

2012 IEEE International Conference on Bioinformatics and Biomedicine Workshops

(BIBMW 2012)

**Philadelphia, Pennsylvania, USA
4-7 October 2012**



**IEEE Catalog Number: CFP1226D-PRT
ISBN: 978-1-4673-2746-6**

TABLE OF CONTENTS

A GRAPH MODEL AND GRAMMAR FOR MULTI-SCALE MODELLING USING XL	1
<i>Yongzhi Ong, Winfried Kurth</i>	
APPROXIMATION OF A MULTI-SCALE MODEL BASED ON MULTIPLE SITE PHOSPHORYLATION	9
<i>Zhen Liu, Yang Cao</i>	
KNOWLEDGE-BASED SCORING FUNCTION DERIVED FROM ATOMIC TESSELLATION OF MACROMOLECULAR STRUCTURES FOR PREDICTION OF PROTEIN-LIGAND BINDING AFFINITY	17
<i>Majid Masso</i>	
PROTEIN SECONDARY STRUCTURE PREDICTION USING SUPPORT VECTOR MACHINES AND A CODON ENCODING SCHEME	22
<i>Masood Zamani, Stefan C. Kremer</i>	
STRUCTURAL BASIS OF POLYPHARMACOLOGICAL EFFECTS OF METFORMIN	28
<i>Weiwei Han, Lei Xie,</i>	
AN INTEGRATED WORKFLOW FOR PROTEOME-WIDE OFF-TARGET IDENTIFICATION AND POLYPHARMACOLOGY DRUG DESIGN	32
<i>Thomas Evangelidis, Philip E. Bourne, Li Xie, Lei Xie</i>	
COARSE-GRAINED ELASTIC NETWORKS, NORMAL MODE ANALYSIS AND ROBOTICS-INSPIRED METHODS FOR MODELING PROTEIN CONFORMATIONAL TRANSITIONS	40
<i>Ibrahim Al-Blawi, Marc Vaisset, Thierry Simeon, Juan Cortes</i>	
AUTODOCK-BASED INCREMENTAL DOCKING PROTOCOL TO IMPROVE DOCKING OF LARGE LIGANDS	48
<i>Ankur Dhanik, John S McMurray, Lydia Kavraki</i>	
A POPULATION-BASED EVOLUTIONARY ALGORITHM FOR SAMPLING MINIMA IN THE PROTEIN ENERGY SURFACE	64
<i>Sameh Saleh, Brian Olson, Amarda Shehu</i>	
META-ANALYSIS OF PROTEIN STRUCTURAL ALIGNMENT	72
<i>Jim Havrilla, Ahmet Sacan</i>	
A NEW GREEDY HEURISTIC FOR 3DHP PROTEIN STRUTURE PREDICTION WITH SIDE CHAIN	77
<i>Lauro Cesar Galvao, Luiz Fernando Nunes, Pablo Moscato</i>	
TOWARDS A HYBRID METHOD FOR DETECTING CRITICAL PROTEIN RESIDUES	82
<i>Bahar Akbal-Delibas, Filip Jagodzinski, Nurit Haspel</i>	
AMODULARIZEDMAPREDUCE FRAMEWORK TO SUPPORT RNASECONDARY STRUCTURE PREDICTION AND ANALYSIS WORKFLOWS	86
<i>Boyu Zhang, Daniel T. Yehdego, Kyle L. Johnson, Ming-Ying Leung, Michela Taufer</i>	
UNBIASED, SCALABLE SAMPLING OF CONSTRAINED KINEMATIC LOOPS	94
<i>Yajia Zhang, Kris Hauser</i>	
REFINING MULTIMERIC PROTEIN COMPLEXES USING CONSERVATION, ELECTROSTATICS AND PROBABILISTIC SELECTION	102
<i>Bahar Akbal-Delibas, Nurit Haspel</i>	
CRYOEM SKELETON LENGTH ESTIMATION USING A DECIMATED CURVE	109
<i>Andrew McKnight, Kamal Al Nasr, Dong Si, Andrey Chernikov, Nikos Chrisochoides, Jing He</i>	
IMPROVING ACCURACY IN BINDING SITE COMPARISON WITH HOMOLOGY MODELING	114
<i>Brian G. Godshall, Brian Y. Chen</i>	
A DRUG ADMINISTRATION DECISION SUPPORT SYSTEM	122
<i>Wenqi You, Alena Simalatsar, Nicolas Widmer, Giovanni De Micheli</i>	
DYNAMICAL MODELING OF CHRONIC MYELOID LEUKEMIA PROGRESSION AND THE DEVELOPMENT OF MUTATIONS	130
<i>Ben-Gong Zhang, Gouhei Tanaka, Luonan Chen, Kazuyuki Aihara</i>	
CHEMOGENOMIC APPROACH TO COMPREHENSIVE PREDICTIONS OF LIGAND-TARGET INTERACTIONS: A COMPARATIVE STUDY	136
<i>J. B. Brown, Satoshi Niijima, Akira Shiraishi, Masahiko Nakatsui, Yasushi Okuno</i>	
A BICLUSTERING APPROACH TO ANALYZE DRUG EFFECTS ON EXTRACELLULAR MATRIX REMODELING POST-MYOCARDIAL INFARCTION	143
<i>Omid Ghasemi, Nguyen Nguyen, Trevi A Ramirez, Jianhua Zhang, Merry L. Lindsey, Yu-Fang Jin</i>	

LIKELIHOOD OF SIDE EFFECTS DEPENDS ON DESIRED CLINICAL IMPACT: AFFINITIES WITHIN A VERY SMALL SET OF TARGETS ENABLES INFERENCE OF PROMISCUITY OR SPECIFICITY OF KINASE INHIBITORS	151
<i>Quoc-Nam Tran, Valentin Andreev, Ariel Fernandez</i>	
RECONSTRUCTING DYNAMIC GENE REGULATORY NETWORK FOR THE DEVELOPMENT PROCESS OF HEPATOCELLULAR CARCINOMA	159
