Tentative Technical Program (8-26-00)

Congress Banquet
MON 18:00-22:00, Grand Ballroom

PS-1 Biomedical Engineering in the New Millennium
Prof. Dov Jaron
President of International Federation for Medical & Biological Engineering
Drexel University, USA.

Plenary Session
TUE 8:00-12:00, Grand Ballroom

PS-2 Complex Biological Systems
Prof. Banu Onaral
Immediate-Past President of IEEE-EMBS
Drexel University, USA

PS-3 Image and Knowledge Engineering in Telemedicine
Prof. Christian Roux
President-Elect of IEEE-EMBS
Ecole Nationale Superieure des Telecommunications de, France

PS-4 Issues to Consider When Studying (or Modeling) the Auditory System
Prof. Herbert F. Voigt
President, Biomedical Engineering Society
Boston University, USA

PS-5 Wavelet Analysis of Respiratory Related Evoked Responses
Prof. Metin Akay
Editor-in-Chief of IEEE-EMBS Book Series
Dartmouth College, USA

PS-6 System Identification and Modeling Approaches to Understanding the Motor System
Prof. Robert Kearney
Past-President of IEEE-EMBS ('98 President)
McGill University, Canada

PS-7 New Developments in the Analysis of Spatial Patterns in Human Electroencephalograms
Prof. Walter J. Freeman
University of California at Berkeley, USA

Minisymposia

MS-1: Functional Brain Imaging I
TUE 13:15-14:45, Cinema Five
Chair: Bin He, University of Illinois, USA
Co-Chair: Toshimitsu Musha, Brain Functions Laboratory, Japan

MS-1-I-1 High-resolution Brain Electric Source Imaging (9)
Prof. B He, University of Illinois, USA

MS-1-I-2 The Alpha Dipolarity as a Measure of Neuronal Defects in Alzheimer's Disease and Its Clinical Examination (610)
Prof. T Musha, Brain Functions Laboratory, Japan

MS-1-I-3 Which Area (MT/V5?) of Human Cortex Mediates Long-range Apparent Movement? A Mapping Study Using fMRI (888)
Prof. L Chen, University of Science and Technology of China, China

MS-1: Functional Brain Imaging II
WED 9:50-11:20, Cinema Five
Chair: Bin He, University of Illinois, USA

MS-1-II-1 Human Lateral Electrocorticographic Coherence Recorded During Seizures (722)
Prof. VL Towle, University of Chicago, USA

MS-1-II-2 Dynamic Cortical Activation in Mental Rotation and Short-Term Visual Memory Processing Revealed by Neuromagnetic Imaging Techniques (85)
Prof. U Shoogo, University of Tokyo, Japan

MS-1-II-3 Vector Entropy Optimization based MEG Imaging (906)
Prof. Y Wang, Zhejing University, China

MS-2: Advanced Methods of Consciousness Studies
TUE 15:45-17:15, Cinema Five
Chair: Fanji Gu, Fudan University, China

MS-2-1 Intention and consciousness through mesoscopic brain dynamics (887)
Prof. WJ Freeman, University of California at Berkeley, USA

MS-2-2 Can Computational Methods Be Helpful In Understanding Consciousness? (874)
Prof. H Liljenstrm, Royal Swedish Academy of Sciences, Sweden

MS-2-3 Complexity and Consciousness (518)
Prof. F Gu, Fudan University, China

MS-3: Ultrasonic Imaging
WED 13:00-14:30, Cinema Five
Chair: K. Kirk Shung, Penn State University, USA

MS-3-1 Recent Advances in Ultrasonic Imaging (621)
Prof. KK Shung, Penn State University, USA

MS-3-2 Three-dimensional Ultrasound (877)
Prof. TR Nelson, University of California at San Diego, USA

MS-3-3 Ultrasound Contrast Agents And Nonlinear Imaging (875)
Prof. WT Shi, Thomas Jefferson University, USA

MS-4: Modeling of Bioelectric Activity
WED 15:45-17:15, Cinema Five
Chair: Jiande Chen, University of Texas, USA
Co-Chair: Bin He, University of Illinois, USA

MS-4-1 Mapping and Imaging of Cardiac Electric Activity – A Model Study (912)
Prof. B He, University of Illinois, USA

MS-4-2 Whole-Heart Modeling: Progress, Principles and Application (541)
Prof. D Wei, University Aizu, Japan

MS-4-3 A Combined Electrophysiological and Mechanical Heart Model (594)

Prof. W Lu, Zhejiang University, China

MS-4-4 Modeling, Measurement and Regulation of Gastric Myoelectrical Activity (776)
Prof. J Chen, University of Texas, USA

MS-5: The Brain on Cocaine: Neurobehavioral perspectives from voltammetry, genetic knockouts, and imaging
WED 8:00-9:30, Cinema Five
Chair: George V. Rebec, Indiana University, USA

MS-5-1 Real-Time Assessment of Cocaine-Induced Dopamine Uptake Inhibition in Freely Behaving Rats (576)
Prof. GV Rebec, Indiana University, USA

MS-5-2 Neurotransmitter transporters and cocaine: insights from genetically altered mice(43)
Prof. GW Miller, University of Texas, USA

MS-5-3 Human Cocaine Abuse: A View from fMRI (*)
Prof. R Risinger, Medical College of Wisconsin, USA

MS-6: Independent Component Analysis Approach in Medical Signal Processing
THU 8:00-9:30, Cinema Five
Chair: Shangkai Gao, Tsinghua University, China
Co-Chair: Fusheng Yang, Tsinghua University, China

MS-6-1 Neural Network Approach to Blind Source Separation Using Second Order Statistics (806)
Prof. FHY Chan, University of Hong Kong, Hong Kong

