2013 IEEE International Conference on Bioinformatics and Biomedicine

(BIBM 2013)

Shanghai, China
18-21 December 2013

Pages 1-773

IEEE Catalog Number: CFP13BIB-POD
ISBN: 978-1-4799-1311-4

TABLE OF CONTENTS

PREDICTING IMMUNOGENIC T-CELL EPITOPES BY COMBINING VARIOUS SEQUENCE-DERIVED FEATURES 1
Wen Zhang, Juan Liu, Yi Xiong, Meng Ke, Ke Zhang

PACKING PROTEIN SIDE-CHAINS BY PARALLEL ANT COLONIES 7
Lijun Quan, Haiou Li, Xiaoyan Xia, Qiang Lu

INFERRING GLOBAL A PRIORI IDENTIFIABILITY OF OPTICAL BIOSENSOR EXPERIMENT MODELS 14
J. M. Whyte

EQTL EPISTASIS: DETECTING COMPLEX INTERACTION EFFECTS BETWEEN MULTIPLE LOCI FROM EQTL DATA 20
Mingon Kang, Shuo Li, Chunyu Liu, Jean Gao

SFAPS: AN R PACKAGE FOR STRUCTURE/FUNCTION ANALYSIS OF PROTEIN SEQUENCES BASED ON INFORMATIONAL SPECTRUM METHOD 26
Suping Deng, Jinghua Yuan, Deshuang Huang, Zhen Wang

PBSALIGN: SEQUENCE-INDEPENDENT LOCAL ALIGNMENT OF PROTEIN BINDING SITES 32
Bin Pang, David Schlessman, Xingyan Kuang, Nan Zhao, Daniel Shyu, Dmitry Korkin, Chi-Ren Shyu

EVALUATING TOPOLOGY-BASED METRICS FOR GO TERM SIMILARITY MEASURES 40
Jong Cheol Jeong, Xue-Wen Chen

A FUZZY INFERENCE SYSTEM FOR PREDICTING ALLERGENICITY AND ALLERGIC CROSS-REACTIVITY IN PROTEINS 46
Saravanan Vijayakumar, P. T. V. Lakshmi

MINING PROTEIN COMPLEXES BASED ON CONNECTED AFFINITY CLIQUE EXTENSION 50
Peng Li, Xiaohua Hu, Tingting He, Junmin Zhao, Ming Zhang, Xianjun Shen

AN INTEGRATED APPROACH TO IDENTIFY PROTEIN COMPLEX BASED ON BEST NEIGHBOR AND MODULARITY INCREMENT 54
Xianjun Shen, Yanli Zhao, Yanan Li, Jincai Yang, Tingting He, Xiaohua Hu

PROTEIN FUNCTIONAL MODULE DETECTION BASED ON CLOSELY ASSOCIATED DEGREE 58
Xianjun Shen, Xiaohui Chen, Rui Xu, Tingting He, Jincai Yang, Xiaohua Hu

USING EVOLUTIONARY COUPLINGS TO OPTIMIZE DIMER PREDICTION WITH ROSETTA SYMDOCK 62
Yiqing Huang, Qiang Lu, Jia Zeng

AN EFFICIENT MULTIPLE PROTEIN STRUCTURE COMPARISON METHOD AND ITS APPLICATION TO STRUCTURE CLUSTERING AND OUTLIER DETECTION 66
Wei Wu, Anuj Srivastava, Jose Laborde, Jinfeng Zhang

A CASE-BASED META-LEARNING ALGORITHM BOOSTS THE PERFORMANCE OF STRUCTURE-BASED VIRTUAL SCREENING 71
Xi Yun, Weiwei Han, Lei Xie, Susan L. Epstein

A DIVIDING-AND-MATCHING ALGORITHM TO DETECT CONSERVED PROTEIN COMPLEXES VIA LOCAL NETWORK ALIGNMENT 75
Wei Peng, Jianxin Wang, Fangxiang Wu

INFERENCE OF MICROBIAL INTERACTIONS FROM TIME SERIES DATA USING VECTOR AUTOREGRESSION MODEL 79
Xingpeng Jiang, Xiaohua Hu, Weiwei Xu, Guangrong Li, Yongli Wang

MANIFOLD-CONSTRAINED REGULARIZATION FOR VARIABLE SELECTION IN ENVRIONMENTAL MICROBIOMIC DATA 83
Xingpeng Jiang, Xiaohua Hu, Weiwei Xu, Yongli Wang

LATTICE MODELS WITH ASYMMETRIC PROPENSITY MATRICES FOR LOCATIONALLY INFORMED PROTEIN STRUCTURE PREDICTION 87
Colin Kern, Li Liao

DE NOVO LIKELIHOOD-BASED MEASURES FOR COMPARING METAGENOMIC ASSEMBLIES 91
Christopher M. Hill, Irina Astrovskaya, Howard Huang, Sergey Koren, Atif Memon

BIMMER: A BI-LAYER HIDDEN MARKOV MODEL FOR DIFFERENTIAL METHYLATION ANALYSIS 96
Zijing Mao, Tim H-M Huang, Yidong Chen, Yufei Huang

PRIORITIZATION OF CANDIDATE GENES BASED ON DISEASE SIMILARITY AND PROTEIN'S PROXIMITY IN PPI NETWORKS 100
Gamage Upeksha Ganegoda, Jianxin Wang, Fang-Xiang Wu, Min Li

A NEW METHOD FOR PREDICTING ESSENTIAL PROTEINS BASED ON TOPOLOGY POTENTIAL 106
Yu Lu, Min Li, Qi Li, Yi Pan, Jianxin Wang

INFER GENE REGULATORY NETWORKS FROM TIME SERIES DATA WITH FORMAL METHODS 112
Michele Ceccarelli, Luigi Cerulo, Antonella Santone

HYBRID METHOD INFERENCE FOR THE CONSTRUCTION OF COOPERATIVE REGULATORY NETWORK IN HUMAN 118
I. Chebil, R. Nicolle, G. Santini, C. Rouveirol, M. Elati

PREDICTION OF SIGNALING NETWORKS BY INFORMATION PROPAGATION ON PROTEIN-PROTEIN INTERACTION NETWORKS INTEGRATED WITH GO ANNOTATIONS 124
Young-Rae Cho, Slavka Jaromerska

IDENTIFYING ESSENTIAL PROTEINS BASED ON PROTEIN DOMAINS IN PROTEIN-PROTEIN INTERACTION NETWORKS 130
Jianxin Wang, Wei Peng, Yingjiao Chen, Yu Lu

UNVEILING THE DYNAMICS IN RNA EPIGENETIC REGULATIONS 136
Jia Meng, Xiaodong Cui, Hui Liu, Lin Zhang, Shaowu Zhang, Manjeet K. Rao

STEMSEARCH: RNA SEARCH TOOL BASED ON STEM IDENTIFICATION AND INDEXING 142
Sivan Yogev, Nimrod Milo, Michal Ziv-Ukelson

FASTWESTFALL-YOUNG PERMUTATION PROCEDURE FOR COMBINATORIAL REGULATION DISCOVERY 150
Aika Terada, Koji Tsuda, Jun Sese

DETECTING MUTUAL FUNCTIONAL GENE CLUSTERS FROM MULTIPLE RELATED DISEASES 156
Nan Du, Xiaoyi Li, Yuan Zhang, Aidong Zhang

COMPARING GENE EXPRESSION SIMILARITY METRICS FOR CONNECTIVITY MAP 162
Jie Cheng, Lun Yang

RECONSTRUCTING BIOLOGICAL NETWORKS USING LOW ORDER PARTIAL CORRELATION 168
Yiming Zuo, Guoqiang Yu, Mahlet G. Tadesse, Habtom W Ressom

A MULTI-EDGE GRAPH BASED DE NOVO PEPTIDE SEQUENCING METHOD FOR HCD SPECTRA 173
Yan Yan, Anthony J. Kusalik, Fang-Xiang Wu

INFERENCE OF GENE REGULATORY NETWORKS BY INTEGRATING GENE EXPRESSIONS AND GENETIC PERTURBATIONS 179
Dong-Chul Kim, Chunyu Liu, Xiaoyong Wu, Baoju Zhang, Jean Gao

PREDICTING PROTEIN COMPLEXES IN PROTEIN INTERACTION NETWORKS: A SUPERVISED LEARNING BASED METHOD 185
Fengying Yu, Zhihao Yang, Nan Tang, Jiajin Wu, Hongfei Lin, Jian Wang

EFFECTIVE AND STABLE FEATURE SELECTION METHOD BASED ON FILTER FOR GENE SIGNATURE IDENTIFICATION IN PAIRED MICROARRAY DATA 186
Zhongbo Cao, Yan Wang, Ying Sun, Wei Du, Yanchun Liang

DIFFERENTIAL COEXPRESSION ANALYSIS IN GENE MODULES LEVEL AND ITS APPLICATION TO TYPE 2 DIABETES 190
Lin Yuan, Wen Sha, Jun Zhang, Chun-Hou Zheng, Jun-Feng Xia

CORRELATING ADVERSE DRUG REACTIONS WITH BIOLOGICAL PATHWAYS IN HUMANS 194
Huiru Zheng, Haiying Wang, Hua Xu, Zhongming Zhao, Francisco Azuaje

MODELING COMPETING ENDOGENOUS RNA REGULATORY NETWORKS IN GLIOBLASTOMA MULTIFORME 198
Yu-Chiao Chiu, Eric Y. Chuang, Tzu-Hung Hsiao, Yidong Chen

ALGORITHMS TO INFER METABOLIC FLUX RATIOS FROM ALGORITHMS TO INFER METABOLIC FLUX RATIOS FROM 202
Rafael Carreira, Miguel Rocha, Silas G. Villas-Boas, Isabel Rocha

A SOFTWARE FRAMEWORK INTEGRATING GENE EXPRESSION PATTERNS, BINDING SITE ANALYSIS AND GENE ONTOLOGY TO HYPOTHESIZE GENE REGULATION RELATIONSHIPS 207
Pujan Joshi, Baikang Pei, Seung-Hyun Hong, Ivo Kalajzic, Dong-Ju Shin, David Rowe