<i>Hailong Zhu, R. Shyama Prasad Rao, Luonan Chen</i>	
MINING HUB-BASED PROTEIN COMPLEXES IN MASSIVE BIOLOGICAL NETWORKS.....	166
<i>Zhijie Lin, Yan Chen, Shiwei Wu, Yun Xiong, Yangyong Zhu, Guangyong Zheng</i>	
ALIGNMCL: COMPARATIVE ANALYSIS OF PROTEIN INTERACTION NETWORKS THROUGH MARKOV CLUSTERING.....	174
<i>Marco Mina, Pietro Hiram Guzzi</i>	
PREDATOR PREY MODELING AT THE MOLECULAR LEVEL: ANALYTICAL CONSIDERATIONS ABOUT THE COUPLING OF BIOCHEMICAL EVENTS DURING PHOTO-CHEMO THERAPY AND CELL SURVIVAL PROBABILITY	182
<i>Ioannis Gkigkitzis</i>	
A COMPUTATIONAL MODEL FOR GENETIC AND EPIGENETIC SIGNALS IN COLON CANCER.....	188
<i>Irina A. Roznovat, Heather J. Ruskin</i>	
RELEVANCE JUDGMENT ALGORITHM FOR DETECTING PROTEIN COMPLEXES FROM PROTEIN INTERACTION NETWORKS	196
<i>Huaxiong Yao, Yan Yang, Xiaolong Li</i>	
DISCOVERING MAXIMAL COHESIVE SUBGRAPHS AND PATTERNS FROM ATTRIBUTED BIOLOGICAL NETWORKS.....	203
<i>Saeed Salem, Rami Alroobi, Syed Ahmed, Mohammad Hossain</i>	
IMPROVEMENTS OF GRAPH ENTROPY APPROACH TO DETECT PROTEIN COMPLEXES BY ONTOLOGICAL ANALYSIS OF PPIS	211
<i>Francisco I. Pena, Young-Rae Cho</i>	
DISCOVERY AT A DISTANCE: FARTHER JOURNEYS IN PREDICATION SPACE	218
<i>Trevor Cohen, Dominic Widdows, Roger W. Schvaneveldt, Thomas C. Rindflesch</i>	
BUILDING SEMANTIC CORPUS FROM WORDNET.....	226
<i>Lubomir Stanchev</i>	
DISCOVERY BY SCENT: DISCOVERY BROWSING SYSTEM BASED ON THE INFORMATION FORAGING THEORY	232
<i>J. Caleb Goodwin, Trevor Cohen, Thomas Rindflesch</i>	
TOWARDS COMPREHENSIVE LONGITUDINAL HEALTHCARE DATA CAPTURE	240
<i>Delroy Cameron, Varun Bhagwan, Amit P. Sheth</i>	
A SEMANTIC APPROACH TO INVOLVE TWITTER IN LBD EFFORTS.....	248
<i>Sanmitra Bhattacharya, Padmini Srinivasan</i>	
A NOVEL NON-CONTACT INTERACTIVE MEDICAL IMAGE VIEWING SYSTEM.....	254
<i>Chen Geng, Jian Yang, Tong Li, Yongtian Wang</i>	
DESIGNING A ROBUST BLEEDING DETECTION METHOD FOR BRAIN CT IMAGE ANALYSIS.....	260
<i>Saurabh Shirgaonkar, Dong Hyunjeong, Toan Huynh, Soo-Yeon Ji</i>	
UTILIZATION OF DOMAIN-KNOWLEDGE FOR SIMPLICITY AND COMPREHENSIBILITY IN PREDICTIVE MODELING OF ALZHEIMER'S DISEASE	265
<i>Murat Seckin Ayhan, Ryan G. Benton, Vijay V. Raghavan, Suresh Choubey</i>	
FEATURES FOR AUTOMATED TONGUE IMAGE SHAPE CLASSIFICATION	273
<i>Tayo Obafemi-Ajayi, Ratchadaporn Kanawong, Dong Xu, Shao Liz, Ye Duan</i>	
UTILISING STOCHASTIC DIFFUSION SEARCH TO IDENTIFY METASTASIS IN BONE SCANS AND MICROCALCIFICATIONS ON MAMMOGRAPHS	280
<i>Mohammad Majid Al-Rifaie, Ahmed Aber, Ahmed Majid Oudah</i>	
ZHENG CLASSIFICATION IN TRADITIONAL CHINESE MEDICINE BASED ON MODIFIED SPECULAR-FREE TONGUE IMAGES.....	288
<i>Ratchadaporn Kanawong, Jun Yu, Dong Xu, Shao Liz, Ye Duan</i>	
SIGNALS ANALYSIS OF PULSE-DIAGNOSIS IN TCM BY THE COMBINATION OF UNSUPERVISED LEARNING AND SUPERVISED LEARNING	295
<i>Wang Nanyue, Yu Youhua, Huang Dawei, Shan Zengyu, Chen Yanping, Xue Liyuan</i>	
A SUPERVISED SOLUTION FOR REDUNDANT FEATURE DETECTION DEPENDING ON INSTANCES.....	299
<i>Xue-Qiang Zeng, Guo-Zheng Li</i>	

THEORY AND PRACTICE: A DISCOURSE-BASED TRANSLATION STRATEGY OF CHINESE MEDICINE	307
<i>Yuanfang Chen, Yu Chen, Tao Yu, Zhaohui Liang, Song Wei</i>	
SYNDROME DISCRIMINATION MODEL OF TRADITIONAL CHINESE MEDICINE FOR CHRONIC HEPATITIS B.....	310
<i>Xiaoyu Chen, Na Chu, Lizhuang Ma , Yiyang Hu</i>	
APPLICATION AND IMPROVEMENT DISCUSSION ABOUT APRIORI ALGORITHM OF ASSOCIATION RULES MINING IN CASES MINING OF INFLUENZA TREATED BY CONTEMPORARY FAMOUS OLD CHINESE MEDICINE	316
<i>Yuntao Liu, Qing Liu, Danwen Zheng, Qingping Deng, Zhanpeng Tan, Xiaoyang Jin, Wei Huang</i>	
