

Contents – Part II

Computational Genomics

Investigation of DNA Sequences Utilizing Frequency-Selective Nanopore Structures	3
<i>Ali Hilal-Alnaqbi, Mahmoud Al Ahmad, Tahir A. Rizvi, and Farah Mustafa</i>	
Uropathogenic Escherichia coli: An Ideal Resource for DNA Microarray Probe Designing	12
<i>Payam Behzadi and Elham Behzadi</i>	
Lost Strings in Genomes: What Sense Do They Make?	20
<i>Michael Sadosky, Jean-Fred Fontaine, Miguel A. Andrade-Navarro, Yury Yakubailik, and Natalia Rudenko</i>	
Comprehensive Study of Instable Regions in <i>Pseudomonas Aeruginosa</i>	30
<i>Dan Wang, Jingyu Li, and Lusheng Wang</i>	
Breathogenomics: A Computational Architecture for Screening, Early Diagnosis and Genotyping of Lung Cancer	41
<i>Emmanuel Adetiba, Marion O. Adebiyi, and Surendra Thakur</i>	
Mixed-Integer Programming Model for Profiling Disease Biomarkers from Gene Expression Studies	50
<i>André M. Santiago, Miguel Rocha, António Dourado, and Joel P. Arrais</i>	
Assembly of Gene Expression Networks Based on a Breast Cancer Signature.	62
<i>Dimitrios Apostolos Chalepakis Ntellis, Ekaterini S. Bei, Dimitrios Kafetzopoulos, and Michalis Zervakis</i>	
Pairwise and Incremental Multi-stage Alignment of Metagenomes: A New Proposal	74
<i>Esteban Pérez-Wohlfeil, Oscar Torreno, and Oswaldo Trelles</i>	
An Expanded Association Approach for Rare Germline Variants with Copy-Number Alternation	81
<i>Yu Geng, Zhongmeng Zhao, Daibin Cui, Tian Zheng, Xuanping Zhang, Xiao Xiao, and Jiayin Wang</i>	
Parallelizing Partial Digest Problem on Multicore System.	95
<i>Hazem M. Bahig, Mostafa M. Abbas, and M.M. Mohie-Eldin</i>	

Computational Proteomics

Prediction of Calmodulin-Binding Proteins Using Short-Linear Motifs	107
<i>Yixun Li, Mina Maleki, Nicholas J. Carruthers, Luis Rueda, Paul M. Stemmer, and Alioune Ngom</i>	
Data Mining the Protein Data Bank to Identify and Characterise Chameleon Coil Sequences that Form Symmetric Homodimer β -Sheet Interfaces.	118
<i>Johanna Laibe, Melanie Broutin, Aaron Caffrey, Barbara Pierscionek, and Jean-Christophe Nebel</i>	
Associating Gene Ontology Terms with Pfam Protein Domains	127
<i>Seyed Ziaeddin Alborzi, Marie-Dominique Devignes, and David W. Ritchie</i>	
3D Protein-Structure-Oriented Discovery of Clinical Relation Across Chronic Lymphocytic Leukemia Patients	139
<i>Konstantinos Mochament, Andreas Agathangelidis, Eleftheria Polychronidou, Christos Palaskas, Elias Kalamaras, Panagiotis Moschonas, Kostas Stamatopoulos, Anna Chailyan, Nanna Overby, Paolo Marcatili, Anastasia Hadzidimitriou, and Dimitrios Tzovaras</i>	
Application of a Membrane Protein Structure Prediction Web Service GPCRM to a Gastric Inhibitory Polypeptide Receptor Model	151
<i>Ewelina Rutkowska, Przemysław Miszta, Krzysztof Młynarczyk, Jakub Jakowiecki, Paweł Pasznik, Sławomir Filipiek, and Dorota Latek</i>	
<i>In Silico</i> Prediction of 3D Structure of <i>Anopheles Gambiae</i> ABCC12 Protein.	163
<i>Marion O. Adebisi, Efejiro Ashano, and Emmanuel Adetiba</i>	
Exploring Symmetric Substructures in Protein Interaction Networks for Pairwise Alignment	173
<i>Ahed Elmsallati, Swarup Roy, and Jugal K. Kalita</i>	
Identification and <i>in silico</i> Analysis of Glutathione Reductase Transcripts Expressed in Olive (<i>Olea europaea</i> L.) Pollen and Pistil	185
<i>Estefanía García-Quirós, Rosario Carmona, Adoración Zafra, M. Gonzalo Claros, and Juan de Dios Alché</i>	