AN INFORMATION-THEORETIC ALGORITHM TO DATA-DRIVEN GENETIC PATHWAY INTERACTION NETWORK RECONSTRUCTION OF DYNAMIC SYSTEMS 211
Farzaneh Farhangmehr, Daniel M. Tartakovsky, Parastou Sadatmousavi, Mano R. Maurya
NETWORK-BASED PATHWAY ENRICHMENT ANALYSIS 215
Lu Liu, Jianhua Ruan
THE REMOVAL OF OCULAR ARTIFACTS FROM EEG SIGNALS:AN ADAPTIVE MODELING TECHNIQUE FOR PORTABLE APPLICATIONS 219
Yang Li, Bin Hu, Qinglin Zhao, Hong Peng, Yujun Shi, Yunpeng Li, Philip Moore
HIGH-PERFORMANCE COMPUTATIONAL ANALYSIS OF GLIOBLASTOMA PATHOLOGY IMAGES WITH DATABASE SUPPORT IDENTIFIES MOLECULAR AND SURVIVAL CORRELATES 226
Jun Kong, Fusheng Wang, George Teodoro, Lee Cooper, Carlos S. Moreno, Tahsin Kurc, Tony Pan, Joel Saltz, Daniel Brat
LUNG DEFORMATION ESTIMATION USING SPATIALLY MEAN SHIFT FOR 4D-CT 234
Xuan Yang, Jihong Pei
A FEASIBILITY RESEARCH ON WAVEFORM RECOGNITION ALGORITHM BASED ON GEOMETRIC CHARACTERISTICS 240
Li Feng, Chen Meili
AN ERROR DETECTING AND TAGGING FRAMEWORK FOR REDUCING DATA ENTRY ERRORS IN ELECTRONIC MEDICAL RECORDS (EMR) SYSTEM 246
Yuan Ling, Yuan An, Mengwen Liu, Xiaohua Hu
DETECTING HIGH-RISK REGIONS FOR PRESSURE ULCER RISK ASSESSMENT 252
M. Farshbaf, R. Yousefi, M. Baran Pouyan, S. Ostadabbas, M. Nourani, M. Pompeo
A SPARSE BAYESIAN MULTI-INSTANCE MULTI-LABEL MODEL FOR SKIN BIOPSY IMAGE ANALYSIS 258
Gang Zhang, Xiangyang Su, Yongjing Huang, Yingrong Lao, Zhaohui Liang, Shanxing Ou, Jimmy Huang
USING CLUSTER ANALYSIS TO IMPROVE GENE SELECTION IN THE FORMATION OF DISCRIMINANT RULES FOR THE PREDICTION OF DISEASE OUTCOMES 264
Shu-Kay, Geoffrey J. McLachlan
IMAGE REGISTRATION USING CONSISTENT ROBUST POINT MATCHING 270
Xuan Yang, Jingli Shi, Jihong Pei
PSYCHIATRIC INSIGHTS INTO LIVER CIRRHOSIS AND THEIR CORRELATIONS WITH TRADITIONAL CHINESE MEDICINE DIAGNOSTICS 276
Yuanzhe Bei, Pengyu Hong, Fangyuan Ke, Yang Zhou, Lieming Xu, Meiping Zhu
CLASSIFICATION OF NEONATAL AMPLITUDE-INTEGRATED EEG USING RANDOM FOREST MODEL WITH COMBINED FEATURE 282
Yu Wang, Weiting Chen, Kai Huang, Qiufang Gu
ENSEMBLE FUZZY C-MEANS CLUSTERING ALGORITHMS BASED ON KL-DIVERGENCE FOR MEDICAL IMAGE SEGMENTATION 288
Jing Zou, Long Chen, C. L. Philip Chen
VISIBILITY GUIDED MULTIMODAL VOLUME VISUALIZATION 294
Lin Zheng, Carlos Correa, Kwan-Liu Ma
AFFECTIVE STATE RECOGNITION FROM EEG WITH DEEP BELIEF NETWORKS 302
Kang Li, Xiaoyi Li, Yuan Zhang, Aidong Zhang
CLINICAL MULTI-LABEL FREE TEXT CLASSIFICATION BY EXPLOITING DISEASE LABEL RELATION 308
Rui-Wei Zhao, Guo-Zheng Li, Jia-Ming Liu, Xiao Wang
MULTI-VIEW BICLUSTERING FOR GENOTYPE-PHENOTYPE ASSOCIATION STUDIES OF COMPLEX DISEASES 313
Jiangwen Sun, Jinbo Bi, Henry R. Kranzler
MULTI-DOMAIN FEATURE EXTRACTION FROM SURFACE EMG SIGNALS USING NONNEGATIVE TENSOR FACTORIZATION 319
Ping Xie, Yan Song
PATIENT INFORMATION EXTRACTION IN NOISY TELE-HEALTH TEXTS 323
Mi-Young Kim, Ying Xu, Osmar Zaiane, Randy Goebel
WAVELET BASED DESPECKLING OF MULTIFRAME OPTICAL COHERENCE TOMOGRAPHY DATA USING SIMILARITY MEASURE AND ANISOTROPIC DIFFUSION FILTERING 327
Wajiha Habib, Adil Masood Siddiqui, Imran Touqir
DETECTING GOOD QUALITY FRAMES IN VIDEOS CAPTURED BY A WEARABLE CAMERA FOR BLIND NAVIGATION 331
Long Tian, Yingli Tian, Chucai Yi

RIGID REGISTRATION OF 3-D MEDICAL IMAGE USING CONVEX HULL MATCHING 335
Jingfan Fan, Jian Yang, Mahima Goyal, Yongtian Wang
PREDICTION OF CYTOCHROME P450 INHIBITION USING ENSEMBLE OF EXTREME LEARNING MACHINE 339
Huan Wu , Yun-Qiang Di , Chun-Hou Zheng, Junfeng Xia
DUAL-FUNCTION BIOMARKERS FOR DETECTION OF BREAST CANCER AND ITS CANCER TYPE: INVASIVE VERSUS NON-INVASIVE 342
Fan Zhang, Tao Liu, Mu Wang, Renee Drabier
TEXT MINING DRIVEN DRUG-DRUG INTERACTION DETECTION 346
Su Yan, Xiaoqian Jiang, Ying Chen
AUGMENTING LASSO REGRESSION WITH DECISION TREE FOR IDENTIFYING THE CORRELATION OF GENETIC POLYMORPHISM AND ADVERSE EVENTS 352
Yi-Fei Cai, Zhao-Hui Liang, Tong He, Gang Zhang, Jimmy Xiangji Huang, Xing Zeng
A HYBRID APPROACH TO RECOGNISING DISCOURSE CAUSALITY IN THE BIOMEDICAL DOMAIN 358
Claudiu Mihaila, Sophia Ananiadou
NSC-NSGA2: OPTIMAL SEARCH FOR FINDING MULTIPLE THRESHOLDS FOR NEAREST SHRUNKEN CENTROID 364
Vinh Quoc Dang, Chiou-Peng Lam
PREDICTION OF THE PRO-LONGEVITY OR ANTI-LONGEVITY EFFECT OF CAENORHABDITIS ELEGANS GENES BASED ON BAYESIAN CLASSIFICATION METHODS 370
Cen Wan, Alex Freitas
DIMENSION REDUCTION FOR P53 PROTEIN RECOGNITION BY USING INCREMENTAL PARTIAL LEAST SQUARES 378
Xue-Qiang Zeng, Guo-Zheng Li
A NOVEL PROTEIN COMPLEX IDENTIFICATION ALGORITHM BASED ON GENE CO-EXPRESSION (PCIA-GECO) 383
Junmin Zhao, Xiaohua Hu, Tingting He, Peng Li, Ming Zhang, Xianjunshen
ENISI SDE: A NOVEL WEB-BASED STOCHASTIC MODELING TOOL FOR COMPUTATIONAL BIOLOGY 389
Yongguo Mei, Adria Carbo, Raquel Hontecillas, Josep Bassaganya-Riera
DATASET RECONSTRUCTION FOR PROTEIN INTERFACE IDENTIFICATION USING MANIFOLD LEARNING METHOD 395
Bing Wang, De-Shuang Huang
INTRA- AND INTER-SPARSE MULTIPLE OUTPUT REGRESSION WITH APPLICATION ON ENVIRONMENTAL MICROBIAL COMMUNITY STUDY 401
Jie Yang, Henry C. M. Leung, S. M. Yiu, Yunpeng Cai, Francis Y. L. Chin
USING AGGREGATE HUMAN GENOME DATA FOR INDIVIDUAL IDENTIFICATION 407
Yue Wang, Xintao Wu, Xinghua Shi
APPROXIMATE BAYESIAN COMPUTATION FOR ESTIMATING RATE CONSTANTS IN BIOCHEMICAL REACTION SYSTEMS 413
Qianqian Wu, Kate Smith-Miles, Tianhai Tian
CONFIRMING BIOLOGICAL SIGNIFICANCE OF CO-OCCURRENCE CLUSTERS OF ALIGNED PATTERN CLUSTERS 419
En-Shiun Annie Lee, Sanderz Fung, Ho-Yin Sze-To, Andrew K. C. Wong
GENEALOGICAL-BASED METHOD FOR ONTOLOGY SELF-EXTENSION IN MESH 425
Yu-Wen Guo, Hung-Yu Kao
LOCATING BASIC BIO-ENTITIES IN GENOME-SCALE RECONSTRUCTED METABOLIC NETWORKS 431
Xinjian Qi, Gultekin Ozsoyoglu
AN ENSEMBLE APPROACH FOR DRUG SIDE EFFECT PREDICTION 437
Md Jamiul Jahid, Jianhua Ruan
RULE BASED REGRESSION AND FEATURE SELECTION FOR BIOLOGICAL DATA 443
Sheng Liu, Shamitha Dissanayake, Sanjay Patel, Xin Dang, Todd Mlsna, Yixin Chen, Dawn Wilkins
A HADOOP APPROACH TO ADVANCED SAMPLING ALGORITHMS IN MOLECULAR DYNAMICS SIMULATION ON CLOUD COMPUTING 449
Jin Niu, Shuju Bai, Ebrahim Khosravi, Seung-Jong Park
INTEGRATING MULTIPLE BIOMEDICAL RESOURCES FOR PROTEIN COMPLEX PREDICTION 453
Yijia Zhang, Hongfei Lin, Zhihao Yang, Jian Wang, Bo Xu