MS-6-2 Several problems in application of ICA (807)
Prof. X Wu, University of Science and Technology of China, China

MS-6-3 Independent Component Analysis and Blind Signal Processing (808)
Prof. X Shi, Shanghai Jiaotong University, China

MS-6-4 Adaptive Independent Component Analysis Algorithms Based on Higher Order Statistics Criterion (820)
Prof. J Liu, Shandong University, China

Theme 1: Biomedical Information Engineering
***Chair**s: YT Zhang (China), J Bai (China), S Laxminarayan (USA)*

1.1 Telemedicine And Health Care Delivery Technologies (Oral)
TUE 13:15-14:45, Shenshi Room
Chair: Jing Bai, Tsinghua University, China
Co-Chair: Martel Sylvain, MIT, USA

1.1.1 Store-and-Forward Telemedicine: Features, Advantages, and Implementing Strategies (601)
David Y,Zhu XW,Wang LN,Kenna JE, Texas Children's Hospital, USA

1.1.2 Networked Electrocardiogram System for Heart Disease Diagnosis and Consultation (637)
Wu DQ, Zhou P,Zhang JQ,Li GP, Shanghai Institute of Technical Physics,
Chinese Academy of Scienses, China

1.1.3 Reducing The Cost, Size, And Power Consumption Of Medical Devices Through Communication And Reconfigurable Computing Techniques (62)
Martel S,Doyle K,Hunter I, Cambridge, MA, USA

1.1.4 Construction and Implementation of Palm Print Recognition Network Infomation System (767)
Zhou YY,Hu WL,Zeng YJ,Liang K, Beijing Polytechnic University, China

1.1.5 A Computer Network Management Information System for Medical Insurance in China (821)
Xiao GZH, Zhejiang University, China

1.1.6 Data Transmission and Netwrork Management in a Telepathology System (734)
Chen XD, Yu L, Lin GH, Zheng ZHY, Chen CHW, Fuzhou University, China

1.2 Teleradiology, Visualization, and PACS (oral)
TUE 15:45-17:15, Shenshi Room
Chair: T.G. Zhuang, Shanghai Jiao-Tong University, China
Co-Chair: Shankar Muthu Krishnan, Nanyang Technical U, Singapore

1.2.1 A Collaborative 3D Volume Visualization Pipeline (504)
Zou QS,Keong KC,Sing NW, Nanyang Technological University, Singapore

1.2.2 A Low-cost Teleradiology System (564)
Lin TY,Chen SP,Duan HL,Tao DCH,Lu WX, Shenzhen, China

1.2.3 Network Infrastructure Design for High Performance Picture Archiving and Communication System (PACS) (654)
Han RL,Zhang JG,Feng J, Shanghai Institute of Technology Physics, China

1.2.4 Design and Implementation of Multi-Media Server in Picture Archiving and Communication System (675)
Zhou ZH,Zhang JG, Shanghai Institute of Technical Physics, Chinese Academy of Sciences, China

1.2.5 Interactive Teleradiology for High Resolution and Large Volume Medical Images (712)
Zhang JG, Shanghai Institute of Technical physics, Chinese Academy of Sciences, China

1.3 Internet-Based Remote Monitoring and Diagnosis (oral)
WED 8:00-9:30, Shenshi Room
Chair: Lun Yu, Fu-Zhou University, China
Co-Chair: Zhen-yu Guo, The George Washington University, USA

1.3.1 Telecardiology Diagnosing Service through World-Wide Web (794)
Ye L,Hu DK, Zhejiang University, China

1.3.2 Interactive Web-Based Genetic Screening Questionnaires: A Comparison Of Asian And American Participants (81)
Neidich J,Sinesky S,Lazarin G,Taswell C, GlobalTeleGeneticsInc, USA

1.3.3 Group-Access Control of E-Medicine Records (534)
Tan EC, Kwoh CK, Nanyang Technological University, Singapore

1.3.4 Three-Dimensional Quantification Of Free Walking Using Three-Axis Accelerometer (47)
Chen WX,Kobayashi T,Asano D,Kaneda M,Teshigawara Y, Soka University, Japan

1.3.5 Medical Image Compression Based on Information Structure (567)
Qiao HY,Luo JH, Shanghai Jiaotong University, China

1.3.6 A HLA Match Program for Kidney Transplantation (616)
Zhou GH, Capital University of Medical Sciences, China

1.4 Heart Models and Simulation I (oral)
WED 9:50-11:20, Shenshi Room
Chair: Toshimitsu Musha, Brain Functions Laboratory, Japan
Co-Chair: Huan-qing Feng, Univ. of Science & Technology of China, China

1.4.1 A Model Investigation of Heart Motion and Its Impact on ECG Forward Problem (666)
Zhan CHA,Feng HQ,Peng H,Chen Q, University of Science & Technology of China, China

1.4.2 The Construction of Three-Dimensional Mechanical Model of Human Left Ventricle (771)

Wu GH,Liu F,Xia L, Zhejiang University, China

1.4.3 Computer Simulation of Cardiovascular System under the Autonomic Nervous System (662)
Li XSH,Yang DCH,Bai J, Tsinghua University, China

1.4.4 The Application Of Whole-heart Electrophysiological Model (26)
Zhu H,Yin BS,Men SR,Hhuang XB, The First Military Medical University, China

1.4.5 A Simulation Study of the Effects on the Body Surface Potentials with an Anisotropic Myocardia Heart Model (833)
Xiao GZH, Zhejiang University, China

1.5 Heart Models and Simulation II (poster)
TUE 14:45-15:45, Grand Ballroom

1.5.1 Study of the Mechanical Effect of Myocardial Infarction on Left Ventricualr Function (772)
Wu GH, Liu F,Lu WX, Zhejiang University, China