CHEN'S FLYING NEEDLE TREATMENT FOR BELL'S FACIAL PARALYSIS OF WIND-COLD PATTERN: A STUDY PROTOCOL FOR A DISTINGUISHED VETERAN DOCTOR OF TCM.....	323
<i>Ziping Li, Zicai Chen, Lingfeng Zeng, Zhaohui Liang</i>	
DISTAL POINT ACUPUNCTURE FOR CERVICAL SPONDYLOSIS WITH RADICULOPATHY BASED ON FLOW OF MERIDIANS: A RESEARCH PROTOCOL FOR CLINICAL TRIAL	328
<i>Ziping Li, Fushan Qiu, Lingfeng Zeng, Zhaohui Liang</i>	
DATA MINING ON PRESCRIPTION, HERBAL PAIRS, AND PATTERN IDENTIFICATION OF PULMONARY TUBERCULOSIS CASES	332
<i>Yun Yang</i>	
THE MECHANISM OF ACUPUNCTURE FOR OBSESSIVE-COMPLUSIVE DISORDER ON TCM HEART-GALLBLADDER CONCEPT.....	336
<i>Nipeng Lin, Changcai Xie, Xiaohong Xu, Wenbin Fu</i>	
30 CASES OF CLINICAL EFFICACY OBSERVATION ON DEGENERATIVE CERVICAL SPONDYLOSIS TREATED WITH NEEDLE- KNIFE THERAPY	340
<i>Xing Liu, Shengye Chen</i>	
MECHANISM OF NEEDLE-KNIFE THERAPY IN TREATING DEGENERATIVE CERVICAL SPONDYLOSIS	343
<i>Li-Zhi Chen, Feng Yuan, Xiao-Yan Zhao, Mei-Ai Liang, Wen-Bin Fu</i>	
ACUPUNCTURE FOR NECK TYPE CERVICAL SPONDYLOSIS ON HEART-GALLBLADDER THEORY	346
<i>Feng Yuan, Lizhi Chen, Xiaohong Xu, Qian Wang, Wenbin Fu</i>	
CHARACTERISTIC OF TCM AND THE IMPACT ON ETHICS REVIEW OF CLINICAL RESEARCH INVOLVING CHINESE MEDICINE	349
<i>Xiuqin Wang, Ningxia Liang, Fumin Zhang, Tianping Li, Chai Yi, Jun Zhao</i>	
EFFECT OF “SHENQUE” QI DISTRIBUTION THEORY ON MALIGNANT BONE CANCER PATIENTS’ QUALITY OF LIFE(QOL) DURING CHEMOTHERAPY.....	352
<i>Xiaoyong Lin, Jian Li, Jianke Pan, Jun Liu, Da Guo</i>	
STUDY ON THE LAW OF ANCIENT HERBS IN THE TREATMENT OF OSTEOARTHRITIS	355
<i>Binshan Zhang, Jian Li, Xuwei Cao, Jianke Pan, Da Guo</i>	
TREATING NON-INFECTIOUS FEVER AFTER ORTHOPEDIC SURGERY BY NOURISHING YIN: AN INSPIRATION FROM SYSTEMATIZED IDENTIFICATION OF WARM DISEASES	358
<i>Zhichao Tan, Da Guo, Lufeng Huang, Xuwei Cao, Jun Liu</i>	
DISCUSSION ON THE IMPROVEMENT OF THE ARTERIOVENOUS FISTULA SURGEON'S MICROLOGICAL TECHNIQUE	362
<i>Kun Bao, Han-Guo Peng, Pei-Ling Su</i>	
RANDOMIZED CONTROLLED TRIALS OF ABDOMINAL ACUPUNCTURE (1992–2012): AN ASSESSMENT OF REPORTING QUALITY WITH A CONSORT- AND STRICTA-BASED INSTRUMENT	365
<i>Shuo Jiang, Ping Zhong, Qiuping Huang, Qian Wang, Dejian Lu, Bin Huang , Wenbin Fu</i>	
THE MAKING AND EVALUATING OF ANIMAL MODELS OF OBSESSIVE-COMPULSIVE DISORDER	371
<i>Zhi-Qi Fan, Qian Wu, Fu-Ming Li, Yu Chen, Ni-Peng Lin</i>	
CLINICAL RESEARCH PROGRESS OF TREATMENT OVER TOURETTE SYNDROME WITH ACUP-MOX THERAPY.....	375
<i>Qian Wu, Fuming Li, Wenbin Fu</i>	
CLINICAL PRACTICE AND RESEARCH SITUATION OF ACUPUNCTURE IN CHINA AN OVERVIEW REPORT OF 2012 PEARL RIVER FORUM.....	379
<i>Xiaohong Xu, Zhe Li, Xiaoling Xu, Wenbin Fu</i>	
EFFECTS OF EMOTIONAL NURSING CARE COOPERATED WITH ACUPUNCTURE POINTS MASSAGE FOR POST-STROKE PATIENTS WITH INSOMNIA	383
<i>Qinghui Bao, Hui Liao, Li Fan, Hui Xiao, Jialin Zhu</i>	

EFFECT OF ACUPUNCTURE ON THE BLOOD GLUCOSE AND INSULIN IN THE OBESE RATS.....	386
<i>You Luo, Li Fan, Guibao Huang, Murong Liang, Jialin Zhu</i>	
CLINICAL OBSERVATION OF THE HEART-GALLBLADDER ACUPUNCTURE TREATMENT IN THE BLOOD STASIS TYPE LUMBAR MUSCLE STRAIN	389
<i>Tao Yu, Kun Bao, Changcai Xie, Jian Sun, Li Jiang, Wenbin Fu</i>	
CLINIC EFFECT OF TONGGUAN CAPSULE FOR CORONARY HEART DISEASE: A META-ANALYSIS.....	392
<i>Guang Yang, Jianfeng Zhuo, Jiang Li, Jun Zhang, Minzhou Zhang</i>	
DEEP LEARNING FOR ACUPUNCTURE POINT SELECTION PATTERNS BASED ON VETERAN DOCTOR EXPERIENCE OF CHINESE MEDICINE.....	396
<i>Zhaohui Liang, Gang Zhang, Ziping Li, Jian Yin, Wenbin Fu</i>	