EXPLORING LI-FA-FANG-YAO RULES OF MAJOR DEPRESSIVE DISORDER IN TRADITIONAL CHINESE MEDICINE THROUGH TEXT MINING 457
Junping Zhan, Guang Zheng, Mengmeng Song Tong Wei, Miao Jiang, Cheng Lu, Aiping Lu

ENHANCING ENTITY ANNOTATION USING WEB SERVICE AND ONTOLOGY HIERARCHY IN BIOMEDICAL DOMAINS 462
Yue Shang, Yuan An, Xiaohua Tony Hu, Mi Zhang, Xia Lin

MULTIGRID DISCRETIZATION METHOD FOR POPZ POLARIZATION IN CAULOBACTER CELL CYCLE 466
Fei Li, Yang Cao

STEMFINDER: AN EFFICIENT ALGORITHM FOR SEARCHING MOTIF STEMS OVER LARGE ALPHABETS 470
Qiang Yu, Hongwei Huo, Jeffrey Scott Vitter, Jun Huan, Yakov Nekrich

INTEGRATING SEMANTIC TRANSCRIPTOMIC DATA ANALYSIS AND KNOWLEDGE EXTRACTION FROM BIOLOGICAL LITERATURE 474
Vid Podpecan, Dragana Miljkovic, Marko Petek, Tjasa Stare, Kristina Gruden, Igor Mozetic, Nada Lavrac

USING SILVER AND SEMI-GOLD STANDARD CORPORA TO COMPARE OPEN NAMED ENTITY RECOGNISERS 478
Tudor Groza, Anika Oellrich, Nigel Collier

CUDA-MAFFT: ACCELERATING MAFFT ON CUDA-ENABLED GRAPHICS HARDWARE 483
Xiangyuan Zhu, Kenli Li

CONNECTIVITY AND PATH ANALYSIS FOR NEURON NETWORK IN THE DROSOPHILA BRAIN 487
Ching-Yao Lin, Kuen-Long Tsai, Chang-Huain Hsieh, Hsiu-Ming Chang, Ann-Shyn Chiang

MIRNA AND GENE EXPRESSION BASED CANCER CLASSIFICATION USING SELF-LEARNING AND CO-TRAINING APPROACHES 492
Rania Ibrahim, Noha A. Yousri, Mohamed A. Ismail, Nagwa M. El-Makky

TOWARDS ASSIGNING REFERENCES USING SEMANTIC, JOURNAL AND CITATION RELEVANCE 496
Ding-Cheng Li, Hongfang Liu, Christopher G. Chute, Siddhartha R. Jonnalagadda

SESAME: A NEW BIOINFORMATICS SEMANTIC WORKFLOW DESIGN SYSTEM 501
Lu Zhang, Yunsheng Wang, Pengfei Xuan, Yongping Duan

CHARACTERISATION OF PROTEIN-PROTEIN INTERACTION NETWORK BASE ON *l* 1-NORM OPTIMISATION 506
Benjamin Yee Shing Li, Lam Fat Yeung, Choujun Zhan, Genke Yang

CLUSTER TREE BASED MULTI-LABEL CLASSIFICATION FOR PROTEIN FUNCTION PREDICTION 510
Qingyao Wu, Yunming Ye, Xiaofeng Zhang, Shen-Shyang Ho

IPEDX: AN EXACT ALGORITHM FOR PEDIGREE RECONSTRUCTION USING GENOTYPE DATA 514
Dan He, Eleazar Eskin

ONLINE SEMI-SUPERVISED LEARNING: ALGORITHM AND APPLICATION IN METAGENOMICS 518
Sultan Imangaliyev, Bart Keijser, Wim Crielaard, Evgeni Tsivtsivadze

SEMI-AUTOMATED MICRORNA ONTOLOGY DEVELOPMENT BASED ON ARTIFICIAL NEURAL NETWORKS 523
Jingshan Huang, Min Xiong, Jiangbo Dang, William T. Gerthoffer, Xingyu Lu, Ming Tan

CLASSIFICATION AND CHARACTERIZATION OF CLINICAL FINDING EXPRESSIONS IN MEDICAL LITERATURE 527
Takashi Okumura, Yuka Tateisi, Eiji Aramaki

INTEGRATION OF GENE EXPRESSION, GENOME WIDE DNA METHYLATION, AND GENE NETWORKS FOR CLINICAL OUTCOME PREDICTION IN OVARIAN CANCER 532
Lin Zhang, Hui Liu, Jia Meng, Xuesong Wang, Yidong Chen, Yufei Huang

DATA AND METADATA MODELS IN ELECTROPHYSIOLOGY DOMAIN - SEPARATION OF DATA MODELS INTO SEMANTIC HIERARCHY AND ITS INTEGRATION INTO EEGBASE 536
Vaclav Papez, Roman Moucek

ROBUST INFERENCE OF GENE REGULATORY NETWORKS FROM MULTIPLE MICROARRAY DATASETS 541
Li-Zhi Liu, Fang-Xiang Wu, Wen-Jun Zhang

VISUAL SPEECH LEARNING FROM AN E-TUTOR VIA DYNAMIC LIP MOVEMENT-BASED VIDEO SEGMENTATION AND COMPARISON 545
Carol Mazuera, Xiaodong Yang, Yingli Tian

A GENERATIVE FRAMEWORK FOR PREDICTION AND INFORMATIVE RISK FACTOR SELECTION OF BONE DISEASES 551
Hui Li, Xiaoyi Li, Yuan Zhang, Murali Ramanathan, Aidong Zhang
A NEW MATHEMATICAL MODEL FOR PROGRESSION OF COLORECTAL CANCER 557
Shuhao Sun, Fima Klebaner, Tianhai Tian
AN EVALUATION OF IDENTIFICATION OF SUSPECTED AUTISM SPECTRUM DISORDER (ASD) CASES IN EARLY INTERVENTION (EI) RECORDS 563
Mengwen Liu, Yuan An, Xiaohua Hu, Debra Langer, Craig Newschaffer, Lindsay Shea
APNEA MEDASSIST II: A SMART PHONE BASED SYSTEM FOR SLEEP APNEA ASSESSMENT 569
Cheng Shi, Mehrdad Nourani, Gopal Gupta, Lakshman Tamil
TOWARDS A FORMAL REPRESENTATION OF CLINICAL PRACTICE GUIDELINES FOR THE TREATMENT OF COMORBID PATIENTS 575
Xing Tan
AN XML FORMAT FOR ELECTROENCEPHALOGRAM DATA PRESENTATION (EEGML) 581
Xiaowei Zhang, Bin Hu, Lin Zhou, Jing Chen, Philip Moore
APPLICATION OF STATISTICAL PHYSICS FOR THE IDENTIFICATION OF IMPORTANT EVENTS IN VISUAL LIFELOGS 586
Na Li, Martin Crane, Heather J. Ruskin, Cathal Gurrin
PROMOTING ELECTRONIC HEALTH RECORD SEARCH THROUGH A TIME-AWARE APPROACH 590
Jiayue Zhang, Jimmy Xiangji Huang, Jun Guo, Weiran Xu
JOINT SEARCH IN TEXT AND CONCEPT SPACES FOR EMR-BASED COHORT IDENTIFICATION 594
Dongqing Zhu, Ben Carterette
IMPROVING PREDICTION ACCURACY OF INFLUENZA-LIKE ILLNESSES IN HOSPITAL EMERGENCY DEPARTMENTS 599
Jiefu Pei, Bo Ling, Simon Liao, Baiyan Liu, Jimmy Xiangji Huang
SEMANTICS-DRIVEN FREQUENT DATA PATTERN MINING ON ELECTRONIC HEALTH RECORDS FOR EFFECTIVE ADVERSE DRUG EVENT MONITORING 605
Jingshan Huang, Jiangbo Dang, Jun Huan, He Zhang, Alexander Tropsha, Min Xiong
DISTINGUISHING SINGLE-STRANDED AND DOUBLE-STRANDED DNA BINDING PROTEINS BASED ON STRUCTURAL INFORMATION 609
Wei Wang, Juan Liu
COMPUTERIZED COLOR ANALYSIS FOR FACIAL DIAGNOSIS IN TRADITIONAL CHINESE MEDICINE 610
Chang Liu, Changbo Zhao, Guozheng Liy, Fufeng Liz, Zhi Wang
IDENTIFICATION OF ESSENTIAL PROTEINS BASED ON NETWORK CAPITAL ASSESSMENT AND INVALIDATING PROTEIN NODE 612
Xianjun Shen, Rui Xu, Xiaohui Chen, Jincai Yang, Tingting He
AN EFFICIENT PROTEIN COMPLEX MINING ALGORITHM BASED ON MULTISTAGE KERNEL EXTENSION 613
Xianjun Shen, Yanli Zhao, Yanan Li, Tingting He, Jincai Yang
A SEMANTIC FEATURE SPACE FOR DISEASE PREDICTION 614
Mariam Daoud, Jimmy Xiangji Huang, William Melek, C. Joseph Kurian
LEARNING TO RANK BASED GENE SUMMARY EXTRACTION 615
Yue Shang, Hongfei Lin, Huihui Hao, Jiajin Wu
DISCOVERING FREQUENT PROBABILITY PATTERN IN UNCERTAIN BIOLOGICAL NETWORKS BY CIRCUIT SIMULATION METHOD* 616
Chunyan Wang, Kunpu Qiu, Wei Zhong, Jieyue He
ENHANCING THE ACCURACY OF KNOWLEDGE DISCOVERY: A SUPERVISED LEARNING METHOD 617
Liangxi Cheng, Hongfei Lin, Feng Zhou, Zhihao Yang
PRIORITIZING HUMAN DISEASE GENES BY MULTIPLE DATA INTEGRATION 618
Bolin Chen, Jianxin Wang, Fang-Xiang Wu
NONMETRIC PROPERTY OF DIABETES-RELATED GENES IN HUMAN GUT MICROBIOME 619
Weiwei Xu, Xingpeng Jiang, Guangrong Li
G-BEAN: AN ONTOLOGY-GRAPH BASED WEB TOOL FOR BIOMEDICAL LITERATURE RETRIEVAL 620
Yuanyuan Zhang, Liang Dong, Lin Li, Pradip K. Srimani, Philip S. Yu, James Z. Wang