1.5.2 A Computer Simulation Study of the Effects on the Body Surface Potentials with a Inhomogenous Torso Model (834)
Xiao GZH, Zhejiang University, China

1.5.3 A Computer Simulation Study of the Effects on the Body Surface Potentials with Different Individual Figures (835)
Xiao GZH, Zhejiang University, China

1.5.4 The Vector Algorithm of Excitation Propagation and Calculation of Dipoles Based on Motional Heart Model (667)
Zhan Cha, Feng HQ, Peng H,Chen Q, University of Science & Technology of China, China

1.5.5 Parallel Algorithm For Calculation Of Cell Dipoles In ECG Simulation (688)
Guo Yonggang, University of Science & Technology of China, China

1.5.6 Environmentally-Adaptive L-System Based Description Of Purkinje Fiber And Its Application In ECG Forward Problem (713)
Chen Q, Peng H,Zhan CHA,Feng HQ, University of Science & Technology of China, China

Theme 2: Biological Signal Detection & Processing
***Chair**s: K Yana (Japan), J Ge (China), N Lovell (Australia)*

2.1 Wavelets/Time-Frequency Analysis I (Oral)
TUE 13:15-14:45, Embassy Room
Chair: Metin Akay, Dartmouth College, USA
Co-Chair: Datian Ye, Tsinghua University, China

2.1.1 ST-T Complex Analysis Using Wavelet Transform: Fiducial Points Detection And Changes Representation (657)
Wang T,Li XY,Feng HQ, University of Science and Technology, China

2.1.2 Wavelet Analysis of Minute Potentials Inside the QRS complex Using Simulated Electrocardiograms of Computer Heart Model (50)
Kaneko R,Wei DM,Saito K,Tsutsumi T, Graduate School of University of Aizu, Japan

2.1.3 Using Wavelet Transform to Detect QRS Endpoint in ECG (57)
Vai MI,Zhou LG, University of Macau Taipa Macau, China

2.1.4 Analysis of the First Heart Sound Using The Matching Pursuit Method (587)
Wang WL,Guo ZHY,Yang J,Zhang YF,Pan JH,Loew M, The George Washington University, USA

2.1.5 Medical Image Progressive Lossless ROI Coding Based Wavelet Transform (743)
Zhang DF,Lin G,Jiang DZ,Yang XH, Xi'an Jiaotong University, China

2.2 Detection and estimation problems in biosignal processing (Oral)
WED 8:00-9:30, Regency Room
Chair: Banu Onaral, Drexel Univ, USA
Co-Chair: T. Kiryu, Niigata Univ, Japan

2.2.1 A New Adaptive Latency Change Estimation Algorithm for Evoked Potentials under Non-Gaussian Noise Condition. (606)
Qiu TSH,Kong X, Northern Illinois University, USA

2.2.2 Detection Of Fetal Heart Rate In Ultrasonic Echo Signals (651)
Nie KB,Fan SHZH,Liu J,Hou CHX, Shangdong University, China

2.2.3 Time Delay Estimation Of Propagating Neural Activity For Multi-Electrode Array Recordings (60)
Tateno T,Jimbo Y, Osaka University, Japan

2.2.4 Removal Of Power Line Interference From EMG. (45)
Mewett DT, Nazeran H,Reynolds KJ, Flinders University, Australia

2.2.5 Improved Spectral Analysis of EEG signals (64)
Palaniappan R,Raveendran P,Nishida S,Saiwaki N, University Malaya, Malaysia

2.3 Chaos and Fractals (Oral)
WED 13:00-14:30, Regency Room
Chair: Bonato Paolo, Boston University, USA
Co-Chair: W. Kinsner, University of Manitoba, Canada

2.3.1 Multifractal Characterization Of Ecg Signals With Denoising (844)
Kinsner W,Huang B,Chen J, University of Manitoba, Canada

2.3.2 Feature Extraction From DNA Sequences By Fractal Analysis (845)
Kinsner W,Zhang H, University of Manitoba, Canada

2.3.3 The Application of Partition Algorithmic Complexity in Processing Nonlinear Biological Signals (701)
Li Y,Zhang H,Tong QY, Zhejiang University, China

2.3.4 Multi-symbol Complexity Measure Of Time Series (672)
Tong SHB,Li YJ,Wang Z,Zhu YSH, Fudan University, China

2.3.5 Analysis Of Interspike Intervals Of A Single Neural Fiber With The Method Of Surrogate Data (915)
Shang YJ,Liu BZH ,Wang SH, Northeast Normal University, China

2.4 Biosignal Interpretation I (Oral)
THU 8:00-9:30, Embassy Room
Chair: Jiguang Ge, Zhejiang University, China
Co-Chair: Shunsuke Sato, Osaka University, Japan

2.4.1 Characteristics Of The High-Frequency Electrocardiogram (818)
Ge JG,Chen H,Xu ZH, Zhejiang University, China

2.4.2 Characteristics of Steady-State Visual Evoked Potential Induced by Multi-Frequency Stimulus (832)
Gao XR,Cheng M,Xu DF,Gao SHK, Tsinghua University, China

2.4.3 The Application Of Nonlinear Autoregressive Models In Bifurcation Analysis (903)
Bagarinao E,Nomura T,Sato S, Osaka University, Japan

2.4.4 Evaluation Of Walking Pattern Using Acceleration Signal (82)
Sekine M,Tamura T,Fujimoto T,Akay M,Fukui Y, Tokyo Denki University,Japan