Computational Systems for Modelling Biological Processes

Cyber Immunity: A Bio-Inspired Cyber Defense System	199
<i>Peter Włodarczak</i>	

An Accurate Database of the Fixation Probabilities for All Undirected Graphs of Order 10 or Less	209
<i>Fernando Alcalde Cuesta, Pablo González Sequeiros, Álvaro Lozano Rojo, and Rubén Vigara Benito</i>	
Quantum Computing Based Inference of GRNs	221
<i>Abhinandan Khan, Goutam Saha, and Rajat Kumar Pal</i>	
Analysis of Soil Data from Eastern of Morocco Based on Data Mining Process.	234
<i>Imane Belabed, Mohammed Talibi Alaoui, Abdelmajid Belabed, and Youssef Talibi Alaoui</i>	
A Multi-objective Optimization Framework for Multiple Sequence Alignment with Metaheuristics	245
<i>Cristian Zambrano-Vega, Antonio J. Nebro, José García-Nieto, and José F. Aldana-Montes</i>	
Analysis of Gene Expression Discretization Techniques in Microarray Biclustering	257
<i>J.S. Dussaut, C.A. Gallo, J.A. Carballido, and I. Ponzoni</i>	
Analysis of Informative Features for Negative Selection in Protein Function Prediction	267
<i>Marco Frasca, Fabio Lipreri, and Dario Malchiodi</i>	
Differential Network Analysis of Anti-sense Regulation.	277
<i>Marc Legeay, Béatrice Duval, and Jean-Pierre Renou</i>	
Nonlinear Control and Simulation of a Dielectric Elastomer Actuator-Based Compression Bandage on Flexible Human Calf	289
<i>Shahram Pourazadi, Mehrdad Moallem, and Carlo Menon</i>	
Dengue Agent-Based Model in South American Temperate Zone	301
<i>Carlos M. Pais, Maximiliano G. Colazo, Maximiliano Fernandez, Silvana Bulatovich, and Hugo Fernandez</i>	
Data Driven Biology - New Tools, Techniques and Resources	
Transcription Control in Human Cell Types by Systematic Analysis of ChIP Sequencing Data from the ENCODE.	315
<i>Guillaume Devailly and Anagha Joshi</i>	
Management of Data Structures Generated During Simulations of the Evolution of Multicellular Systems.	325
<i>Andreea Robu, Mihaela Crisan-Vida, Nicolae Robu, and Adrian Neagu</i>	

Finding Transcripts Associated with Prostate Cancer Gleason Stages Using Next Generation Sequencing and Machine Learning Techniques	337
<i>Osama Hamzeh, Abedalrhman Alkhateeb, Iman Rezaeian, Aram Karkar, and Luis Rueda</i>	
Bioinformatics from a Big Data Perspective: Meeting the Challenge	349
<i>Francisco Gomez-Vela, Aurelio López, José A. Lagares, Domingo S. Baena, Carlos D. Barranco, Miguel García-Torres, and Federico Divina</i>	
Computational Prediction of Host-Pathogen Interactions Through Omics Data Analysis and Machine Learning.	360
<i>Diogo Manuel Carvalho Leite, Xavier Brochet, Grégory Resch, Yok-Ai Que, Aitana Neves, and Carlos Peña-Reyes</i>	
Simultaneous Gene Selection and Weighting in Nearest Neighbor Classifier for Gene Expression Data	372
<i>Antonio Alarcón-Paredes, Gustavo Adolfo Alonso, Eduardo Cabrera, and René Cuevas-Valencia</i>	
Machine Learning Approaches for Predicting High Utilizers in Health Care	382
<i>Chengliang Yang, Chris Delcher, Elizabeth Shenkman, and Sanjay Ranka</i>	
eHealth	
A Device Supporting the Self Management of Tinnitus	399
<i>Pablo Chamoso, Fernando De La Prieta, Alberto Eibenstein, Daniel Santos-Santos, Angelo Tizio, and Pierpaolo Vittorini</i>	
A Case Study on the Integration of Heterogeneous Data Sources in Public Health	411
<i>Pierpaolo Vittorini, Anna Maria Angelone, Vincenza Cofini, Leila Fabiani, Antonella Mattei, and Stefano Necozone</i>	
QSAR Classification Models for Predicting Affinity to Blood or Liver of Volatile Organic Compounds in e-Health.	424
<i>Fiorella Cravero, María Jimena Martínez, Mónica F. Díaz, and Ignacio Ponzoni</i>	
Usage of VR Headsets for Rehabilitation Exergames	434
<i>Martina Eckert, José Zarco, Juan Meneses, and José-Fernán Martínez</i>	