EXPOLITING RICH FEATURES FOR PROMOTING DIVERSITY IN BIOMEDICAL INFORMATION RETRIEVAL 621
Jiajin Wu, Jimmy Huang, Zheng Ye
COLOUR VISION DEFICIENCY CORRECTION IN IMAGE PROCESSING 622
Pankaj Kumar Nigam, Mahua Bhattacharya
NETWORK-BASED INVESTIGATION OF GENETIC MODULES ASSOCIATED WITH FUNCTIONAL BRAIN NETWORKS IN SCHIZOPHRENIA 630
Dongdong Lin, Hao He, Jingyao Li, Hong-Wen Deng, Vince D. Calhoun, Yu-Ping Wang
A 3D SEGMENTATION FRAMEWORK FOR AN ACCURATE EXTRACTION OF THE SPONGY AND CORTICAL BONES FROM THE MRI DATA 638
Seyed Mehdi Moghadas, Won-Sook Lee
THE CHAOTIC BEHAVIOR OF THE ENDOPLASMIC-RETICULUM NETWORK IN TIME-LAPSE MICROSCOPY IMAGES 643
Tuan D. Pham
EXPLORING GENOMES WITH A GAME ENGINE 647
Jeremiah J. Shepherd, Lingxi Zhou, Yan Zhang, Jim Zheng, Jijun Tang
THE EFFECTS OF DIFFERENT TYPES OF MUSIC ON ELECTROENCEPHALOGRAM 652
Chenbing Sun, Yimin Bao, Jiatuo Xu, Hong Zhou, Qi Wang, Xu Wang, Ye Duan
MEDICAL IMAGE BASED 3D RECONSTRUCTION AND PREOPERATIVE SURGERY-PLANNING FOR MICROWAVE ABLATION 659
Xi Wen, Hong Wang, Weiming Zhai
CHARACTERIZING GENETIC INTERACTIONS USING A MACHINE LEARNING APPROACH IN COLOMBIAN PATIENTS WITH ALZHEIMER'S DISEASE 664
Edgar A. Ospina Granados, Luis F. Nino Vasquez
INTRINSIC FEATURES OF BIOMEDICAL DOCUMENT FOR THE EFFICIENT SINGLE DOCUMENT SUMMARIZATION 666
Hoon Jin
PRIORITIZING JOURNALS RELEVANT TO A TOPIC FOR ADDRESSING CLINICIANS' INFORMATION NEEDS 668
Siddhartha R. Jonnalagadda, Soheil Moosavinasab, Dingcheng Li, Martin D. Abel, Christopher G. Chute
CO-TRAINING AND ENSEMBLE BASED DUPLICATE DETECTION IN ADVERSE DRUG EVENT REPORTING SYSTEMS 670
Wen-Yang Lin, Chiao-Feng Lo
COMPRESSION VIA COMPRESSIVE SENSING : A LOW-POWER FRAMEWORK FOR THE TELEMONITORING OF MULTI-CHANNEL PHYSIOLOGICAL SIGNALS 672
Benyuan Liu, Zhilin Zhang, Hongqi Fan, Qiang Fu
INNOVATIVE NAVIGATION OF HEALTH DISCUSSION FORUMS BASED ON RELATIONSHIP EXTRACTION AND MEDICAL ONTOLOGIES 676
Saeed Mohajeri, Afsaneh Esteki, Osmar R. Zaiane, Davood Rafiei
ARRHYTHMIA DETECTION FROM HEARTBEAT USING K-NEAREST NEIGHBOR CLASSIFIER 678
Juyoung Park, Kuyeon Lee, Kyungtae Kang†
MINING DRUG-DRUG INTERACTION PATTERNS FROM LINKED DATA: A CASE STUDY FOR WARFARIN, CLOPIDOGREL, AND SIMVASTATIN 686
Jyotishman Pathak, Richard C. Kiefer, Christopher G. Chute
CLUSTER ANALYSIS OF TREATMENT PROCESSES BASED ON THE TYPICALNESS MEASURE FOR BUILDING CLINICAL PATHWAYS 694
Shoji Hirano, Shusaku Tsumoto
AN EFFECTIVE METHOD TO ANALYZE VARIATIONS OF HIGH-DIMENSIONAL PATTERNS OVER MEDICAL STREAMS† 696
Yan Tang, Hongyan Li, Feifei Li, Lilue Fan
SMARTSPAGHETTI: USE OF SMART DEVICES TO SOLVE HEALTH CARE PROBLEMS 703
Mostafa Uddin, Ajay Gupta, Kurt Maly, Tamer Nadeem, Sandip Godambe, Arno Zaritsky
PROFILING ADVERSE DRUG EVENTS OF CANCER DRUG INGREDIENTS USING NORMALIZED AERS DATA 709
Liwei Wang, Hongfang Liu
SIM: A SMARTPHONE-BASED IDENTITY MANAGEMENT FRAMEWORK AND ITS APPLICATION TO ARKANSAS TRAUMA IMAGE REPOSITORY 716
Mengjun Xie, Umit Topaloglu, Thomas Powell, Chao Peng, Jiang Bian
ANALYZING CONFORMANCE TO CLINICAL PROTOCOLS INVOLVING ADVANCED SYNCHRONIZATIONS 724
Hui Yan, Pieter Van Gorp, Uzay Kaymak, Xudong Lu, Richard Vdovjak, Hendriks H. M. Korsten, Huilong Duan

SIGNALING PATHWAY PREDICTION BY PATH FREQUENCY IN PROTEIN-PROTEIN INTERACTION NETWORKS 732
Yilan Bai, Greg Speegle, Young-Rae Cho
LOCAL K-CORE CLUSTERING FOR GENE NETWORKS 740
Yizong Cheng, Chen Lu, Nan Wang
UNDERSTANDING SYNERGETIC ACTIVITIES OF FUZI-DAHUANG HERB PAIRS BASED ON NETWORK PHARMACOLOGY 747
Yong Tan, Cheng Lu, Miao Jiang, Li Li, Xiaojuan He, Jian Li
TOWARDS SIMULTANEOUS CLUSTERING AND MOTIF-MODELING FOR A LARGE NUMBER OF PROTEIN FAMILY 753
Young Joon Yoo, Tushar Sandhan, Jinyoung Choi, Sun Kim
CRITICAL PROTEIN DETECTION IN DYNAMIC PPI NETWORKS WITH MULTI-SOURCE INTEGRATED DEEP BELIEF NETS 760
Yuan Zhang, Nan Du, Kang Li, Jinchao Feng, Kebin Jia, Aidong Zhang
A CLUSTERING ALGORITHM FOR IDENTIFYING HIERARCHICAL AND OVERLAPPING PROTEIN COMPLEXES IN LARGE PPI NETWORKS 768
Jun Ren, Jianxin Wang, Min Li
PPI MODULES DETECTION METHOD THROUGH ABC-IFC ALGORITHM 770
Xiujuan Lei, Jianfang Tian, Fangxiang Wu
SYN-LETHALITY: AN INTEGRATIVE KNOWLEDGE BASE OF SYNTHETIC LETHALITY TOWARDS DISCOVERY OF SELECTIVE ANTICANCER THERAPIES 771
Xue-Juan Li, Shital K. Mishra, Min Wu, Fan Zhang, Jie Zheng
IDENTIFYING DYNAMIC PROTEIN COMPLEXES BASED ON GENE EXPRESSION PROFILES AND PPI NETWORKS 772
Min Li, Weijie Chen, Jianxin Wang, Fang-Xiang Wu, Yi Pan
A NOVEL ALGORITHM FOR MINING PROTEIN COMPLEX FROM THE WEIGHTED NETWORK 773
Xiwei Tang, Jianxin Wang, Min Li, Yiming He, Yi Pan
IN-SILICO ANALYSIS OF EGFR-ASSOCIATED MICRORNA SIGNATURE IN CANCER 774
Fengfeng Wang, Lawrence Chan, Helen K. W. Law, William C. S. Cho
REGULARIZED NONNEGATIVE MATRIX FACTORIZATION FOR CLUSTERING GENE EXPRESSION DATA 780
Weixiang Liu, Tianfu Wang, Siping Chen
NEURAL NETWORK MODELS FOR CLASSIFYING IMMUNE CELL SUBSETS 784
Yongguo Mei, Raquel Hontecillas, Xiaoying Zhang, Adria Carbo, Josep Bassaganya-Riera
HPC+AZURE ENVIRONMENT FOR BIOINFORMATICS APPLICATIONS 791
Amandeep S. Sidhu, Suresh Reuben Balakrishnan, Sarinder K. Dhillon
GPA: AN ALGORITHM FOR LC/MS BASED GLYCAN PROFILE ANNOTATION 795
Minkun Wang, Guoqiang Yu, Yehia Mechref, Habtom W. Ressom
DYNAMIC APPROXIMATE ENTROPY WITH BAND FILTERING FOR PATIENT'S EEG CONSCIOUSNESS ANALYSIS 802
Yunchao Yin, Daren Zheng, Jianting Cao, Toshihisa Tanaka
METHOD TO ACCELERATE PREDICTION OF MEMBRANE PROTEIN TYPES BY CUDA 806
Yukun Zhong, Liao Gang, M. A. Longfei, Zeng Yu
MODELING EXOME SEQUENCING DATA WITH GENERALIZED GAUSSIAN DISTRIBUTION WITH APPLICATION TO COPY NUMBER VARIATION DETECTION 812
Junbo Duan, Mingxi Wan, Hong-Wen Deng, Yu-Ping Wang
ACOSCHED: A SCHEDULING ALGORITHM IN A FEDERATED CLOUD INFRASTRUCTURE FOR BIOINFORMATICS APPLICATIONS 819
Gabriel S. S. De Oliveira, Edward Ribeiro, Diogo A. Ferreira, Aleteia P. F. Araujo
AUTOMATIC CAPTURE OF PROVENANCE DATA IN GENOME PROJECT WORKFLOWS 826
Rodrigo Pinheiro, Maristela Holanda, Aleteia P. F Araujo, Maria Emília Walter, Sergio Lifschitz
DETECTING SEASONAL MARINE MICROBIAL COMMUNITIES WITH SYMMETRICAL NON-NEGATIVE MATRIX FACTORIZATION 832
Shao-Wu Zhang, Fei Liu, Ze-Gang Wei, Wei Chen, Chen Zhou
A NOVEL PROGNOSTIC MODEL TO PREDICT THE RECOVERY OF ISCHEMIC STROKE PATIENTS 838
Kegang Cao, Caihong Fu, Huanqin Li, Xiyan Xin, Ying Gao
BIBLIOMETRICS IN SYNDROME DISTRIBUTION OF ANOVULATORY DYSFUNCTIONAL UTERINE BLEEDING 840
Lixing Cao, Yuanyuan Ma