2.4.5 High Efficiency Pattern Analysis in Holter Scanner (706)

Hong W,Duan HL,Lu WX, Zhejiang University, China

2.4.6 A New Method for Measurement Of Animal Activities (782)
Hsieh CW,Shu HM,Mao CW,Young MS,Li YC, National Cheng Kung University, Taiwan

2.5 Mental and Physical Stress Measurement by way of Biosignal Interpretation (Oral)
THU 9:50-11:20, Diplomat Board Room
Chair: Kazuo Yana, Hosei University, Japan

2.5.1 Evaluation and Monitoring the Accumulated Mental Work Load using Heart Rate Variability (836)
Yanai T,Yamamoto Y,Kishi N,Yana K, Nissan Research Center, Nissan Motor Co., Ltd., Japan

2.5.2 The Sympathetic Nervous System Symptoms As Reactions Against Motion Sickness (694)
Suzuki K, Hosei University, Japan

2.5.3 Estimation of Subjective Ratings of Perceived Exertion from Muscle Activity and Heart Rate During Cycle Ergometer Exercise For Elderly Person Using Artificial Neural Networks (74)
Kiryu T,Shibai K,Sasaki I, Niigata University, Japan

2.5.4 A Time-Frequency Procedure for Assessing Paraspinal Muscle Function during Cyclical Lifting (83)
Bonato P,Boissy P,Ebenbichler G,Roy SH, Boston Unviersity, USA

2.6 Wavelets/Time-Frequency Analysis II (Poster)
TUE 14:45-15:45, Grand Ballroom

2.6.1 The Wavelet Transform Analysis Of Transient Change In R-R Interval Series (510)
Xu A,Peng QY,Huang GJ, Shanghai Tiedao University, China

2.6.2 Phonocardiographic Signal Compression Using the Matching Pursuit Method (28)
Yang J,Guo ZHY,Loew M, Wang W,Durand LG, The George Washington University, USA

2.6.3 Application And Effect Of Contralateral Acoustic Stimulation On Transient Evoked Otoacoustic Emissions (578)
Gong Q, Ye DT,Guo LS,Liu B,Liu C, Tsinghua University, China

2.6.4 Wavelet Adaptive Filter And Its Application To Remove Baseline Wondering In ECG (656)
Wang T, Li XY,Feng HQ, University of Science and Technology, China

2.7 Independent Component Analysis (Poster)
TUE 14:45-15:45, Grand Ballroom

2.7.1 Detection of Electroencephalogram Rhythms in Schizophrenia by Independent Component Analysis and Wavelet Transformation (608)
Wang Y,Lee YJ,Zhu YSH,Wang Z, Shanghai Jiaotong University, China

2.7.2 Independent features extraction from multivariable time series biomedical recordings (586)
Cao JT,Cichocki A, Sophia University,Japan.

2.7.3 Improved Independent Component Theory Based Cardiac Chaotic Information Extraction and Analysis (557)
Zhang HX,Zhu YSH,Xu YH,Wang ZM, Shanghai Jiaotong University, China

2.7.4 Independent Component Analysis in Extracting Characteristic signals in EEG (515)
Chen HF,Zeng M, Yao DZH, University of Electronic Science and Technology of China, China

2.7.5 Blind Extraction of EGG Signals by A Sequential ICA Algorithm (650)
Liu J,Nie KB,Li DZH,He ZHY, Shandong University, China

2.8 Neural Networks/ Fuzzy Logics (poster)
TUE 14:45-15:45, Grand Ballroom

2.8.1 SOM based knowledge discovery in MIT-BIH arrhythmia database (622)

Yang YY, Hou PK, Shi XZH, Shanghai Jiaotong University, China

2.8.2 Study on the Discriminative Analysis of Dynamic Monitoring Esophageal pH based on Genetic Algorithm (605)
Zheng CHX,Yu H,Wang L, Xi'an Jiaotong University, China

2.8.3 ECG Compression Using Partial Resampling And Fuzzy Vector Quantization (655)
Shen Q,Wang T, Anhui University, China

2.8.4 Efficiently Detecting and Classifying the Epileptic Waves by Signal Partition and Fuzzy Clustering (681)
Zhang H, Zeng CHX, Xi'an Jiaotong University, China

2.8.5 Detection Of R Complex In ECG Signals Using Slope Algorithm And Wavelet Transform Algorithm (755)
Nie KB,Han XH, Shangdong University, China

2.9 Biosignal Interpretation II (Poster)
TUE 14:45-15:45, Grand Ballroom

2.9.1 A Study On Effectively Representing The Inhomogeneity Of Ventricular Repolarization Induced By Ischemia (602)
Li CHY,Zhuang JL,Wang LX, Nankai University, China

2.9.2 A New Method Of Diagnosis Of Diabetes Based On Thermograph (796)
Shang ZG,Chen QH,Jiang GT, Tongji University, China

2.9.3 A Method Of The Study On "Common Drive" Phenomenon (862)
Chen X,Yang JH,Lou ZH,Zhong ZH,Liang ZH, University Of Science and Technology Of China, China

2.9.4 Analysis Of Speech Identification Results Of CIS Speech Processor For Cochlear Implants With And Without Tonal Information (652)
Nie KB,Liu J,Hou CHX,Fan SHZH, Shangdong University, China

2.9.5 Application of Mutual Information in Cardiac System (693)
Xu QP,Xu Y,Xu ZH, No. 1 Accessory Hospital of Zhejiang University, China

2.9.6 The New Application In Breath Detection Using Electronic Nose (841)
Gao XSH,Wang P, Zhejiang University, China

2.9.7 2-D Sliding Spectrum Analysis and Application in Biomedical Signal Processing (619)
Chen ZHQ,Gu H,Zhu YSH, Shanghai Jiaotong University, China