PROF. LIU JINWEN’S EXPERIENCE ON TREATING KNEE OSTEOARTHRITIS	402
<i>Jian Li, Da Guo, Liu Jinwen, Jianke Pan, Lufeng Huang, Jun Liu</i>	
RESEARCH ON OPTIMAL TRADITIONAL CHINESE MEDICINE TREATMENT OF KNEE OSTARTHRTIS WITH DATA MINING ALGORITHMS	406
<i>Da Guo, Jian Li, Gang Zhang, Weixiang Lu, Shaojian Xu</i>	
THE IMMEDIATE EFFECTS OF CHINESE BONE-SETTING IN PATIENTS WITH ACUTE ANKLE SPRAIN	410
<i>Qiang Tian, Kiulam Chung, Rusong Guo, Zhenbao Li, Shan Wu</i>	
CLINICAL RESEARCH ON RULE OF ACUPOINT HEAT-SENSITIZATION WITHIN PATIENTS SUFFER BELL’S PALSYP	413
<i>Qingsheng Yang, Zhilin Gu, Zhenhua Xu, Quanxin Chen</i>	
EVALUATION OF HERBAL CHROMATOGRAPHIC FINGERPRINT IDENTIFICATION SYSTEMS	418
<i>Hao Chen, Josiah Poon, Simon Poon, Daniel Sze</i>	
A CLINICAL RESEARCH ABOUT “MOXIBUSTION CAN BE USED FOR HEAT SYNDROME” IN BELL’S PALSYP.....	424
<i>Zhenhua Xu, Zhilin Gu, Qingsheng Yang, Quanxin Chen</i>	
A RANDOMIZED CONTROLLED STUDY OF EMOTION AND QUALITY OF LIFE ON MILD TO MODERATE INSOMNIA INTERVENED BY CHINESE MEDICINE IN INTEGRATED PROGRAM.....	428
<i>Yan Li, Biyun Xu, Peng Liu, Aihua Ou, Yan Xu, Biyang Ou, Ruiyu Xu, Zhaozhang Wei</i>	
CLINICAL CURATIVE EFFECT OF NEEDLE SCALPEL FOR TRAUMATIC ANKYLOSIS	435
<i>Benjie Qi, Qingfeng Luo, Mingzhi Wan</i>	
A NOVEL ACUPUNCTURE FOR KILLING LUMBAGO IMMEDIATE EFFECTS OF BALANCING ACUPUNCTURE FOR ACUTE LUMBAR DISC HERNIATION	437
<i>Xiaohong Xu, Shudong Chen, Xiaoling Xu</i>	
MOXIBUSTION AT DA-ZHUI ACUPOINT FOR SENSORINEURAL TINNITUS WITH THE PATTERN ABOUT DEFICIENCY OF QI-AND-BLOOD: A STUDY PROTOCOL FOR CLINICAL TRIAL	441
<i>Ziping Li, Yun Zhang, Lingfeng Zeng, Zhaohui Liang, Liwei Yin, Wenbin Fu</i>	
THE DEVELOPMENT OF CHEN’S FLYING NEEDLE BASED ON THE TRADITIONAL CHINESE MEDICINE: A NEEDLE-INSERTING TECHNIQUE CREATED BY A DISTINGUISHED VETERAN DOCTOR OF TCM.....	444
<i>Ziping Li, Lingfeng Zeng, Zhaohui Liang, Yongchao Zhang, Quanxin Chen, Wenbin Fu</i>	
APPLICATION OF DATA MINING TO ZHENG STUDIES OF CHINESE MEDICINE BASED ON CER	448
<i>Ye-Feng Cai, Yue Zhang, Zhao-Hui Liang</i>	
ANALYSIS ON THE MEDICATION RULE FROM THE CONTEMPORARY FAMOUS EXPERTS OF TCM IN TREATMENT OF CHRONIC RENAL FAILURE	452
<i>Wei Mao, ??peng Xu, Chuang Li, Fengzhen Ye1</i>	
THE EFFECT OF SERUM CONTAINING TAO HONG SI WU DECOCTION ON MACROPHAGES IN STEROID-INDUCED OSTEONECROSIS OF FEMORAL HEAD.....	455
<i>Peng Chen, Bin Fang, Wei He, Yong Li</i>	
CLINICAL EFFECT STUDY ON TREATMENT OF POST CEREBRAL INFARCTION DEPRESSION BY EIGHT METHODS OF INTELLIGENT TURTLE.....	459
<i>Li Fan, You Luo, Dejian Lu, Minmin Wang, Hong Zhang, Weixiang Xie, Yujie Li</i>	
THE EXPERIMENTAL INTRODUCTION OF PROFESSOR FU’S THREE-STEP THERAPY ON GOUTY ARTHRITIS	463
<i>Changcai Xie, Nipeng Lin, Jiaxin Zhou, Zhiqi Fan, Wenbin Fu</i>	

THE DEVELOPMENT FOR ENDOMETRIOSIS WITH THE PATTERN OF KIDNEY-DEFICIENCY AND BLOOD-STASIS BASED ON ANIMAL MODEL:A TRIAL COMBINING DISEASE AND SYNDROME	466
<i>Lixing Cao, Yanxin Chen, Xiaodan Li, Qiuxia Chen</i>	
THE ASSESSMENT ON INFLUENCING FACTORS FOR POSTOPERATIVE RECOVERY OF GASTROINTESTINAL FUNCTION BASED ON THE GYNECOLOGICAL ABDOMINAL SURGERY.....	472
<i>Qingqing Zhou, Lixing Cao, Danting Wen, Zhiqiang Chen</i>	
THE MECHANICAL DISCUSSION OF EFFECT OF MUSCLE MERIDIAN ON THE TREATMENT OF ARTHRALGIA SYNDROME.....	477
<i>Wei Song, Weifeng Sun, Zhihuang Chen, Liu Jian</i>	
MINING THE ASSOCIATIONS BETWEEN PHARMIC QUALITY AND INGREDIENTS OF TRADITIONAL CHINESE MEDICINES.....	480
<i>Xia Wu, Hui-Jin Wang, Guo-Ming Chen, Wei-Heng Zui, Shun Long</i>	
THE ANALYSIS OF SURFACE ELECTROMYOGRAPHIC SIGNAL CHARACTERISTICS OF HUMAN ARM MUSCLE FUNCTION STATE BASED ON THE THEORY OF CHINESE MEDICINE	486