High-Throughput Bioinformatic Tools for Genomics

Search of Regions with Periodicity Using Random Position Weight Matrices in the Genome of <i>C. elegans</i>	445
<i>E.V. Korotkov and M.A. Korotkova</i>	
RNA Sequencing Analysis of Neural Cell Lines: Impact of Normalization and Technical Replication	457
<i>V. Bleu Knight and Elba E. Serrano</i>	
Towards a Universal Genomic Positioning System: Phylogenetics and Species IDentification	469
<i>Max H. Garzon and Sambriddhi Mainali</i>	
A High Performance Storage Appliance for Genomic Data.	480
<i>Gaurav Kaul, Zeeshan Ali Shah, and Mohamed Abouelhoda</i>	
Obtaining the Most Accurate <i>de novo</i> Transcriptomes for Non-model Organisms: The Case of <i>Castanea sativa</i>	489
<i>Marina Espigares, Pedro Seoane, Rocío Bautista, Julia Quintana, Luis Gómez, and M. Gonzalo Claros</i>	
Accelerating Smith-Waterman Alignment of Long DNA Sequences with OpenCL on FPGA	500
<i>Enzo Rucci, Carlos Garcia, Guillermo Botella, Armando De Giusti, Marcelo Naiouf, and Manuel Prieto-Matias</i>	
Smith-Waterman Acceleration in Multi-GPUs: A Performance per Watt Analysis	512
<i>Jesús Pérez Serrano, Edans Flavius De Oliveira Sandes, Alba Cristina Magalhaes Alves de Melo, and Manuel Ujaldón</i>	
A Deep Learning Network for Exploiting Positional Information in Nucleosome Related Sequences.	524
<i>Mattia Antonino Di Gangi, Salvatore Gaglio, Claudio La Bua, Giosué Lo Bosco, and Riccardo Rizzo</i>	

Oncological Big Data and New Mathematical Tools

A Clinical Tool for Automated Flow Cytometry Based on Machine Learning Methods	537
<i>Claude Takenga, Michael Dworzak, Markus Diem, Rolf-Dietrich Berndt, Erling Si, Michael Brandstoetter, Leonid Karawajew, Melanie Gau, and Martin Kampel</i>	

Prognostic Modeling and Analysis of Tumor Response to Fractionated Radiotherapy for Patients with Squamous Cell Lung Cancer.	549
<i>Hualiang Zhong, Hoda Sharifi, Haisen Li, Weihua Mao, and Indrin J. Chetty</i>	

Uncertainty Quantification for Meningococcus B Carriers Prediction	560
<i>Luis Acedo, Clara Burgos, Juan-Carlos Cortés, and Rafael J. Villanueva</i>	

Smart Sensor and Sensor-Network Architectures

A Novel Wearable for Rehabilitation Using Infrared Sensors: A Preliminary Investigation	573
<i>Jordan Lui, Andrea Ferrone, Zhi Yih Lim, Lorenzo Colace, and Carlo Menon</i>	