2.9.8 Frequency Spectrum Analysis Of EEG During Voluntary/Involuntary Contractions Of The Abductor Digiti Minimi Assisting In Epileptic Seizure Detection. (803)
Pekris J,Cosic I,Lithgow B, Monash University - Clayton, Australia

2.9.9 A Fast Algorithm For The Estimation Of Dynamic ApEn And Its Application In HRV Analysis (509)
Xu A,Peng QY,Huang GJ, Shanghai Tiedao University, China

Theme 3: Medical Imaging & Image Processing

***Chair**s: T Zhuang (China), SM Krishnan (Singapore), VL Towle (USA)*

Session 3.1 X-ray Imaging and CT (oral)
TUE 13:15-14:45, Dangui Building
Chair: Christian Roux, Ecole Nationale Superieure des Telecommunications de, France
Co-Chair: Jianguo Zhang, Chinese Academy of Sciences, China

3.1.1 The Study on Quantitative Assessment of Osteoporosis Based on Texture Analysis of X-ray Images (529)
Yang XH,Zhang DF,Jiang DZ, Xi'an Jiaotong University, China

3.1.2 A Large Area, Multi-Mode, Flat Panel Medical X-Ray Imaging System (754)

Wright MD,Batts M,Boyce S,Colbeth RE,Fong R,Gray K,Harris R,Job I,Mollov I,Nepo B, Partain LD,Pavkovich JM,Seppi EJ,Shapiro E,Taie N,Webb C, Yu J,Zentai GE, Varian Medical Systems, Inc. USA

3.1.3 Automatic Background Recognition and Removal (ABRR) in Multiple Exposures of Computed Radiography Images (673)
Zhuang J,Zhang JG, Shanghai Institute of Technical Physics, China

3.1.4 Correction of Incident Rays Intensity for Fluorescent X-Ray CT Using Synchrotron Radiation (14)
Yuasa T,Takeda T,Hasegawa Y,Yu Q,Zeniya T,Hyodo K,Itai Y,Akatsuka T, Yamagata Univ., Japan

3.1.5 Minimal Detectability Of Contrast Materials In Fluorescent X-Ray Computed Tomography Using Synchrotron Radiation (773)
Yu Q,Takeda T,Yuasa T,Hasegawa Y,Zeniya T,Hyodo K, Itai Y,Akatsuka T, Yamagata University, Japan

Session 3.2 Ultrasound And Optics In Medicine (Oral)
TUE 15:45-17:15, Dangui Building
Chair: Rob Keaney, McGill Univ, Canada
Co-Chair: Siping Chen, Analogic Scientific, China

3.2.1 Computer Simulation And Experiment Study Of A Multi-Element Auto-Focused Ultrasonic Applicator (505)
Wan BK,Chen C, Zhang LX,Zhu X,Ming D, Tianjin Univ., China

3.2.2 Simulation of Limited Diffraction Bessel ultrasonic (859)
Peng H,Zhang ZSH,Wei YM,Feng HQ, University Of Science and Technology Of China, China

3.2.3 Nonlinear Propagation of Shock Wave Pulses in Extracorporeal Shock Wave Lithotripsy (27)
Morita N,Jian XQ,Nakamura O,Okazaki K, Chiba Inst. of Tech., Japan

3.2.4 Lesion Boundary Enhancement Using Threshold Directed Average Sticks (501)
Chen YT, Keong KC,Sing NW, Nanyang Technological University, Singapore

3.2.5 Evaluating the Placental Function during the Gestational Period Using the Fractal Character of Ultrasound Images (733)
Ma X,Liu ZH,Chang C,Wang YY,Wang WQ, Shanghai Obstetrics & Gynecology Hospital, China

Session 3.3 Magnetic Resonance Imaging (oral)
WED 8:00-9:30, Dangui Building
Chair: TG Zhuang, Shanghai Jiaotong Univ, China
Co-Chair: VL Towle, Univ. of Chicago, USA

3.3.1 Classification of Magnetic Resonance Images Using A Novel Neural Network (896)
Dokur Z,Olmez T, Istanbul Technical University, Turkey

3.3.2 A Study of fMRI Data Processing Methods (596)
Chen SH,Li HY,Luo SHQ, Capital University of Medical Sciences, China

3.3.3 A Robust Analysis Procedure For Evaluating Rates Of Brain Atrophy Based On Structural Magnetic Resonance Imaging (864)
Wang DM,Doddrell DM, University of Queensland, Australia

3.3.4 A Basic Study Of Objective Method To Diagnose Dementia Using MR Brain Images (756)
Kodama N,Shimada T,Hiyoshi I,Hiwatashi K,Nakagawa S,Fukumoto I, Nagaoka University of Technology, Japan

3.3.5 Rigid Registration And Fusion Of SPECT/PET And MRI/CT Based On External Marker (751)
Li SHX,Zhuang TG,Guang L, Shanghai Jiao Tong University, China

3.3.6 3-D MR and CT images registration using Mutual Information (879)
Lin L,Wong EMC,Krishnan SM,Tsao SY, Nanyang Technological University, Singapore

Session 3.4 Medical Image Segmentation (Oral)

WED 9:50-11:20, Dangui Building
Chair: S M Krishnan, Nanyang Technical U, Singapore
Co-Chair: S Xia, Zhejian University, China

3.4.1 A New Mass Detect Method Based On Fussy Region Grow In Digital Mammograms (686)
Jiang YF,Xia SHR, Ge LY, Zhejiang University, China

3.4.2 Knowledge-based Tumor Segmentation in MR Images (566)
Li Y,Tan O,Duan HL,Lu WX, Zhejiang University, China

3.4.3 An Image Segmentaion Algorithm For Color Image (760)
Wang YB,Zhang NY,Zhang HY,Zheng XX, Zhejiang University, China