<i>Ling Fan, Yao Xiao, Wenbin Fu, Ziping Li, Zhaohui Liang, Qing He</i>	
AN EMPIRICAL STUDY ON KNEE ARTHRITIS REMEDIES	491
<i>Shun Long, Guo-Ming Chen, Wei-Heng Zhu, Wen-Juan Shi</i>	
AN INFORMATION-THEORETIC NEURAL MODEL BASED ON CONCEPTS IN CHINESE MEDICINE	496
<i>Stefan Jaeger</i>	
PROFESSOR WENBIN FU'S EXPERIENCE IN TREATING TOURETTE SYNDROME ON THE THEORY OF REGULATING SPIRIT	503
<i>Dejian Lu, Fuming Li, Wenbin Fu</i>	
GIFTS FROM CHINESE MEDICINE FOR DIABETIC NEPHROPATHY: ANCIENT FORMULAS IN MODERN TIMES.....	507
<i>Lei Zhang, Wei Mao, Yin Li, Guobin Su, Xusheng Liu</i>	
ABDOMINAL ACUPUNCTURE FOR BI SYNDROME OF CASINO WORKERS IN MACAU: A RANDOMIZED CONTROLLED TRIAL	511
<i>Yu Kui, Jian-Qiao Fang, Li Fang, Ping-Wen Li</i>	
THERAPEUTIC EFFECTIVENESS EVALUATION ON SHISHI MANIPULATION FOR KNEE OSTEOARTHRITIS	520
<i>Chongli Deng, Jian Li, Xuwei Cao, Jun Liu, Tao Yu, Da Guo</i>	
PATHWAY CURATION: APPLICATION OF TEXT-MINING TOOLS EGIFT AND RLIMS-P.....	523
<i>Carl J Schmidt, Liang Sun, Cecilia N. Arighi, Keith Decker, K. Vijay-Shanker, Manabu Torii, Catalina O. Tudor</i>	
CONNECTING CLUSTERS OF PATIENT TO DRUG RESPONSES OF CELL LINES TO SUGGEST PERSONALIZED THERAPEUTICS FOR BREAST CANCER.....	529
<i>Simon Gordonov, Avi Ma'Ayan</i>	
USING EXPRESSION DATA TO HELP PATHWAY CURATION	535
<i>Keith Decker, Preeti Anday, Liang Sun, Carl Schmidt</i>	
SPATIAL INDEX AND VISUALIZATION OF PROTEIN STRUCTURE.....	540
<i>Hui Li, Chunmei Liu, Legand Burge, William Southerland</i>	
PREDICTING PROTEIN-PROTEIN INTERACTIONS USING FULL BAYESIAN NETWORK	544
<i>Hui Li, Chunmei Liu, Legand Burge, William Southerland</i>	
IDENTIFICATION AND ANALYSIS OF GENE CLUSTERS IN BIOLOGICAL DATA.....	551
<i>Liliana Marcela Olarte Mesa, Luis Fernando Nino Vasquez, Liliana Lopez-Kleine</i>	
ENRICHING MIRNA BINDING SITE SPECIFICITY WITH SEQUENCE PROFILE BASED FILTERING OF 3'- UTR REGION OF MRNA.....	558
<i>Jasjit K. Banwait, Hesham Ali, Dhundy K. Bastola</i>	
A NETWORK AND FUNCTIONAL INVESTIGATION OF ILLICIT DRUGS AND THEIR TARGETS.....	564
<i>Ravi V. Atreya, Jingchun Sun, Zhongming Zhao</i>	
CONSTRAINT-DRIVEN OPTIMIZATION OF PLANT DEFENSE MODEL PARAMETERS.....	570
<i>Dragana Miljkovic, Matjaz Depolli, Igor Mozetic, Marko Petek, Kristina Gruden</i>	
PREDICTION OF ANTIMICROBIAL ACTIVITY OF PEPTIDES USING RELATIONAL MACHINE LEARNING	575
<i>Andrea Szaboova, Ondrej Kuzelka, Filip Zelezny</i>	
IDENTIFYING FUNCTIONAL MODULES IN TISSUE SPECIFIC PROTEIN INTERACTION NETWORK	581
<i>Gang Chen, Jianxin Wang</i>	

A HYBRID APPROACH OF SUPPORT VECTOR MACHINES WITH LOGISTIC REGRESSION FOR -TURN PREDICTION	587
<i>Murtada Khalafallah Elbashir, Wang Jianxin, Fangxiang Wu</i>	
COMBINING LABELED AND UNLABELED DATA FOR BIOMEDICAL EVENT EXTRACTION	594
<i>Jian Wang, Qian Xu, Hongfei Lin, Zhihao Yang, Yanpeng Li</i>	
A FUZZY CLUSTER-BASED ALGORITHM FOR PEPTIDE IDENTIFICATION	602
<i>Xijun Liang, Zhonghang Xia, Xinnan Niu, Andrew J. Link, Liping Pang, Fangxiang Wu, Hongwei Zhang</i>	
EVALUATION OF NORMALIZATION METHODS FOR ANALYSIS OF LC-MS DATA	610
<i>Mohammad R. Nezami Ranjbar, Yi Zhao, Mahlet G. Tadesse, Yue Wang, Habtom W. Resson</i>	
AN EFFICIENT DYNAMIC PROGRAMMING ALGORITHM FOR PHOSPHORYLATION SITE ASSIGNMENT OF LARGE-SCALE MASS SPECTROMETRY DATA	618
<i>Fahad Saeed, Trairak Pisitkun, Jason D. Hoffert, Guanghui Wang, Marjan Gucek, Mark A. Knepper</i>	
A SYNTACTIC RULE-BASED METHOD FOR AUTOMATIC PATHWAY INFORMATION EXTRACTION	626
<i>Yanhua Wang, Zhihao Yang, Hongfei Lin, Yanpeng Li</i>	