MUTUAL INFORMATION MINING FOR COMPONENT LAW AND DEVELOPMENT OF NEW RECIPES OF TOPICAL HERBS FOR ATOPIC DERMATITIS 844
Da-Can Chen, Wei Zhao, Jun-Feng Liu, Qing Wu, Xiu-Mei Mo, Jian-Ke Pan, Rui-Qiang Fan, Hong-Yi Li

DISCUSSION ABOUT TRADITIONAL CHINESE MEDICINE CAUSES, PATHOGENESIS AND DISTRIBUTION OF SYNDROMES OF PRIMARY DYSMENORRHEA AMONG FEMALE COLLEGE STUDENTS BASED ON QUESTIONNAIRE INVESTIGATION 846
Shengye Chen, Xu Wu, Chunyan Liu, Wenbin Fu, Zhihuan Pan

STUDY OF THE REGULARITIES IN THE TREATMENT OF PSORIASIS VULGARIS BY TCM: APPLYING ASSOCIATION RULE MINING TO TCM LITERATURE 852
Shuhui Chen, Xiuli Xie, Zhao Zeng, Jingjie Yu, Chuanjian Lu

NOVEL DISCOVERY ON MATHEMATICAL RELATIONSHIP OF FIVE ELEMENTS OF CONTAINING NOTES AND FIBONACCI MODULAR SEQUENCE 855
Chen Zhaoxue

AN INTELLIGENT DIAGNOSIS METHOD FOR CHRONIS HEPATITIS B IN TCM 857
Na Chu, Zhiying Che, Min Zhou, Yu Zhao, Lizhuang Ma

APPLICATION OF CLUSTERING ANALYSIS TO EXPLORE SYNDROME EVOLUTION LAW OF PERITONEAL DIALYSIS PATIENTS 860
Zou Chuan, Tang Ying, Bai Li, Zeng Yuqun, Lu Fuhua

PARALLEL MODEL OF INDEPENDENT COMPONENT ANALYSIS CONSTRAINED BY REFERENCE CURVES FOR HPLC-DAD AND ITS SOLUTION BY MULTI-AREAS GENETIC ALGORITHM 864
Lizhi Cui, Josiah Poon, Simon K. Poon, Kei Fan, Hao Chen, Paul Kwan, Zhihao Ling, Junbin Gao

ACUPUNCTURE FOR TENSION-TYPE HEADACHE: AN ASSESSMENT OF CLINICAL REPORTING QUALITY BASED ON OCSI, STROBE STATEMENT AND QUALITY ASSESSMENT FOR CASE SERIES 866
Zhong Di, Xianming Lin, Shuo Jiang

THE APPLICATION CHARACTERISTICS OF ACUPOINTS OF ACUPUNCTURE FOR TENSION-TYPE HEADACHE: AN LITERATURE RESEARCH BASED ON DATA-MINING APRIORI ALGORITHM 868
Zhong Di, Yayuan Yang, Qiaohui Fu, Xianming Lin, Shuo Jiang

ORACLE HEALTH INFORMATION EXCHANGE: SECURE, SEAMLESS DATA SHARING 873
N/A

SYSTEM EVALUATION OF ELECTRO-ACUPUNCTURE (EA) FOR FUNCTIONAL CONSTIPATION 877
Zhi-Qi Fan, Ping Wang, Shu-Hui Wang, Wen-Bin Fu, Zhi-Shun Liu, Shao-Yang Cui

RULES OF TRADITIONAL PHYSICAL THERAPIES IN TREATING HYPERTENSION THROUGH TEXT MINING 885
Hongmei Zhou, Jinrui Guo, Xiaoxia Ren, Rong fen, Jinrong Zhang, Zhaoli Cui, Guang Zheng, Hongtao Guo

THE INVESTIGATION OF LAWS UNDERLYING ASSOCIATION RULES OF TREATING CORONARY HEART DISEASE WHICH BY FAMOUS OLD TCM DOCTOR WANG XING-KUAN 889
Jun-Feng Yan, Hou-Wu Gong, Jin-Hua Lu

COMPARATIVE STUDY ABOUT BONE PROPORTIONAL MEASUREMENT ON ABDOMEN AND FINGER-CUN MEASUREMENT 893
Zhi-Lin Gu, Xin Qian, Jie-Bin Zhu, Zhen-Hua Xu

DEVELOPMENT OF THE CARDIAC FAILURE EXPERT SYSTEM FOR CHINESE MEDICINE DIAGNOSIS BASED ON DATABASE 898
He Jiancheng, Xiaoqian Li, Fang Hong, Hongjuan Ding, Cao Xuebin, Hu Yuanhui

RESEARCH ON THE DRUGS OF ADDITION AND SUBTRACTION OF EMPIRICAL FORMULA OF TRADITIONAL CHINESE MEDICINE BASED ON ASSOCIATION RULES 904
Huang Li, Yuan Jiamin, Yang Zhimin, Lu Huanyu, Huang Chunhua

INHIBITORY EFFECTS OF YINQIAOSAN AND ITS DISASSEMBLED PRESCRIPTION ON VIRAL INFLUENZA 906
Tao Huang, Hong Zhou, Yong-Lin Li, Zi-Feng Yang, Ai-Hua Ou

A TEXT-MINING ANALYSIS ON THE APPLICATION OF TRADITIONAL CHINESE MEDICINE EXTERNAL THERAPY AND FOOD THERAPY IN HYPERTENSION TREATMENT 914
Minghai Zhang, Dongmei Jia, Xiaoxia Ren, Guang Zheng, Miao Jiang, Yaoxian Wang

EXPLORING CLINICAL EFFICACY OF WRINKLED GIANT HYSSOP 916
Zhen Jia, Jian Sun, Zhi-Xing Li, Chun Luo, Xin-Yan Jia, Yue Zhao

USING BIOINFORMATIC TECHNIQUE TO DISCOVERY HUANGQIN AND LIANQIAO COMBINATION AS A POTENTIAL NEW DRUG FOR TREATMENT ACNE 920
Chunyan Jiang, Jian Li, Yong Tan, Cheng Lu, Feng Cai, Junping Zhan, Xiaojuan He, Miao Jiang, Aiping Lu

EXPLORING THE BASIC LAWS OF ACUPOINTS OF ISCHEMIC CEREBROVASCULAR DISEASE IN ACUPUNCTURE TREATMENT THROUGH TEXT MINING 927
Miao Jiang, Zhong-Di Liu, Jing Sun, Hong-Ming Ma, Na Qi, Hong-Tao Guo, Guang Zheng, Ning Zhao, Su-Yun Wang, Jing-Rong Zhang

RESEARCH STATUS AND PROSPECT OF INTERNAL THERAPIES OF TCM TO THE RECOVERY OF GASTROINTESTINAL FUNCTION AFTER ABDOMINAL OPERATION 933
Jie Liu, Linyan Zhuang, Lixing Cao, Zhiqiang Chen, Zhi Jiang, Qicheng Chen

ENGLISH TRANSLATION OF CHINESE PEDIATRIC POINTS: A LOST LAND 937
Yu Kui, Kai Wang, Jian-Wei Liang, Zhao-Hui Liang

CORRELATIVE STUDY ON TCM SYNDROMES OF CONGESTIVE HEART FAILURE, CARDIAC FUNCTION AND BRAIN NATRIURETIC PEPTIDE 939
Li Xiaoqian, He Jiancheng, Fu Deyu, Cao Xuebin

CLASSIFICATION OF TONGUE COATING USING GABOR AND TAMURA FEATURES ON UNBALANCED DATA SET 945
Xiaoqiang Li, Qing Shao, Jingjing Wang

IMPROVED AUTOMATIC FILTERING ALGORITHM FOR IMBALANCED CLASSIFICATION BASED ON SVM-RFE 947
Xiaoqiang Li, Qing Shao, Jingjing Wang

NETWORK ANALYSIS FOR ANTI-RHEUMATOID ARTHRITIS TCM PRESCRIPTIONS 951
Yan Li, Zibo Ouyang, Rui Li, Shao Li

COMPLEX NETWORK APPROACH FOR ANALYZING TCM CLINICAL HERB-SYMPTOM RELATIONSHIPS 953
Yubing Li, Xuezhong Zhou, Runshun Zhang, Yinghui Wang, Jingqing Hu

JUEYIN OF SIX-MERIDIAN SYNDROME DIFFERENTIATION ON PARKINSON'S DISEASE 955
Zhe Li, Yingyu Hu, Xiaodong Luo

ACUPOINT INJECTION COMBINED WITH ACUPUNCTURE FOR INSOMNIA WITH CARDIACSPLENIC ASTHENIA: A RESEARCH PROTOCOL FOR CLINICAL TRIAL 958
Ziping Li, Minling Xian, Zhaohui Liang, Lingfeng Zeng, Manyun Liu, Zongchang Zheng, Yanyan Huang