Real Time Localization Using Bluetooth Low Energy	584
<i>Massimo Conti</i>	

A Sensor Grid for Pressure and Movement Detection Supporting Sleep Phase Analysis	596
<i>Maksym Gaiduk, Ina Kuhn, Ralf Seepold, Juan Antonio Ortega, and Natividad Martínez Madrid</i>	

A Portable Wireless sEMG and Inertial Acquisition System for Human Activity Monitoring.	608
<i>Giorgio Biagetti, Paolo Crippa, Laura Falaschetti, Simone Orcioni, and Claudio Turchetti</i>	

An Automatic and Intelligent System for Integrated Healthcare Processes Management	621
<i>Virginia Cid-de-la-Paz, Andrés Jiménez-Ramírez, and M.J. Escalona</i>	

A Microcontroller Based System for Controlling Patient Respiratory Guidelines.	631
<i>Leticia Morales, Manuel Domínguez Morales, Andrés Jiménez-Ramírez, and M.J. Escalona</i>	

Requirements Analysis for User Interfaces in Mobile eHealth Applications. . .	642
<i>Armando Statti and Natividad Martinez Madrid</i>	

Mobile Health System for Evaluation of Breast Cancer Patients During Treatment and Recovery Phases	653
<i>Joquin Ollero, Jose Antonio Moral-Munoz, Ignacio Rojas, and Oresti Banos</i>	

Key Factors for Innovative Developments on Health Sensor-Based System.	665
<i>Maria Dolores Peláez, Miguel López-Medina, Macarena Espinilla, and Javier Medina-Quero</i>	

Time Lapse Experiments and Multivariate Biostatistics

Towards Integration of CFD and Photosynthetic Reaction Kinetics in Modeling of Microalgae Culture Systems	679
<i>Štěpán Papáček, Jiří Jablonský, and Karel Petera</i>	

Kinetic Modelling of Processes Behind $S_{2,3}$ -states Deactivation in Photosynthetic Oxygen Evolution	691
<i>Jiri Jablonsky and Stepan Papacek</i>	

Observation of Dynamics Inside an Unlabeled Live Cell Using a Bright-Field Photon Microscopy: Evaluation of Organelles' Trajectories	700
<i>Renata Rychtáriková and Dalibor Štys</i>	

Automatic Multiparameter Acquisition in Aquaponics Systems	712
<i>Antonín Bárta, Pavel Souček, Vladyslav Bozhynov, and Pavla Urbanová</i>	

High Definition Method for Imaging Bacteria in Microconfined Environments on Solid Media.	726
<i>Cesar A. Hernandez, Natalia Lopez-Barbosa, Crhistian C. Segura, and Johann F. Osuma</i>	

Erratum to: Bioinformatics and Biomedical Engineering.	E1
<i>Ignacio Rojas and Francisco Ortuño</i>	

Author Index	737
-------------------------------	------------

Contents – Part I

Advances in Computational Intelligence for Critical Care

Health Monitoring System Based on Parallel-APPROX SVM	3
<i>Fahmi Ben Rejab, Walid Ksiaâ, and Kaouther Nouira</i>	
Machine Learning for Critical Care: An Overview and a Sepsis Case Study . . .	15
<i>Alfredo Vellido, Vicent Ribas, Carles Morales, Adolfo Ruiz Sanmartín, and Juan Carlos Ruiz-Rodríguez</i>	