EFFECTIVELY PREDICTING PROTEIN FUNCTIONS BY COLLECTIVE CLASSIFICATION — AN EXTENDED ABSTRACT	634
<i>Wei Xiong, Hui Liu, Jihong Guan, Shuigeng Zhou</i>	
CLASSIFYING PROTEIN COMPLEXES FROM CANDIDATE SUBGRAPHS USING FUZZY MACHINE LEARNING MODEL	640
<i>Bo Xu, Hongfei Lin, Zhihao Yang, Kavishwar B. Waghlikar, Hongfang Liu</i>	
A STATISTICAL APPROACH TO PEPTIDE IDENTIFICATION FROM CLUSTERED TANDEM MASS SPECTROMETRY DATA	648
<i>Soyoung Ryu, David R. Goodlett, William S. Noble, Vladimir N. Minin</i>	
MANAGING DATA PROVENANCE IN GENOME PROJECT WORKFLOWS	654
<i>Renato De Paula, Maristela T. Holanda, Sérgio Lifschitz</i>	
A NOVEL QUASI-ALIGNMENT-BASED METHOD FOR DISCOVERING CONSERVED REGIONS IN GENETIC SEQUENCES	662
<i>Anurag Nagar, Michael Hahsler</i>	
BAMCHOP: A BIOINFORMATICS UTILITY TO SUMMARIZE AND VISUALIZE EXOME AND OTHER TYPES OF TARGETED RESEQUENCING DATA	670
<i>Zhe Zhang, Jeremy Leipzig, Ariella Sasson, Juan Carlos Perin, Michael Xie</i>	
IDENTIFICATION OF TRANSPOSABLE ELEMENTS OF THE GIANT PANDA (AILUROPODA MELANOLEUCA) GENOME	674
<i>Avindra Fernando, Jun Huan, Justin P. Blumenstiel, Jin Lin, Xue-Wen Chen, Bo Luo</i>	
ON THE REPETITIVE COLLECTION INDEXING PROBLEM	682
<i>Ali Alatabbi, Carl Barton, Costas S. Iliopoulos</i>	
LIBGAPMIS: AN ULTRAFast LIBRARY FOR SHORT-READ SINGLE-GAP ALIGNMENT	688
<i>Nikolaos Alachiotis, Simon Berger, Solon P. Pissis, Alexandros Stamatakis</i>	
A META-GENOME SEQUENCING AND ASSEMBLY PREPROCESSING ALGORITHM INSPIRED BY RESTRICTION SITE BASE COMPOSITION	696
<i>Oliver Bonham-Carter, Hesham Ali, Dhundy Bastola</i>	
AN EFFICIENT OVERLAP GRAPH COARSENING APPROACH FOR MODELING SHORT READS	704
<i>Julia Warnke, Hesham H. Ali</i>	
THE EFFECT OF HUMAN GENOME ANNOTATION COMPLEXITY ON RNA-SEQ GENE EXPRESSION QUANTIFICATION	712
<i>Po-Yen Wu, John H. Phan, May D. Wang</i>	
READ-MAPPING USING PERSONALIZED DIPLOID REFERENCE GENOME FOR RNA SEQUENCING DATA REDUCED BIAS FOR DETECTING ALLELE-SPECIFIC EXPRESSION	718
<i>Shuai Yuan, Zhaohui Qin</i>	
EXTRACTING VOLUMETRIC INFORMATION FROM STANDARD TWO-DIMENSIONAL RADIOLOGICAL ANNOTATIONS WITHIN THE CLINICAL WORKFLOW	725
<i>Sharmili Roy, Michael S. Brown, George L. Shih</i>	
DETECTING STAIRS AND PEDESTRIAN CROSSWALKS FOR THE BLIND BY RGBD CAMERA	732
<i>Shuihua Wang, Yingli Tian</i>	
AN ONTOLOGY-BASED MICRORNA KNOWLEDGE SHARING AND ACQUISITION FRAMEWORK	740
<i>Jingshan Huang, Xingyu Lu, Dejing Dou, William T. Gerthoffer, Jiangbo Dang, Judith A. Blake, Ming Tan</i>	

MODEL-BASED DESIGN OF A WIRELESS TELEMETRY SYSTEM AND QOS ASSESSMENT USING AADL	748
<i>Kyungtae Kang, Min-Young Nam, Jaemyoun Lee, Juyoung Park, Homin Yoo, Lui Sha</i>	
GRAPH BASED UNSUPERVISED FEATURE SELECTION FOR MICROARRAY DATA	750
<i>Tripti Swarnkar, Pabitra Mitra</i>	
DIMENSIONALITY REDUCTION TO IMPROVE CONTENT-BASED IMAGE RETRIEVAL A CLUSTERING APPROACH	752
<i>Francisco R. Pirolla, Marilde T. P. Santos, Joaquim C. Felipe, Marcela X. Ribeiro</i>	
ANALYSIS OF AN ENSEMBLE ALGORITHM FOR CLUSTERING CANCER DATA	754
<i>Dengyuan Wu, Li Sheng, Eric Xu, Kai Xing, Dechang Chen</i>	
A COMPARISON BETWEEN HIERARCHICAL CLUSTERING AND COMMUNITY DETECTION METHOD IN THE COLLECTION OF GENE TARGETS FOR MOLECULAR IDENTIFICATION OF PATHOGENIC FUNGI	756
<i>Ishwor Thapa, Sanjukta Bhowmick, Dhundy R Bastola</i>	
ANALYSIS OF QUESTIONNAIRE FOR TRADITIONAL MEDICAL AND DEVELOP DECISION SUPPORT SYSTEM	762
<i>Kotoe Katayama, Seiya Imoto, Kenji Watanabe, Rui Ymaguchi, Keiko Matsuura, Satoru Miyano</i>	
COMPUTER VISION-BASED MATHEMATICS LEARNING ENHANCEMENT FOR CHILDREN WITH VISUAL IMPAIRMENTS	764
<i>Chenyang Zhang, Mohsin Shabbir, Despina Stylianou, Yingli Tian</i>	