3.4.4 Development Of Texture Analysis Method For Medical Endoscopic Colour Images (880)
Krishnan SM,Wang P,Lin Z,Vikram N,Xue Z, NTU, Singapore

3.4.5 Shortest-Path problem Based Interactive Segmentation Method and Its Application in Medical Image Analyzing (732)
Lin G,Zhang DF,Jiang DZH, Xi'an Jiaotong University, China

3.4.6 A Segmentation-Based and Partial-Volume-Compensated Method For Accurate Measurement Of Lateral Ventricular Volumes On T1-Weighted Magnetic Resonance Images (873)
Wang DM,Chalk J,Spooner D,Barnes D,Doddrell DM, University of Queensland, Australia

Session 3.5 Image Reconstruction and Processing (oral)
THU 8:00-9:30, Diplomat Board Room
Chair: YT Zhang, Chinese University of Hong Kong, Hong Kong
Co-Chair: Yuanmei Wang, Zhejiang Univ, China

3.5.1 Perceptual Metric for Image Quality (708)
Liu Y,Zhou H, Zhejiang University, China

3.5.2 Comparative Analysis Between EIT Reconstruction Algorithms Solved By Monoprocessor And Multiprocessor Systems (783)
Marija K,Suzana L, University "Sts. Kiril and Metodij", Macedonia

3.5.3 A Novel Scanning Structure of Direct Volume CT (565)
Xu H,YU J,Zhuang TG,Luo JH, Shanghai Jiaotong Univ., China

3.5.4 Optical Flow Motion Analysis Using Probabilistic Relaxation Method (514)
Zhang HH, Xiang RA, Hama H, Osaka City University, Japan

3.5.5 Advanced And Noval Palm Image Preprocessing Methods Used By The Tumorous Dermatoglyphics Analysis And Detection System (766)
Li ZH,Hu WL,Zeng YJ,Liang K, Beijing Polytechnic University, China

Session 3.6 Image Visualization and Reconstruction (oral)
THU 9:50-11:20, Cinema Five
Chair: S Xia, Zhejiang University, China
Co-Chair: Shiqian Luo, Capital University of Medical Sciences, China

3.6.1 Fluorescent X-Ray CT Image Of Rat Heart With Non-Radioactive Iodine Labelled BMIPP (49)
Takeda T, Matsushita S, Yu Q,Wu J,Lwin TT,Zeniya T,Yuasa T,Hyodo K, Dilmanian FA,Akatsuka T,Itai Y, Affiliation University of Tsukuba, Institute of Clinical Medicine, Japan

3.6.2 A Multilevel Dominant Point Detection For Closed Curves In Atlas-To-Data Registration (664)
Yang YJ,Xu MH,Nowinski WL, Kent Ridge Digital Labs, Singapore

3.6.3 Area Calculation Of Medical Image On Screen (533)
Tan EC, Xiao D, Kwoh CK, Nanyang Technological University, Singapore

3.6.4 Development Of Computer-Aided Analysis System On Mammography (770)
Xia SHR,Ying JF,Lv ZH,Ge YL,Zhou M, Zhejiang University, China

3.6.5 Automatic Cephalometric Recognition and Measurement (869)
Zhang HY, Hong DH, Zheng XX, Zhejiang University, China

Session 3.7 Medical Image Registration (poster)
TUE 14:45-15:45, Grand Ballroom

3.7.1 A Fast Image Registration System Based On Man-Machine Interaction (598)
Zhou YX,Luo SHQ, Capital University of Medical Sciences, China

3.7.2 A Novel And High Accurate Localizing Method For Computer Assisted Surgery (633)
Sun JA,Zhuang TG, Shanghai Jiao Tong University, China

3.7.3 Comparison Of Image Fusion Methods In Atlas-Based Medical Image Analysis (595)
Li Y,Tan O,Duan HL,Lu WX, Zhejiang University, China

3.7.4 Image Guided Brain Tumor Surgery System Using Mutual-Information Based Multi-Modal Volume Registration (641)
Li X,Cai CH,Duan HL, Zhejiang University, China

Session 3.8 Image Processing And Analysis (Poster)
TUE 14:45-15:45, Grand Ballroom

3.8.1 Noninvasive Mapping Of Paced Atrial Activities By Means Of Body Surface Laplacian ECG Mapping (741)
Srinivasan S,Tsai H,Wu DN,Wu D,Lian J,Ceccoli H,Avitall B, University Of Illinois, USA

3.8.2 Noninvasive Localization Of Chronic Myocardial Infarction By Means Of Iso-Integral Laplacian Maps (540)
Wu DN,Tsai H,Wu D,Srinivasan S,Lian J,Krumdick G,Ceccoli H,Avitall B,He B, University Of Illinois,USA

3.8.3 A Novel Method For Pattern Recognition Of Retinal Blood Vessels (815)
Lin TSH, Du MH, Xu JT, South China University Of Technology, China.

