto Moreno-Conde and María Jose Ortiz-Gordillo

Influence of Far Infrared Radiation on cytotoxicity of Human Breast Cancer (MCF7) cells: experimental evaluation

Pantea Peidaee, Ravi Shukla and Elena Pirogova

Pattern recognition of multidimensional PBMC flow cytometry histograms for prostate cancer identification

Dong Tong and Graham Ball

Computational methods for cancer survival classification using intermediate information

Shinuk Kim, Taesung Park and Mark Kon

Session 4.B. Biology Systems and Biology Processes Modelling.

Chairman: Dr. Bram Vrancken

Data driven inference of unmodelled dynamical processes in systems biology models

Maik Kschischo and Matthias Kahm

Double-Chain Unscented Expectation Propagation for Inference in Stochastic Dynamical Models of Biological Processes

Hao Wu and Stefan Bernhard

Stochastic modelling of non Markovian Dynamics in Biochemical Reactions

Davide Chiarugi, Moreno Falaschi, Diana Hermith, Roberto Marangoni and Carlos Olarte

Session 5.B. Disease Processes Modelling.

Chairman: Dr. Davide Chiarugi

Mobile Data Modeling for Unknown Disease Understanding: Bells Palsy Case Study

Jalel Akaichi

A flowgraph model for bladder carcinoma

Gregorio Rubio, Belén García Mora, Cristina Santamaría and José Luis Pontones

Reconstruction of an HIV Transmission History in a Bayesian Coalescent Framework

Bram Vrancken, Andrew Rambaut, Guy Baele, Anne-Mieke Vandamme, Kristel Van Laethem, Eric Van Wijngaerden, Alexei Drummond, Marc Suchard and Philippe Lemey

Session 6.B. eHealth (I).

Chairman: Dr. Joerg Schroettner

Aeroallergens Database Design

Alcides Alvear and Elizabeth Quintero

Improving the breast cancer diagnosis using digital repositories

César Suárez-Ortega, José Miguel Franco-Valiente, Manuel Rubio-Del-Solar, Guillermo Díaz-Herrero, Miguel Ángel Guevara-López, Naimy González-Posada, Daniel Moura, Pedro Cunha, Isabel Ramos, Joana Loureiro and Bruno Ferreira-De-Araujo

Information System for Pharmaceutical Management using Clinical Risk Groups

Ruth Usó Talamantes, Juan Bru Sanchis, Laia Buigues Pastor, Inmaculada Sauri Ferrer, David Vivas Consuelo and Carla Sancho Mestre

Session 7.B. eHealth (II).

Chairman: Dr. Alcides Alvear

Influence of NYHA Classification of Heart Failure Patients for Assessing Telemedical Applications and Services by Using a Discrete Event Model

Jörg Schröttner and Alexander Lassnig

Towards the sustainability of the Health Care System: Tlediagnosis as a success case.

José Miguel Cacho and Natalia Jimenez

A Hierarchical Event-based Architecture for the Notification of Medical Document Availability

Christian Esposito and Mario Ciampi

Session 8.B. Biomedical Engineering (I).

Chairman: Dr. Torben Larsen

Locating the Optic Disc in Retinal Images Using Morphological Techniques

Angel Suero, Diego Marin, Manuel Emilio Gegundez-Arias and Jose Manuel Bravo

Development of a Surgical Interface for Cryoablation of Kidney Tumors

Duygun Erol Barkana, Mehmed Ozkan, Fethi Calisir, Dilek Goksel Duru and Deniz Duru

Mechanical Aspects of an Interference Screw Placement in ACL Reconstruction

M Chizari

Probability of path block by using microbubbles aggregation in artificial capillary

Kohji Masuda, Nobuhiko Shigehara, Ren Koda and Takashi Mochizuki

Session 9.B. Biomedical Engineering (II).

Chairman: Dr. Cai Haoyang

Gaussian mixture model based analysis of apparent diffusion coefficient maps for differentiation between malignant and benign brain tumours: preliminary results.

Joanna Polanska, Franciszek Binczyk, Anna Hebda and Barbara Bobek-Billewicz

Neuroeconomics and General Neural Biomarkers

Torben Larsen

Network-based drug-disease relation prioritization using ProphNet

Víctor Martínez, Carmen Navarro, Carlos Cano and Armando Blanco

Application of Rényi Entropy and Mutual Information of Cauchy-Schwartz in Selecting Variables

Leonardo Macrini and Leonardo Gonçalves

Session 10.B. Biomedical Sensors and Activity Recognition.