FREQUENCY TRACKING OF RESONANT-LIKE SOUNDS FROM AUDIO RECORDINGS OF ARTERIO-VEINUS FISTULA STENOSIS	771
<i>Pablo Vasquez Obando, Pablo Vasquez Obando, Bengt Mandersson</i>	
MAPPING THE FIELD OF BIOINFORMATICS WITH A CONTENT AND CO-AUTHORSHIP ANALYSIS	774
<i>Min Song, Christopher C. Yang, Xuning Tang, Wook-Shin Han</i>	
A SECURITY FRAMEWORK FOR XML SCHEMAS AND DOCUMENTS FOR HEALTHCARE	782
<i>Alberto De La Rosa Alagarin, Solomon Berhe, Jaime A. Pavlich-Mariscal</i>	
CLINICAL CODING SUPPORT BASED ON STRUCTURED DATA STORED IN ELECTRONIC HEALTH RECORDS	790
<i>Jose C. Ferrao, Monica D. Oliveira, Filipe Janela, Henrique M. G. Martins</i>	
A PROPOSED STAR SCHEMA AND EXTRACTION PROCESS TO ENHANCE THE COLLECTION OF CONTEXTUAL & SEMANTIC INFORMATION FOR CLINICAL RESEARCH DATA WAREHOUSES	798
<i>Michael Blechner, Rishi Kanth Saripalle, Steven A Demurjian</i>	
SMARTSYNC: TOWARDS PATIENT-DRIVEN MEDICATION RECONCILIATION	806
<i>T. B. Ziminski, A. De La Rosa Alagarin, E. Jackson</i>	
INTRACAVITARY SIGNAL ANALYSIS FOR ATRIAL FIBRILLATION PREDICTION	814
<i>P. Vizza, G. Tradigo, A. Curcio, C. Indolfi, P. Veltri</i>	
CAPTURING DISEASE-SYMPTOM RELATIONS USING HIGHER-ORDER CO-OCCURRENCE ALGORITHMS	816
<i>Vivek Datla, King-Ip Lin, Max Louwerse</i>	
A CONTEXT AND KNOWLEDGE BASED HEALTH EVENT STORAGE FOR EFFICIENT CLINICAL INFORMATION RETRIEVAL	822
<i>Soubhik Paul, Sandip Bhaumik</i>	
INTEGRATED ANALYSIS OF HELA CELL MICRORNAS' MICROARRAY DATA AND ANTI-CANCER PATHWAY PREDICTION OF BETA-SITOSTEROL	824
<i>Xijia Fei, Dachuang Liu, Cuihong Dai, Aiju Hou, Jianzhong Li, Dechang Xu</i>	
FEATURE SELECTIONS USING ADABOOST: APPLICATION IN GENE-GENE INTERACTION DETECTION	831
<i>Amin Assareh, L. Gwenn Volkert, Jing Li</i>	
GXG-VIZTOOL: A PROGRAM FOR VISUALIZING GENE-GENE INTERACTIONS IN GENETIC ASSOCIATION ANALYSIS	838
<i>Kyunga Kim, Min-Seok Kwon, Sung Young Lee, Junghyun Namkung, Ming D. Li, Taesung Park</i>	
A DATA AGGREGATION FRAMEWORK FOR CANCER SUBTYPE DISCOVERY	844
<i>S. N. Nagabhushan, Taejin Ahn, M. R. Srikanth, Taesung Park, Ajit S. Bopardikar</i>	
IDENTIFYING DIFFERENTIAL EXPRESSION FOR RNA-SEQ DATA WITH NO REPLICATION	847
<i>Jungsoo Gim, Taesung Park</i>	
JOINT SELECTION OF SNPS FOR IMPROVING PREDICTION IN GENOME-WIDE ASSOCIATION STUDIES	852
<i>Seo-Jin Bang, Yong-Gang Kim, Taesung Park</i>	

PREDICTIVE MODELING OF NANOMATERIAL BIOLOGICAL EFFECTS	859
<i>Xiong Liu, Kaizhi Tang, Stacey Harper, Bryan Harper, Jeffery A. Steevens</i>	
ROUGH SETS AND SUPPORT VECTOR MACHINE FOR SELECTING DIFFERENTIALLY EXPRESSED MIRNAS	864
<i>Sushmita Paul, Pradipta Maji</i>	
PREDICTING SURVIVAL BY CANCER PATHWAY GENE EXPRESSION PROFILES IN THE TCGA	872
<i>Hyunsoo Kim, Markus Bredel</i>	
GROUPING OF COLLOIDAL METAL NANOPARTICLES BASED ON THEIR MEASURABLE CHARACTERISTICS: A PROPOSED FRAMEWORK	876
<i>Christie M. Sayes, Ivan V. Ivanov</i>	
THE NANOMATERIAL REGISTRY OPPORTUNITIES AND CHALLENGES IN INFORMATICS	884
<i>Michele L. Ostraat, Karmann C. Mills, Kimberly A. Guzan</i>	
ANNOTATING THE STRUCTURE AND COMPONENTS OF A NANOPARTICLE FORMULATION USING COMPUTABLE STRING EXPRESSIONS	889
<i>Dennis G. Thomas, Satish Chikkagoudar, Alan R. Chappell, Nathan A. Baker</i>	
NEIMINER: A MODEL DRIVEN DATA MINING SYSTEM FOR STUDYING ENVIRONMENTAL IMPACT OF NANOMATERIALS	895
<i>Kaizhi Tang, Xiong Liu, Stacey Harper, Jeffery A. Steevens, Roger Xu</i>	
COMBINED FORMULATION OF DOXORUBICIN-ARG-GLY-ASP (RGD) AND MODIFIED PEGYLATED PLGA-ENCAPSULATED NANOCARRIER IMPROVES ANTI-TUMOR ACTIVITY	903
<i>Stanley Moffatt, Richard Cristiano, Rose Boyle</i>	