Bioinformatics for Healthcare and Diseases

A Meta-Review of Feature Selection Techniques in the Context of Microarray Data	33
<i>Zahra Mungloo-Dilmohamud, Yasmina Jaufeerally-Fakim, and Carlos Peña-Reyes</i>	
Immune Network Technology on the Basis of Random Forest Algorithm for Computer-Aided Drug Design	50
<i>Galina Samigulina and Samigulina Zarina</i>	
H-RACER: Hybrid RACER to Correct Substitution, Insertion, and Deletion Errors	62
<i>Salma Gomaa, Nahla A. Belal, and Yasser El-Sonbaty</i>	
A Multi-sensor Approach for Biomimetic Control of a Robotic Prosthetic Hand	74
<i>Jeetinder Ghataurah, Diego Ferigo, Lukas-Karim Merhi, Brittany Pousett, and Carlo Menon</i>	
Feature Selection in Multiple Linear Regression Problems with Fewer Samples Than Features	85
<i>Paul Schmude</i>	
Colormetric Experiments on Aquatic Organisms	96
<i>Jan Urban</i>	
Predicting Comprehensive Drug-Drug Interactions for New Drugs via Triple Matrix Factorization	108
<i>Jian-Yu Shi, Hua Huang, Jia-Xin Li, Peng Lei, Yan-Ning Zhang, and Siu-Ming Yiu</i>	

Diagnosis of Auditory Pathologies with Hidden Markov Models.	118
<i>Lilia Lazli, Mounir Boukadoum, Mohamed-Tayeb Laskri, and Otmane Ait-Mohamed</i>	
Biclustering Based on Collinear Patterns	134
<i>Leon Bobrowski</i>	
A Data- and Model-Driven Analysis Reveals the Multi-omic Landscape of Ageing	145
<i>Elisabeth Yaneske and Claudio Angione</i>	
Experimental Investigation of Frequency Chaos Game Representation for in Silico and Accurate Classification of Viral Pathogens from Genomic Sequences.	155
<i>Emmanuel Adetiba, Joke A. Badejo, Surendra Thakur, Victor O. Matthews, Marion O. Adebisi, and Ezekiel F. Adebisi</i>	
Gamified Mobile Blood Donation Applications.	165
<i>Lamyae Sardi, Ali Idri, and José Luis Fernández-Alemán</i>	
Medical Entity Recognition and Negation Extraction: Assessment of NegEx on Health Records in Spanish	177
<i>Sara Santiso, Arantza Casillas, Alicia Pérez, and Maite Oronoz</i>	
RISK: A Random Optimization Interactive System Based on Kernel Learning for Predicting Breast Cancer Disease Progression.	189
<i>Fiorella Guadagni, Fabio Massimo Zanzotto, Noemi Scarpato, Alessandro Rullo, Silvia Riandino, Patrizia Ferroni, and Mario Roselli</i>	
Revealing the Relationship Between Human Genome Regions and Pathological Phenotypes Through Network Analysis	197
<i>Elena Rojano, Pedro Seoane, Anibal Bueno-Amoros, James Richard Perkins, and Juan Antonio Garcia-Ranea</i>	
Variety Behavior in the Piece-Wise Linear Model of the p53-Regulatory Module	208
<i>Magdalena Ochab, Krzysztof Puszynski, Andrzej Swierniak, and Jerzy Klamka</i>	
Multi-omic Data Integration Elucidates <i>Synechococcus</i> Adaptation Mechanisms to Fluctuations in Light Intensity and Salinity	220
<i>Supreeta Vijayakumar and Claudio Angione</i>	
MASS Studio: A Novel Software Utility to Simplify LC-MS Analyses of Large Sets of Samples for Metabolomics	230
<i>Germán Martínez, Víctor González-Menéndez, Jesús Martín, Fernando Reyes, Olga Genilloud, and José R. Tormo</i>	