3.8.4 A Combined Filtering Method for Speckle Suppression in 3-D Ultrasound Imaging (588)
Lee B,Yan JY,Xie ZHX,Zhuang TG,Shou WD, Shanghai Jiaotong University, China

3.8.5 A Digital Brain Atlas (597)
Yan H,Liu M,Cheng J,Wu XX,Luo SHQ, Capital University Of Medical Sciences, China

Session 3.9 Ultrasound Imaging And Image Processing (Poster)
TUE 14:45-15:45, Grand Ballroom

3.9.1 Nonlinear Parameter Imaging Using Echo Signals (517)
Xu XCH, Liu JH,Gong XF,Zhang D,Mao F, Nanjing University, China

3.9.2 Detection Of Breast Cancer Using Near Infrared Light-Experiments And Initial Clinical Results (663)
TX Gao, YH Zhang, J Bai, Tsinghua University, China

3.9.3 A Computer Model Of An Annular Array Transducer For High Resolution Ultrasound Imaging (38)
Li G,Wang L,Chen YQ, Zhejiang University, China

3.9.4 Noise Elimination On Ultrasonic Cvib Calculation Using Wavelet Transform (711)
Qi Y,Pan DL,Bai J, Tsinghua University, China

3.9.5 A New Noninvasive Temperature Estimation Method Based On Diagnostic Ultrasound In Hyperthermia (553)
Niu JH,Wang HZH,Shou WD, Shanghai Jiaotong University, China

Session 3.10 PACS And Telemedicine (Poster)
TUE 14:45-15:45, Grand Ballroom

3.10.1 Constructing An Ultrasonic Imaging Workstation Management System Over The Intranet (838)
Xia SHR, Su S,Xie SH,Lou XM,Pan N,Zhang GX, Zhejiang University, China

3.10.2 Wavelet-Based Medical Video Codec Under Very Low Bit Rate Environment (563)
Wu CHQ,Wang ZHZH, Shanghai Jiaotong University, China

3.10.3 Development Of PACS In First Affiliated Hospital Of SUMS And Strategy For PACS Development In China (570)
Lin TY,Bi YL,Duan HL,Meng QF,Chen SP,Tao DCH,Lu WX, Zhejiang University, China

3.10.4 Medical Image Retrieval Based on Histogram and Cross Correlation (735)
Li SHSH, Zhuang TG,Chen H, Shanghai Jiaotong University, Shanghai, China

3.10.5 Detecting Periodic Respiratory Motion From Realtime Video Images In Telecare Monitoring (73)
Kara A,Koga O,Wei DM, The Univ. Of Aizu CITEC, Japan

Session 3.11 Other Imaging Modalities And Image Processing Approaches (Poster)
TUE 14:45-15:45, Grand Ballroom

3.11.1 Image Processing Of Gene Chip Using Mathematical Morphological Operations Based On Fuzzy Set (848)
Zhang XL,Lu ZH, Southeast University, China

3.11.2 Fully-Automatic 3D-Segmentation Of Brain MR Images Based On Markov Random Fields (643)
Cai CH,Li X,Duan HL, Zhejiang University, China

3.11.3 Vod System In Ultrasound Department (649)
Chen H,Zhuang TG, Shanghai Jiao Tong University, China

3.11.4 Study On Simulation Of X-Waves (860)
Peng H,Zhang ZSH,Wei YM,Feng HQ, University Of Science and Technology Of China, China

3.11.5 The Utility Of The Virtual Brain In Segmentation/Labelling Of Human Brain (581)
Tan O,Duan HL,Lu WX, Zhejiang University, China

Theme 4: Physiologic Modeling And Simulation

Chair*s: S. Sato (Japan), F Gu (China), J Chen (USA)*

4.1 Physiological Measurement And Fluctuations (Oral)
WED 15:45-17:15, ***Regency Room***
Chair: Shunsuke Sato, Osaka Univ., Japan
Co-Chair: T Nomura, Osaka U, Japan

4.1.1 Noise Induced Sensitization Of Human Baroreflex System (823)
Ichiro H,Daichi N,Yoshiharu Y, The University Of Tokyo, Japan

4.1.2 Changes In The Fluctuation Of Beat-To-Beat Intervals In Spontaneously Beating Cardiac Myocytes In Culture (825)
Yamauchi Y,Kawahara K, Hokkaido University, Japan

4.1.3 A Control Strategy Underlying 1/F Fluctuations In Heart Rate Variability (822)
Nakao M,Ito A,Katayama N,Yamamoto M, Tohoku University, Japan

4.1.4 EMULATE THE VIBRATION OF CLOSED AORTIC VALVE DURING EARLY DIASTOLE (22)
Yang MJ, Fuzhou University, China

4.1.5 Continuous Depth Perception With Only One Disparity Level (723)
Zhang ZHL, Guo XH,Ge JG, Zhejiang University, China

4.2 Multi-Dimensionality In Physiological Dynamics (Oral)

THU 8:00-9:30, Regency Room
Chair: Mitsuyuki Nakao, Tohoku Univ., Japan
Co-Chair: Yoshiharu Yamamoto, Tokyo Univ., Japan

4.2.1 Snapshot Assessment Of Fatigue Process During Long-Term.Repetitive Skiing(76)
Kiryu T,Gocho T,Ushiyama Y, Niigata University, Japan

4.2.2 Optimization Of Gait And Control In Human Biped Locomotion (826)
Nomura T,Toshima A, Sato S, Osaka University, Japan

4.2.3 A Simulated Model Of Tilting For Analysing Continuous Haemodynamic Data Series (628)
Zhang Y,Critchley LAH,Critchley JAJH, Chinese University Of Hong Kong, Hong Kong

4.2.4 Role Of Inhibition Of Soma And Secondary Dendrites In Initiation Of Action Potential In Olfactory Mitral Cells (684)
Shen GY,Chen WR,Midtgaard J,Hines ML,Shepherd GM, Zhejiang University, China

4.2.5 A Novel Kind Of Simulation Propagation Algorithm Of Cardiac Bioelectricity (861)
Peng H, Chen Q, Feng HQ, Zhang ZSH, University Of Science & Technology Of China, China

4.3 Heart Rate Variability (Oral)
WED 13:00-14:30, Shenshi Room
Chair: John Y. Cheung, University of Oklahoma, USA
Co-Chair: Jiande Chen, University of Texas, USA