Chairman: Dr. Duygun Erol Barkana

Instrumented Insoles with Pressure and Acceleration Sensors

Fernando Martínez Martí, Santiago Gonzalo García Diaz, Javier García Jiménez, María Sofía Martínez García, Antonio Martínez Olmos and Miguel Ángel Carvajal Rodríguez

Gait parameter adaptation for lower-limb exoskeletons

Daniel Sanz-Merodio, Manuel Cestari, Juan Carlos Arevalo and Elena Garcia

Techniques to increase the sensitivity for dosimetry sensors

Sofia Martínez-García, Miguel Ángel Carvajal, Fernando Simancas, Jesús Banqueri, Antonio M. Lallena and Alberto J. Palma

Monitoring changes in daily actigraphy patterns of free-living patients

Elies Fuster-Garcia, Javier Juan-Albarracín, Adrián Bresó and Juan M. García-Gómez

Session 11.B. Data Mining, Semantics and Ontologies (I).

Chairman: Dr. Dragana Miljkovic

Plant Pathogen Interactions Ontology (PPIO)

Alejandro Rodríguez Iglesias, Mikel Egaña Aranguren, Alejandro Rodríguez Gonzalez and Mark D. Wilkinson

Representation of Semantic Networks of Biomedical Terms

André Vechina, Joel P. Arrais and José Luís Oliveira

Session 12.B. Data Mining , Semantics and Ontologies (II).

Chairman: Dr. Dragana Miljkovic

The Plant Resistance Gene Database (PRGdb): a Wiki-based system for the annotation of R-genes.

Antonio Hermoso Pulido, Anna Vlasova, Walter Sanseverino, Raffaella Dalessandro, Giuseppe Andolfo, Luigi Frusciante, Guglielmo Roma, Mara Ercolano and Ernesto Lowy

Analysis and Classification of Bio-ontologies by the Structure of their Labels

Manuel Quesada-Martínez, Jesualdo Tomás Fernández-Breis and Robert Stevens

Enhancing Transcriptomic Data Mining with Semantic Ranking: Towards a new Functional Spectral Representation.

Sidahmed Benabderrahmane

Session 13.B. Computational Proteomics (I) .

Chairman: Dr. Sergio Matos

The Apoptosis Gene Ontology project and the IntAct-Apoptosis dataset: updating the conceptual representation of apoptosis

Pablo Porras Millan, Paola Roncaglia, Emily Dimmer, Jane Lomax, Rachael Huntley, Sandra Orchard, Marine Dumousseau, Samuel Kerrien and Henning Hermjakob

A GPU based Conformational Entropy Calculation Method

Qian Zhang, José M. García, Junmei Wang, Tingjun Hou and Horacio Pérez-Sánchez

Impact of implicit solvation models on database enrichment in GPU based blind Virtual Screening

Ginés D. Guerrero, José M. Cecilia, José M. García and Horacio Pérez-Sánchez

Finite absorbing Markov chain as a model of small-ligand binding process

Marcin Pacholczyk, Damian Borys and Marek Kimmel

Invited Talk: sbv IMPROVER. From Rat to Human: understanding the limits of animal models of human biology.

Speaker: Dr. Julia Hoeng

From Rat to Human: understanding the limits of animal models of human biology

C. Mathis, L.G. Alexopoulos, C. Poussin, V. Belcastro, J. Binder, E. Bilhal, P. Meyer, R. Norel, J.J. Rice, G. Stolovitzky, Julia Hoeng and M.C. Peitsch

Session 14.B. Computational Proteomics (II).

Chairman: Dr. Maria Vittoria Cubellis

The integration of Clifford Algebra in the iBP algorithm for the DMDGP

Rafael Alves, Andrea Cassioli, Antonio Mucherino, Carlile Lavor and Leo Liberti

Protein Sequence Annotation by means of Community Detection

Giuseppe Profiti, Damiano Piovesan, Pier Luigi Martelli, Piero Fariselli and Rita Casadio

Advances in Semi-Supervised Alignment-Free Classification of G Protein-Coupled Receptors

Raúl Cruz-Barbosa, Alfredo Vellido and Jesús Giraldo