Biomedical Engineering

Adsorption of Bilirubin Toxin in Liver by Chitosan Coated Activated Carbon Prepared from Date Pits	247
<i>Asel Mwafy, Ameerah Seyedzadeh, Waleed Khalil Ahmed, Basel Alsayyed Ahmad, Betty Mathew, Kamala Pandurangan, Abdel-Hamid Ismail Mourad, and Ali Hilal-Alnaqbi</i>	
Investigation of the Feasibility of Strain Gages as Pressure Sensors for Force Myography.	261
<i>Him Wai Ng, Xianta Jiang, Lukas-Karim Merhi, and Carlo Menon</i>	
Geometric Modelling of the Human Cornea: A New Approach for the Study of Corneal Ectatic Disease. A Pilot Investigation	271
<i>Francisco Cavas-Martínez, Daniel G. Fernández-Pacheco, Dolores Parras, Francisco J.F. Cañavate, Laurent Bataille, and Jorge L. Alio</i>	
Virtual Surgical Planning for Mandibular Reconstruction: Improving the Fibula Bone Flap.	282
<i>Dolores Parras, Benito Ramos, Juan José Haro, Manuel Acosta, Francisco Cavas-Martínez, Francisco J.F. Cañavate, and Daniel G. Fernández-Pacheco</i>	
Elbow Orthosis for Tremor Suppression – A Torque Based Input Case	292
<i>Gil Herrmstadt and Carlo Menon</i>	
Gremlin Language for Querying the BiographDB Integrated Biological Database.	303
<i>Antonino Fiannaca, Laura La Paglia, Massimo La Rosa, Antonio Messina, Riccardo Rizzo, Dario Stabile, and Alfonso Urso</i>	
Modelling of Glucose Dynamics for Diabetes	314
<i>Tomas Koutny</i>	
Medical Planning: Operating Theatre Design and Its Impact on Cost, Area and Workflow.	325
<i>Khaled S. Ahmed</i>	

Biomedical Image Analysis

Recognition of Stages in the Belousov-Zhabotinsky Reaction Using Information Entropy: Implications to Cell Biology	335
<i>Anna Zhyrova, Renata Rychtáriková, and Dalibor Štys</i>	
Back Pain During Pregnancy and Its Relationship to Anthropometric Biomechanical Parameters	347
<i>Julien A. Leboucher, Antonio Pinti, and Geneviève A. Dumas</i>	

Bioimaging - Autothresholding and Segmentation via Neural Networks	358
<i>Pavla Urbanová, Jan Vaněk, Pavel Souček, Dalibor Štys, Petr Císar,</i> <i>and Miloš Železný</i>	
Maximal Oxygen Consumption and Composite Indices of Femoral Neck Strength in a Group of Young Women	369
<i>Abdel-Jalil Berro, Nadine Fayad, Antonio Pinti, Georges El Khoury,</i> <i>Said Ahmaidi, Hassane Zouhal, Ghassan Maalouf, and Rawad El Hage</i>	
Microaneurysm Candidate Extraction Methodology in Retinal Images for the Integration into Classification-Based Detection Systems	376
<i>Estefanía Cortés-Ancos, Manuel Emilio Gegúndez-Arias,</i> <i>and Diego Marin</i>	
A Bio-inspired Algorithm for the Quantitative Analysis of Hind Limb Locomotion Kinematics of Laboratory Rats	385
<i>Josué González-Sandoval, S. Ivvan Valdez-Peña, Sergio Dueñas-Jiménez,</i> <i>and Gerardo Mendizabal-Ruiz</i>	
Quantization and Equalization of Pseudocolor Images in Hand Thermography	397
<i>Orcan Alpar and Ondrej Krejcar</i>	
Superficial Dorsal Hand Vein Estimation	408
<i>Orcan Alpar and Ondrej Krejcar</i>	
Automatic Removal of Mechanical Fixations from CT Imagery with Particle Swarm Optimisation	419
<i>Mohammad Hashem Ryalat, Stephen Laycock, and Mark Fisher</i>	
Augmented Visualization as Surgical Support in the Treatment of Tumors . . .	432
<i>Lucio Tommaso De Paolis</i>	
Salient Networks: A Novel Application to Study Brain Connectivity	444
<i>Nicola Amoroso, Roberto Bellotti, Domenico Diacono,</i> <i>Marianna La Rocca, and Sabina Tangaro</i>	
Clustering of Food Intake Images into Food and Non-food Categories	454
<i>Abul Doulah and Edward Sazonov</i>	
Feature Extraction Using Deep Learning for Food Type Recognition	464
<i>Muhammad Farooq and Edward Sazonov</i>	
Biomedical Signal Analysis	
Degrees of Freedom in a Vocal Fold Inverse Problem	475
<i>Pablo Gómez, Stefan Kniesburges, Anne Schützenberger,</i> <i>Christopher Bohr, and Michael Döllinger</i>	