RESEARCH ON THE THOUGHT OF NEEDLE-MEDICINE OF MUTUAL REINFORCEMENT SCHOOL 962
Ziping Li, Yanyan Huang, Liwei Yin, Changrong Meng, Zhaohui Liang, Lingfeng Zeng, Zongchang Zheng

AN AUSCULTATORY TECHNIQUE OF CHINESE MEDICINE: PATTERN RECOGNITION BASED ON TIMBRE OF HUMAN-VOICE MATCHING WITH STANDARDIZED PATTERNS OF SOUND FROM BIANZHONG OF MARQUIS YI OF ZENG 967
Zhiwei Liang, Xiaoyan Luo, Linli Wang, Qianrong Liang

OBSERVATION ON THE MECHANISM OF ACUPUNCTURE TREATMENT FOR GENERALIZED ANXIETY DISORDER USING LIEQUE(LU7), ZHAOHAI(KI6) AS THE MAIN ACUPOINTS 971
Chuhua Lin, Xiaoyan Zhao, Xing Liu, Wenbin Fu

STUDY ON THE DISTINGUISHING FEATURE IN USE OF CHINESE DRUGS ON CERVICAL SPONDYLOSIS PATIENTS IN PERIMENOPAUSAL PERIOD THROUGH DATA MINING METHODS 975
Jun Liu, Jian-Ke Pan, Ji-Yuan Yang, Da Guo, Wei-Yi Yang, Xiang Li, Yu-Yao Wan, Shu-Chai Xu

RESEARCH ON THE COMPONENT LAW OF CHINESE MEDICINE FOR KNEE OSTEOARTHRITIS AND THE DEVELOPMENT OF NEW RECIPES THROUGH UNSUPERVISED DATA MINING METHODS 977
Jun Liu, Jian-Ke Pan, Ji-Yuan Yang, Wei-Yi Yang, Zhen-Wei Ma, Yong-Ming Huang

DEVELOPMENT OF "DYNAMIC ACUPOINT INTERIOR RESISTANCE DETECTING AND ANALYZING SYSTEM" 981
Tang-Yi Liu, Rui-Xia Li, Hua-Yuan Yang, Ming Gao, Xu Gang, Wen-Chao Tang

STUDY ON THE MECHANISM OF CERVICAL VERTIGO TREATED WITH NEEDLE- KNIFE THERAPY 986
Xing Liu, Sheng-Ye Chen

A SYSTEMATIC REVIEW OF 192 CASES OF STIFF-PERSON SYNDROME IN CHINA 990
Yue Liu, Yuan-Qi Zhoa

PREVALENCE AND RELATED FACTORS OF ANEMIA AMONG HUMAN IMMUNODEFICIENCY VIRUS(HIV)/ ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS) OUTPATIENTS IN RESOURCES LIMITED REGION OF CHINA 994
Zhibin Liu, Yantao Jin, Jiping Yang, Qi Lei, Liran Xu, Qiang Li, Huijun Guo

SEARCHING ASSOCIATION RULES OF TRADITIONAL CHINESE MEDICINE ON LIGUSTICUM WALLICHII BY TEXT MINING 999
Dan Luo, Cheng Xiao, Guang Zheng, Shuyu Sun, Minzhi Wang, Xiaojuan He, Aiping Lu

RESEARCH ON THE COMPONENT LAW OF CHINESE MEDICINE FOR OSTEONECROSIS OF THE FEMERAL HEAD AND THE DEVELOPMENT OF NEW RECIPES THROUGH UNSUPERVISED DATA MINING METHODS 1005
Ming-Hui Luo, Xiang Li, Jian-Ke Pan, Jia-Yi Chen, Ji-Yuan Yang, Jun Liu

STUDY ON THE EXTRACTION METHOD OF DECOCTION FOR SPLEEN DEFICIENCY SYNDROME 1009
Wenbin Luo, Chengyu Wu

BLOODLETTING THERAPY COMBINED WITH PAROXETINE HYDROCHLORIDE FOR GENERALIZED ANXIETY DISORDER: A RANDOMIZED CONTROLLED TRIAL 1011
Hong Ma, Yu Kui, Ying Li, Bin-Cheng Huang, Shu-Qian Li, Xiu-Hua Chen

ONTOLOGY MATCHING BASED TRADITIONAL CHINESE MEDICINE CLINICAL INFORMATION SHARING SYSTEM 1014
Li Ma, Baoyan Liu, Yufeng Zhao, Shusong Mao, Zhiwei Cu

EVIDENCE-BASED DECISION SUPPORT FOR THE CLINICAL PRACTICE OF ACUPUNCTURE: DATA MINING APPROACHES 1017
Chang-Rong Meng, Hong-Lai Zhang, Ling-Feng Zeng, Zi-Ping Li, Jimmy Huang, Zhaohui Liang

DIFFERENCE BETWEEN TRADITIONAL ACUPUNCTURE COMBINED WITH HERBAL MEDICINE AND THE NEEDLE-MEDICINE OF MUTUAL REINFORCEMENT SCHOOL IN THE TREATMENT OF TINNITUS AND DEAFNESS 1019
Changrong Meng, Tian Zhang, Zhaohui Liang, Lingfeng Zeng, Liwei Yin, Yanyan Huang

DISCUSSION ON TCM PULSE DIAGNOSIS TECHNOLOGY EVALUATION STANDARD 1023
Mi Kaiyun, Tnag Yinan, Tan Sili

LEVIS: A HYPERTENSION DATASET IN TRADITIONAL CHINESE MEDICINE 1029
Aihua Ou, Xiaozhong Lin, Guozheng Li, Mingyu You

RESEARCH ON THE COMPONENT LAW OF CHINESE MEDICINE FOR GOUT AND THE DEVELOPMENT OF NEW RECIPES THROUGH UNSUPERVISED DATA MINING METHODS 1035
Bi-Qi Pan, Ji-Yuanyang, Hong-Mei Li, Jian-Ke Pan, Jia-Jing Lu, Jun Liu

THE EFFECT OF BO'S ABDOMINAL ACUPUNCTURE COMBINED WITH REHABILITATION EXERCISE ON SHOULDER PAIN AFTER STROKE 1039
Ruihuan Pan, Yao Xiao, Mingfeng He, Youhua Guo, Hongxia Chen

STRAIN DISTRIBUTION AND DETECTION OF DRUG SENSITIVITY IN 119 CASES OF VULVOVAGINAL CANDIDIASIS 1045
Ping Wang, Zhiqi Fan, Ruiqiang Fan, Haiping Bao, Zhuangyan Zhu, Yuhong Yan

A STUDY OF FITNESS FUNCTIONS IN EVOLUTIONARY ALGORITHMS ON SYMPTOM-HERB RELATIONSHIP DISCOVERY 1049
Josiah Poon, Johny Shih, Simon K. Poon, Daniel Sze

MUTUAL INFORMATION MINING FOR COMPONENT LAW AND DEVELOPMENT OF NEW RECIPES FOR ANKYLOSING SPONDYLITIS 1055
Qingzhong Qiu, Da Guo, Jianke Pan, Jiajing Lu, Jun Liu, Xuewei Cao

MUTUAL INFORMATION MINING FOR COMPONENT LAW AND DEVELOPMENT OF NEW RECIPES FOR RHEUMATOID ARTHRITIS 1059
Qingzhong Qiu, Da Guo, Jianke Pan, Zhenwei Ma, Jun Liu, Xuewei Cao

A PORTABLE PULSE SIGNAL ACQUIRING AND MONITORING SYSTEM BASED ON ANDROID PLATFORM 1063
Huiliang Shang, Qi Zhang, Mimin Jin, Wenxin Wang, Jiajun Zhu, Qingsheng Kong

STUDY OF COLORIMETRIC PARAMETERS ON NORMAL TONGUE TIP COLOR UNDER DIFFERENT STANDARD ILLUMINANTS 1065
Wen-Juan Shi, Chang-Chun Zeng, Wen-Guang Zhao, Xu-Sheng Ni

APPLICATION OF DATA MINING TECHNOLOGY IN ANALYSIS OF CHARACTERISTICS OF CHINESE MEDICINE TO TREAT CERVICAL SPONDYLOTIC MYELOPATHY 1069
Shuan Wu, Ruimin Tian, Shudong Chen, Dongyi Chen, Ping Chen

INVESTIGATING THE PATTERN OF SYNDROME BASED ON THE DIFFERENCE OF SYMPTOM NETWORK IN DEPRESSION 1073
Jianglong Song, Xi Liu, Wen Dai, Yibo Gao, Lin Chen, Yunling Zhang, Hong Zheng, Zhichen Zhang, Miao Yu

DISCOVERING CAUSAL PATTERNS IN TCM CLINICAL PRESCRIPTION DATA USING SET-THEORETIC APPROACH 1079
Alan Su, Simon K. Poon, Josiah Poon

THE IMMEDIATE EFFECTS OF CHINESE BONE-SETTING IN PATIENTS WITH ACUTE ANKLE SPRAIN 1085
Qiang Tian, Kiu Lam Chung, Rusong Guo, Shan Wu

EFFECT OF TUINA THERAPY AND BADUANJIN EXERCISE FOR PRIMARY FIBROMYALGIA SYNDROME - A PROSPECTIVE, RANDOMIZED STUDY 1088
Tian Qiang, Guo Ru-Song, Chung Kiu Lam, Wu Shan

A SHIATSU PULSE SENSOR CALIBRATION METHOD AND APPLICATION TO THREE-PART PULSE WAVE COLLECTION 1091
Liping Tu, Jiatuo Xu, Zhifeng Zhang, Bo Yu, Hao Chang, Ye Duan

THE DESIGN AND IMPLEMENTATION OF INPATIENT MEDICAL EXPENSES ANALYSIS SYSTEM 1093
Wangwen Jing, Wang Bin, Caoxin Yu

COMPARATIVE STUDY OF PULSE-DIAGNOSIS SIGNALS BETWEEN 2 KINDS OF LIVER DISEASE PATIENTS BASED ON THE COMBINATION OF UNSUPERVISED LEARNING AND SUPERVISED LEARNING 1097
Wang Nanyue, Yu Youhua, Huang Dawei, Liu Jia, Xue Li Yuan