NANOMATERIAL REGISTRY - A RESOURCE FOR BIOLOGICAL AND ENVIRONMENTAL INTERACTIONS OF NANOMATERIALS	910
<i>Xiao-Zhong James Luo</i>	
MONOTONICITY FUNCTIONAL FOR A TRANSIENT MATHEMATICAL MODEL OF OXYGEN DEPLETION DURING PHOTODYNAMIC THERAPY	914
<i>Ioannis Gkigkitzis</i>	
PHYLOGENETIC ANALYSIS OF SOME LEGUMINOUS TREES USING CLUSTALW2 BIOINFORMATICS TOOL	917
<i>Sagar Patel, Kalpesh Anjaria</i>	
THE E!DAL JAVA-API: STORE, SHARE AND CITE PRIMARY DATA IN LIFE SCIENCES	927
<i>Daniel Arend, Matthias Lange, Christian Colmsee, Steffen Flemming, Jinbo Chen, Uwe Scholz</i>	
PACSY DATABASE, A RELATIONAL DATABASE MANAGEMENT SYSTEM FOR PROTEIN STRUCTURE AND NUCLEAR MAGNETIC RESONANCE CHEMICAL SHIFT ANALYSIS	930
<i>Woonghee Lee, John L. Markley</i>	
AN EVOLUTIONARY FRAMEWORK TO SAMPLE NEAR-NATIVE PROTEIN CONFORMATIONS	933
<i>Sameh Saleh, Brian Olson, Amarda Shehu</i>	
JOINT CLUSTERING AND ALIGNMENT FOR NUCLEOSOME OCCUPANCY ANALYSIS	934
<i>Teng L. Liu, Yu Zhang, Jonathan H. Dennis</i>	
QUANTITATIVE MODELS FOR STATISTICAL NUCLEOSOME OCCUPANCY PREDICTION	937
<i>Yu Zhang, Xiuwen Liu, Jonathan H. Dennis</i>	
COMBINING CONSERVATION AND RIGIDITY METHODS TO DETECT CRITICAL RESIDUES IN PROTEINS	940
<i>Bahar Akbal-Delibas, Filip Jagodzinski, Nurit Haspel</i>	
AN EVOLUTIONARY-GUIDED ITERATIVE REFINEMENT APPROACH FOR PROTEIN MULTIMERS	941
<i>Bahar Akbal-Delibas, Nurit Haspel</i>	
PHYSICO-CHEMICAL FEATURES FOR RECOGNITION OF ANTIMICROBIAL PEPTIDES	942
<i>Daniel Veltri, Amarda Shehu</i>	
ONE-BASE-PAIR LOCALIZATION OF NUCLEOSOMES	943
<i>Xiuwen Liu, Yu Zhang, Teng L. Liu, Jonathan H. Dennis</i>	
JUMPING LOW, JUMPING HIGH: CONTROLLING HOPPING IN THE PROTEIN ENERGY SURFACE	946
<i>Brian Olson, Amarda Shehu</i>	
SAMPLING LOW-ENERGY PROTEIN-PROTEIN CONFIGURATIONS WITH BASIN HOPPING	947
<i>Irina Hashmi, Amarda Shehu</i>	
PREDICTING HEALTH PATTERNS USING SENSOR SEQUENCE SIMILARITY AND NLP	948
<i>Zahra Hajihashemi, Mihail Popescu</i>	
PYROPRINTING SENSITIVITY ANALYSIS ON THE GPU	951
<i>Douglas Brandt, Aldrin Montana, Bob Somers, Michael Black, Anya Goodman, Chris Kitts</i>	

ASSEMBLABLE PROJECT FORMULATION FOR DRUG TARGET DISCOVERY	954
<i>Byung-Cheol Kim, Sunghoon Kim</i>	
IN SILICO ANALYSES OF 24 HUMAN IMPRINTED GENES ASSOCIATED TO DIABESIN TRIAD (DIABETES, OBESITY AND INFLAMMATION) IN SEARCH FOR A POTENTIAL DIABESIN RISK HAPLOTYPE.....	956
<i>Ana Paula M. Bezerra, Samara C. Silva-Santiago, Elton Jose R. Vasconcelos, Monica M. Silva</i>	
EPSMART: EPILEPTIC SEIZURE MONITORING WITH ALERTS IN REAL TIME - A TABLET-BASED ANDROID APPLICATION FOR A REAL-TIME MULTI-MODAL SEIZURE DETECTION SYSTEM	959
<i>Sai R. Gouravajhala, David Wang, Lunal Khuon, Forrest S. Bao</i>	
MICROARRAY THERAPEUTIC INDEX: A NOVEL METHOD TO COMBINE MOLECULAR AND CLINICAL DATA FROM CANCER PATIENTS.....	962
<i>Sungchul Ji, Larry Cheng, Weronika Szafran, Richard Carmona</i>	
CLASSIFICATION AND CLUSTERING IN METAGENOMICS WITH UNIFIED DATA MANAGEMENT AND COMPUTATIONAL FRAMEWORK	965
<i>Zeehasham Rasheed, Huzeefa Rangwala, Patrick Gillevet</i>	
IDENTIFYING PROTEIN BINDING FUNCTIONALITY OF PROTEIN FAMILY SEQUENCES BY ALIGNED PATTERN CLUSTERS	968
<i>En-Shiun Annie Lee, Andrew K. C. Wong</i>	
MAPPING CONFORMATIONAL PATHWAYS BETWEEN KNOWN FUNCTIONAL PROTEIN STATES.....	971
<i>Kevin Molloy, Amarda Shehu</i>	
A USABILITY STUDY OF THE KOMEN VIRTUAL TISSUE BANK	972
<i>Eric Juhn, John A. Springer</i>	
MUTATION ANALYSIS OF DISEASE CAUSING PROTEINS.....	975
<i>Ananda Mohan Mondal, Jianjun Hu</i>	
A TREE-BASED SEARCH TO BIAS SAMPLING OF PROTEIN DECOY CONFORMATIONS.....	978
<i>Kevin Molloy, Amarda Shehu</i>	
Author Index	