Information Limits of Optical Microscopy: Application to Fluorescent Labelled Tissue Section	485
<i>Renata Rychtáriková, Georg Steiner, Michael B. Fischer, and Dalibor Štys</i>	
Hands-Free EEG-Based Control of a Computer Interface Based on Online Detection of Clenching of Jaw	497
<i>Mahta Khoshnam, Eunice Kuatsjah, Xin Zhang, and Carlo Menon</i>	
Wavelet Decomposition Based Automatic Sleep Stage Classification Using EEG.	508
<i>Nieves Crasto and Richa Upadhyay</i>	
An Impact of Severe Preeclampsia on Cardiovascular System Adaptation of Newborns in Early Neonatal Period.	517
<i>Olga Kireeva, Eugene Bushmelev, Elena Emelianchik, Alla Salmina, and Michael Sadovsky</i>	
Classification Algorithms for Fetal QRS Extraction in Abdominal ECG Signals.	524
<i>Pedro Álvarez, Francisco J. Romero, Antonio García, Luis Parrilla, Encarnación Castillo, and Diego P. Morales</i>	
Evaluation of Algorithms for Automatic Classification of Heart Sound Signals.	536
<i>Ricardo Enrique Pérez-Guzmán, Rodolfo García-Bermúdez, Fernando Rojas-Ruiz, Ariel Céspedes-Pérez, and Yudelkis Ojeda-Riquenes</i>	
Automatic Glissade Determination Through a Mathematical Model in Electrooculographic Records.	546
<i>Camilo Velázquez-Rodríguez, Rodolfo García-Bermúdez, Fernando Rojas-Ruiz, Roberto Becerra-García, and Luis Velázquez</i>	
Evaluation of the Differentiation of Noisy Electrooculographic Records Using Continuous Wavelet Transform	557
<i>Rodolfo Garcia-Bermudez, Fernando Rojas, Gabriel Demera, Christian Torres, David Zambrano, Gonzalo Joya, and Roberto Becerra</i>	

Biomedicine

Scores of Intestinal Fibrosis from Wavelet-Based Magnetic Resonance Imaging Models	569
<i>Ian Morilla, Sabrina Doblás, Philippe Garteiser, Magaly Zappa, and Eric Ogier-Denis</i>	

<i>L</i> ₁ -regularization Model Enriched with Biological Knowledge.	579
<i>Daniel Urda, Francisco Aragón, Leonardo Franco, Francisco J. Veredas, and Jose M. Jerez</i>	
Secret Life of Tiny Blood Vessels: Lactate, Scaffold and Beyond	591
<i>Vladimir Salmin, Andrey Morgun, Elena Khilazheva, Natalia Pisareva, Elizaveta Boitsova, Pavel Lavrentiev, Michael Sadovsky, and Alla Salmina</i>	
Increasing of Data Security and Workflow Optimization in Information and Management System for Laboratory	602
<i>Pavel Blazek, Kamil Kuca, Jiri Krenek, and Ondrej Krejcar</i>	
Challenges Representing Large-Scale Biological Data	
GIS-Aided Modelling of Two Siberian Reservation Sites	617
<i>Marina Erunova and Michael Sadovsky</i>	
What Can the Big Data Eco-System and Data Analytics Do for E-Health? A Smooth Review Study	629
<i>Sidahmed Benabderrahmane</i>	
On the Ability to Reconstruct Ancestral Genomes from <i>Mycobacterium</i> Genus	642
<i>Christophe Guyeux, Bashar Al-Nuaimi, Bassam AlKindy, Jean-François Couchot, and Michel Salomon</i>	
Representativeness of a Set of Metabolic Pathways	659
<i>José F. Hidalgo, Jose A. Egea, Francisco Guil, and José M. García</i>	
Author Index	669

Bioinformatics and Biomedical Engineering
5th International Work-Conference, IWBBIO 2017,
Granada, Spain, April 26–28, 2017, Proceedings, Part II
Rojas, I.; Ortuño, F. (Eds.)
2017, XXXVI, 741 p. 275 illus., Softcover
ISBN: 978-3-319-56153-0