RESEARCH ON THE CONSTRUCTION OF DATA ELEMENT OF TCM DIAGNOSIS AND TREATMENT INFORMATIONS 1100
Wei Chang-Fa, Yan Jun-Feng

DERIVING MUTUAL MODES FROM HPLC FINGERPRINTS OF TRADITIONAL CHINESE MEDICINE WITH NON-NEGATIVE MATRIX FACTORIZATION 1102
Hang Wei, Li Lin, Qin-Qun Chen, Hong-Lai Zhang, Shao-Dong Deng, Cai-Xia Liang

APPLICATION OF PATIENT-REPORTED OUTCOMES IN CLINICAL EVALUATION OF ACUPUNCTURE FOR CERVICAL SPONDYLOSIS WITH ARTIFICIAL NEURAL NETWORK 1108
Hang Wei, Zi-Ping Li, Hong-Lai Zhang, Qin-Qun Chen, Zhao-Hui Liang

ANALYZING THE RELATIONSHIP BETWEEN TRADITIONAL CHINESE MEDICINE PATTERNS AND BIOCHEMICAL PARAMETERS IN CKD POPULATION BASED ON INFORMATIONS SHARING SYSTEM 1114
Yi-Fan Wu, La Zhang, Yu-Ping Zeng, Xu-Sheng Liu, Hao-Yang Fu

INTEGRATING PHENOTYPE-GENOTYPE DATA FOR PRIORITIZATION OF CANDIDATE SYMPTOM GENES 1116
Xing Li, Xuezhong Zhou, Yonghong Peng, Runshun Zhang, Jingqing Hu, Jian Yu

RESEARCH ON THE PSORIASIS VULGARIS SYNDROME DIFFERENTIATION STANDARD OF TRADITIONAL CHINESE MEDICINE BASED ON DATA MINING TECHNOLOGY 1118
Xiuli Xie, Chuanjian Lu, Zhao Zeng, Zhangpeng Zeng, Yuhong Yan

THE SYNDROME DIFFERENTIATION MODEL AND PROGRAM OF TRADITIONAL CHINESE MEDICINE BASED ON THE FUZZY RECOGNITION 1122
Tao Yang, Chengyu Wu, Zheng Xu, Yiyan Ding

AN ONTOLOGY-BASED APPROACH FOR TEXT MINING OF STROKE ELECTRONIC MEDICAL RECORDS 1125
Yujie Yang, Yunpeng Cai, Wenshu Luo, Zhifeng Li, Zhenghui Ma, Xiaolu Yu, Haibo Yu

CUSTOMIZED MANAGEMENT OF CLINICAL DATA IN TRADITIONAL CHINESE MEDICINE 1129
Mingyu You, Shi-Xing Yan, Guo-Zheng Li, Liao-Yu Xu, Su-Ying Huang

INVESTIGATION ON THE FEASIBILITY OF SELECTING SOFT TISSUE ELASTICITY AS THE OBJECTIVE EVALUATING INDICATOR OF THE NECK TYPE OF CERVICAL SPONDYLOSIS 1131
Feng Yuan, Qi-Chen Tan, Jia-Xin Zhou, Wen-Bin Fu

CLINICAL RANDOMIZED RESEARCH OF 73 CASES RECEIVING THE ACUPUNCTURE TREATMENT BASED ON THE CONCEPT OF HEART AND GALL BLADDER FROM TCM ASPECT FOR NECK TYPE OF CERVICAL SPONDYLOSIS(NTCS) 1135
Feng Yuan, Xiao-Yan Zhao, Wenbin Fu

INFORMATIZATION ORIENTED THE DECISION-MAKING OF PHYSICIANS IN THE CONTEXT OF ZHENG DIFFERENTIATION OF TRADITIONAL MEDICINE 1141
Lingfeng Zeng, Yongchao Zhang, Zhaohui Liang, Changrong Meng, Minling Xian, Tian Zhang

EFFECTS OF CLIMATE FACTORS ON BACILLARY DYSENTERY EPIDEMIC IN HARBIN CITY, CHINA 1145
Hao Zhang, Chunpu Zou, Fengfeng Shao, Guozheng Li

USING TEXT MINING TO UNDERSTAND TRADITIONAL CHINESE MEDICINE PATHOGENESIS OF NON-ALCOHOLIC FATTY LIVER DISEASE 1148
Hui-Qin Zhang, Jian Li, Guang Zheng, Miao Jiang, Li Li, Yong Tan, Ai-Ping Lu

FREQUENT ITEMSETS COMPRESSING BASED ON MINIMUM COVER: AN EFFICIENT METHOD FOR MINING MEDICATION LAW OF CHINESE HERBS 1152
Lei Zhang, Yiguo Wang, Qiming, Xuezhong Zhou, Jian Yu, Xiuhua Guo, Xia Li

ANCIENT TERMS OF CHRONIC RENAL FAILURE: THE KEY TO ANCIENT LITERATURE MINING 1156
Lei Zhang, Yin Li, Deli Zhu, Xusheng Liu
A NEW TONGUE DIAGNOSIS APPLICATION ON ANDROID PLATFORM 1161
Qi Zhang, Hui-Liang Shang, Jia-Jun Zhu, Min-Min Jin, Wen-Xin Wang, Qing-Sheng Kong
DEVELOPMENT OF CLINICAL PATHWAY FOR STROKE MANAGEMENT - AN E-DELPHI SURVEY 1165
Yuan-Qi Zhao, Min Zhao, Zhao-Hui Liang, Yefeng Cai
AID DECISION OF CHINESE TRADITIONAL PATENT MEDICINE BASED ON MANIFOLD RANKING 1167
Yufeng Zhao, Liyun He, Baoyan Liu, Ruili Huo
RULE-BASED TEXT MINING OF TRADITIONAL CHINESE MEDICINE PATTERNS WITH CHINESE HERBAL MEDICINES AND FORMULAE ON HYPERTENSION 1169
Jinrui Guo, Yahong Wang, Guang Zheng, Jinrui Guo, Yahong Wang, Guang Zheng
INFERRING SEMANTIC SIMILARITY THROUGH CORRELATING INFORMATION CONTENTS OF GENE ONTOLOGY TERMS 1173
Mingxin Gan, Rui Jiang
PREDICTION OF PROTEIN STRUCTURES USING A MAP-REDUCE HADOOP FRAMEWORK BASED SIMULATED ANNEALING ALGORITHM 1178
Hui Li, Chunmei Liu
NETWORK ANALYSIS REVEALS COMPLEX INTERACTIONS IN HEAT SHOCK RESPONSE IN THE MALARIA PARASITE 1183
Timothy G. Lilburn, Hong Cai, Jianying Gu, Zhan Zhou, Yufeng Wang
PREDICTION OF HOT REGIONS IN PROTEIN-PROTEIN INTERACTIONS BASED ON COMPLEX NETWORK AND COMMUNITY DETECTION 1189
Dongfang Nan, Xiaolong Zhang
EXTASY SIMPLIFIED - TOWARDS OPENING THE BLACK BOX 1196
Dusan Popovic, Alejandro Sifrim, Yves Moreau, Bart De Moor
A NOVEL SEEDING METHOD BASED ON SPATIAL SLIDING VOLUME FILTER FOR NEURON RECONSTRUCTION 1201
Dong Sui, Kuanquan Wang, Henggui Zhang
AN ENSEMBLE CLASSIFIER WITH RANDOM PROJECTION FOR PREDICTING MULTI-LABEL PROTEIN SUBCELLULAR LOCALIZATION 1207
Shibiao Wan, Man-Wai Mak, Bai Zhang, Yue Wang, Sun-Yuan Kung
DETECTION OF PROTEIN COMPLEXES IN PROTEIN INTERACTION NETWORKS IS IMPROVED THROUGH NETWORK-DRIVEN FUNCTIONAL HOMOGENEITY ANALYSIS 1215
Haiying Wang, Huiru Zheng, Francisco Azuaje
STABILITY AND BIFURCATION ANALYSIS OF HODGKIN-HUXLEY MODEL 1221
Yue Zhang, Kuanquan Wang, Henggui Zhang
REGROUPING OF PATTERN CLUSTERS TO REVEAL CHARACTERISTICS OF DISTINCT CLASSES AND RELATED CLASSES 1227
Pei-Yuan Zhou, En-Shiun Annie Lee, Andrew K. C. Wong
PATHWAY BASED IDENTIFICATION OF RARE MUTATION EFFECT IN CANCER 1234
Taejin Ahn, Taesung Park
STUDYING THE ROBUSTNESS OF ENSEMBLES OF CLASSIFIERS USED FOR CANCER DIAGNOSIS USING MICROARRAYS DATASETS 1240
Mohammed A. Gaafar, Noha A. Yousri, Mohamed A. Ismail
TUMOR SUBTYPE IDENTIFICATION WITH WEIGHTED SPARSE NON-NEGATIVE MATRIX FACTORIZATION FOR MULTIPLE HETEROGENEOUS DATA INTEGRATION 1247
Hyunsoo Kim, Jeff Chuang, Markus Bredel
A COMMON FACTOR-ANALYTIC MODEL FOR CLASSIFICATION 1252
Mingzhu Sun, Geoffrey J. McLachlan
INFORMATION EXTRACTION FROM NANOTOXICITY RELATED PUBLICATIONS 1258
Lemin Xiao, Kaizhi Tang, Xiong Liu, Hui Yang, Zheng Chen, Roger Xu
A USER CENTERED APPROACH TO DEVELOPING INFORMATION VISUALIZATION MODULE FOR NEIMINER 1264
Hui Yang, Soundar Kumara, Kaizhi Tang, Xiong Liu, Lemin Xiao, Roger Xu
INVESTIGATING NANOMATERIAL TOXICITY BIBLIOGRAPHY: A NETWORK ANALYSIS APPROACH 1270
Hui Yang, Soundar Kumara, Kaizhi Tang, Xiong Liu, Zheng Chen, Roger Xu

COMPUTATIONAL SYNCHRONIZATION IMPROVES THE CONSISTENCY OF GENE EXPRESSION PATTERNS OVER MULTIPLE EXPERIMENTS 1276
Wei Zhao, Justin Dauwels, Jianshu Cao
A ROADMAP FOR INFORMATION SECURITY ASSESSMENT FOR MEANINGFUL USE 1280
Subrata Acharya
UNDERSTANDING BIOMEDICAL RESEARCH COLLABORATIONS THROUGH SOCIAL NETWORK ANALYSIS: A CASE STUDY 1288
Jiang Bian, Mengjun Xie, Umit Topaloglu, Teresa Hudson, William Hogan
OVERLAPPING COMMUNITY DETECTION IN SOCIAL NETWORKS 1296
Zeineb Dhouioui, Jalel Akaichi
TOWARDS A SECURE SOCIAL SENSOR NETWORK 1303
Wassim Drira, Eric Renault, Djamal Zeghlache
PREDICTING THE ONSET OF BULLOUS PEMPHIGOID WITH CO-MORBIDITIES - A SURVEY BASED ON A NATIONWIDE MEDICAL DATABASE 1309
Chu-Cheng Kuo, Fang-Chi Yang, Meng-Han, Ding-Dar Lee
STUDY ON THE PRESSURE METHODS OF PULSE DETECTING INSTRUMENT 1317
Cong-Ying Liu
AUTOMATIC WORKING AREA LOCALIZATION IN BLOOD SMEAR MICROSCOPIC IMAGES USING MACHINE LEARNING ALGORITHMS 1322
Emad A. Mohammed, Mostafa M. A. Mohamed, Christopher Naugler
DETERMINING AN OPTIMAL VALUE OF K IN K-MEANS CLUSTERING 1330
Arshad Muhammad Mehar, Kenan Matawie, Anthony Maeder
SIMULATION STUDY OF THE DRUG RELEASE DYNAMICS 1335
Yixiang Shi, Ajun Wan, Yifei Shi
COMPARATIVE STUDY OF AN HIV RISK SCORECARD AND REGRESSION MODELS TO RANK EFFECTS OF DEMOGRAPHIC CHARACTERISTICS ON RISK OF AQUIRING AN HIV INFECTION 1336
Wilbert Sibanda, Philip Pretorius
UTILIZING CIS-ELEMENTS TO REFINE GENE REGULATORY NETWORKS 1344
Yiou Xiao, Kishan Mehrotra, Chilukuri Mohan, Ramesh Raina
AN INTEGRATIVE COMPUTATIONAL APPROACH TO IDENTIFY DISEASE-SPECIFIC NETWORKS FROM PUBMED LITERATURE INFORMATION 1351
Yuji Zhang, Dingchen Li, Cui Tao, Feichen Shen, Hongfang Liu
INFERRING REGULATORY NETWORKS THROUGH ORTHOLOGOUS GENE MAPPING 1355
Guoyi Zhao, Li Guo, Lixin Gao, Li-Jun Ma
MINING THE MAXIMUM CONSERVED FUNCTIONAL MODULE FROM THE ALIGNMENT OF PAIRWISE PROTEIN INTERACTION NETWORKS 1363
Xueqin Zhuang, Yongli Wang, Xiaohui Jiang, Xingpeng Jiang
AN MPI-ENABLED MAPREDUCE FRAMEWORK FOR MOLECULAR DYNAMICS SIMULATION APPLICATIONS 1369
Shuju Bai, Ebrahim Khosravi, Seung-Jong Park
DETECTING CRITICAL CARDIAC EVENTS WITH 12 LEAD ECG DATA 1372
Ayush Bansal, Sunil Kumar, Mukesh Kr. Agrawal, Mithun M. Nayak, Ranga Narayanan
OBJECT BEHAVIOR MINING FROM MITOCHONDIRAL SHAPE DATABASES FOR DEGENERATED NERVE DISEASE STUDIES 1375
Hongfei Cao, Jing Han, Chi-Ren Shyu
EVALUATION OF LAUGE-HANSEN CLASSIFICATION FOR ANKLE FRACTURES AND FOLLOW-UP MANAGEMENT 1378
Haiyun Chen, Yingyu Hu, Haizhou Wang, Zhe Li, Qiang Lin
APPLICATION OF CRITICAL CONDITION SCORING SCALE OF TRADITIONAL CHINESE MEDICINE IN PREDICTING OPERATIVE RISKS FOR ELDER PATIENTS WITH ORTHOPEDIC SURGERY 1381
Haiyun Chen, Yingyu Hu, Zhe Li, Wanxi Deng, Yi Liu, Qiang Lin, Zehui He
A NOVEL STATISTICAL APPROACH TO IDENTIFY CO-REGULATORY GENE MODULES 1384
Xi Chen, Jianhua Xuan, Xu Shi, Ayesha N. Shajahan-Haq, Leena Hilakivi-Clarke, Robert Clarke
ANTIHYPERTENSIVE EFFECT OF ACUPUNCTURING AT KI3 IN SPONTANEOUSLY HYPERTENSIVE RATS 1387
Shaoyang Cui, Mingzhu Xu, Shuhui Wang, Chunzhi Tang, Xinsheng Lai, Zhiqi Fan
THE RESEARCH FOR DIGITALIZATION OF FOUR GREAT CLASSICAL LITERATURES OF TRADITIONAL CHINESE MEDICINE KNOWLEDGE FOR CLINIC USE 1394
Yunfeng Dai, Yingrong Lao, Guofeng Xu, Yuanshen Zhou, Liheng Guo, Liu Qi

VISUALIZATION OF THE SETS OF DNA SEQUENCES USING SELF ORGANIZING MAPS BASED ON CORRELATION COEFFICIENTS 1395
Hiroshi Dozono, Gen Niina
USING OPEN DATA IN HEALTH CARE AND TOURISM 1398
Mario Cannataro, Pietro H Guzzi, Pierangelo Veltri
DIALECTICAL ANALYSIS OF SPECTRAL DATA OF PATIENTS WITH HEPATOCELLULAR JAUNDICE THROUGH DATA MINING TECHNIQUES 1402
Yao Hai-Ying, Zhu Hui-Shao, Li Bin, Liang Chun-Yan, Zhao Wen-Guang, Zhang Yu-Bo
A NEW ON-LINE CHEMICAL BIOLOGY DATA VISUALIZATION SYSTEM 1403
Peng Hao, Jintao Zhang, Jun Huan
APPLICATION ON SPACE-TIME CODING TECHNOLOGY IN ULTRASONIC BACK-PROPAGATION METHOD 1406
H. E. Xiaonian, Weixiang Liu, Siping Chen, Zhengdi Qin
NETWORK-BASED MUTATION ANALYSIS OF PUTATIVE CANCER GENES FROM NEXT-GENERATION SEQUENCING DATA 1409
Peilin Jia, Zhongming Zhao
SOYBEAN KNOWLEDGE BASE (SOYKB) : BRIDGING THE GAP BETWEEN SOYBEAN TRANSLATIONAL GENOMICS AND BREEDING 1410
Trupti Joshi, Michael R. Fitzpatrick, Shiyuan Chen, Yang Liu, Hongxin Zhang, Ryan Z. Endacott
DETECTING CORE PROTEIN COMPLEXES BASED ON LINK PATTERNS 1413
Kan Li, Fengjiao Chen
COMMUNITIES ANALYSIS IN PROTEIN-PROTEIN INTERACTION NETWORKS 1414
Kan Li, Yin Pang
ANALYSIS OF ELECTRODE SHAPE EFFECT ON SINGLE HELA CELL IMPEDANCE USING COMSOL SIMULATION 1415
Jai-Hao Li, Wen-Hao Chang, Min-Haw Wang
A PROTEIN-PEPTIDE DOCKING PROGRAM WITH MODELING RECEPTOR FLEXIBLE AREAS 1416
Haiou Li, Qiang Lu, Rong Chen, Lijun Quan, Xiaoyan Xia
ON PRIVACY-PRESERVING PUBLISHING OF SPONTANEOUS ADE REPORTING DATA 1419
Wen-Yang Lin, Duan-Chun Yang
A CURATIVE EFFECT OBSERVATION ON TIANJIU THERAPY FOR INSOMNIA 1422
Yajie Liu, Shujun Xu, Wenbin Fu
ASSESSING DAIRY MANURE PATHOGEN INDICATOR INACTIVATION UNDER ANAEROBIC AND AEROBIC DIGESTIONS IN MESOPHILIC TEMPERATURE 1425
Pramod K Pandey, Michelle L Soupir
MINING REPETITIVE SEQUENCES USING A BIG DATA ECOSYSTEM 1428
Michael Phinney, Hongfei Cao, Andi Dhroso, Chi-Ren Shyu
IMPLEMENTING REPLICA EXCHANGE MOLECULAR DYNAMICS USING WORK QUEUE 1431
Maritza Smith-Romero, Jin Niu, Alvin Allen, Abrahim Khosravi, Shuju Bai
LATIN SQUARE DATASET FOR EVALUATING THE ACCURACY OF MASS SPECTROMETRY-BASED PROTEIN IDENTIFICATION AND QUANTIFICATION 1433
Penghao Wang, Jean Yee Hwa Yang, Mark Raftery, Ling Zhong, Susan R. Wilson
AN EXPERIMENTAL RESEARCH FOR AUTOMATIC CLASSIFICATION OF UNBALANCED SINGLE-CHANNEL PROTEIN SUB-CELLULAR LOCATION FLUORESCENCE IMAGE SET 1436
Dechang Xu, Jianzhong Li
CAUSAL DISCOVERY BASED ON HEALTHCARE INFORMATION 1439
Jing Yang, Ning An, Gil Alterovitz, Lian Li, Aiguo Wang
ALGORITHMIC COMPLEXITY OF MOTIFS CLUSTERS SUPERFAMILIES OF NETWORKS 1442
Hector Zenil, Narsis A. Kiani, Jesper Tegnér
EXPLORING THE MOLECULAR MECHANISM OF JUAN-BI-TANG FOR FENG-HAN-SHI-BI SYNDROME IN RHEUMATOID ARTHRITIS 1445
Guang Zheng, Mengmeng Song, Biao He, Xiaoqing Li, Jia Luo, Aiping Lu
Author Index