4.3.1 Spectral Analysis Of Heart Rate Variability As A Method For The Assessment Of Brain (Big Brain) -Gut (Little Brain) Interaction (774)
Chen JD, Wang L, Qian LW, University Of Texas, USA

4.3.2 Insight An Physics, Engineering, Physiology And Clinics For Analyzing HPS (550)
Xie ZHX,Yin YH, Chongqing University Of Medical Sciences, China

4.3.3 Comparisons Of Analysis Techniques For Heart Rate Variability (895)
Cheung JY,Stephen S,Hull Jr SS,He ZHY,Pei WJ,Yang LX, University Of Oklahoma, USA

4.3.4 A Hypothesis Of Dynamic Mechanism For HRV Supported By Dynamic Interpolation (830)
Pei WJ,Yang LX,He ZY,Hull SS,Cheung JY, Southeast University, China

4.3.5 Combination Of Six Nonlinear Indexes In Signal Analysis Of Heart Rate Variability (555)
Ruan Jiong, Lin Wei, Cai Zhijie, Fudan University, China

4.4. Physiological Models and Simulation (Poster)
WED 14:30-15:45, Grand Ballroom

4.4.1 Globus Pallidus' 3D-Localization And Visualization In Remote Diagnosis And Treatment System (604)
Huang SH,Huang XY,Wang BL, Xiamen University, China

4.4.2 Cardiac Pathological Signal Prediction For VT/VF Based On Grey Model Theory (558)
Zhang HX,Wang Z,Niu JH,Zhu YSH,Lee YJ, Shanghai Jiaotong University, China

4.4.3 The Study of Ultrasound Field of Self-Focusing Transducer by FDTD Method (569)
Xia RM,Shou WD,Yan JY, Shanghai Jiaotong University, China

4.4.4 Error Analysis And Improvement On Simulation Algorithm Of Excitation Propagation's Process Of Cardiac Electricity (668)
Wang HL,Zhou HQ,Feng HQ,Guo YG, University Of Science & Technology Of China, China

4.4.5 Algorithms For Numerical Modeling Of Navier-Stokes Equations And Computer Simulation Of Blood Flow (729)
Koceski S,Jolevski I,Loskovska S , Macedonian Academy of Sciences and Arts, Macedonia

4.5 Models In Cellular Systems (Poster)

WED 14:30-15:45, Grand Ballroom

4.5.1 Strategy For Fitting Neuronal Models To Dual Patch Data (634)
Shen GY,Ye SHM, Chen WR,Midtgaard J,Shepherd GM, Hines ML, Zhejiang University, China

4.5.2 A Sliding Model Of Actin-Myosin System Based On Nyquist Theorem (630)
Matsuura H,Nakano M,Wang Q,Liu LG, National Graduate Institute For Policy Studies, Japan

4.5.3 A Dynamic Model For Muscle's Motion (665)
Ai BQ,Wang XJ,Liu LG,Nakano M,Matsuura H, Zhongshan University, China

Theme 5: Chinese Medicine Modernization

***Chair**s: XX Zheng (China), LY Kong (China), YL Lo (China)*

5.1 Chinese Medicine Modernization Methodology Research (Oral)
TUE 15:45-17:15, Senator Room
Chair: Ryoji Aoyagi, Sendai National College of Technology, Japan
Co-Chair: Ling-yi Kong, China Pharmaceutical University, China

5.1.1 Variation In Electrical Conductance Between Acupuncture And Non-Acupuncture Points Before And After Stimulation. (580)
Lazoura H,Cosic I, Monash University, Australia

5.1.2 Relationships Between Short-Term Pulse Harmonics Fluctuations And Heart-Rate Variability In Respiratory Subjects. (58)
Hsieh CHW,Mao CHW,Youmg MS, No. 1 Ta Hsueh Road, Tainan City, Taiwan

5.1.3 Quantification Of Acupuncturists' Resistance Sensation Of A Needle By Comparison With Its Mechanical Impedance (86)
Aoyagi R,Tanaka H,Sasaki K,Chubachi N, Sendai National College of Technology ,Japan

5.1.4 Using The Dentate Gyrus Field Potentials To Assess The Effect Of Chinese Medicine In Rat (715)
Feng ZHY,Zheng XX, Zhejiang University, China

5.1.5 Chemical Studies On Two Plants Of Peucedanum And Structure Modification Of (+)-Praeruptorin A (857)
Kong LY,Wu XL,Min ZHD, China Pharmaceutical University, China

5.2 Chinese Medicine Modernization Standardized Studies (Poster)
WED 14:30-15:45, Grand Ballroom

5.2.1 Comparison Of Iontophoresis And Electropration On Dermal In The Morphology (819)
Bao JL,Hu QH,Lang WQ,Ge JG, Zhejiang University, China

5.2.2 Standardized Studies On Quality Standard Of Cortex Mori (882)
Sun JY, Zhejiang Academy Of Traditional Chinese Medicine, China

5.2.3 Inhibitive Effects Of H01-5 On Increased Catecholamines In Serum Of Mice With Brain Ischemia (758)
Chen XCH,Zheng XX, Zhejiang University, China

5.2.4 The Quantitative Appraisal Of The Dissolving-Thrombus Effect Of Chinese Traditional Medicine "Guanyuan Granule" (719)
Zheng XX,Zhou JY,Yan WM, Zhejiang University, China

Theme 6: Molecular Electronics And Biosensors

***Chair**s: Z Lu (China), SM Chang (Korea), C Ruggiero (Italy)*

6.1 Molecular Electronics And Biosensors I (Oral)

TUE 15:45-17:15, Regency Room
Chair: Z Lu, Southeast University, China
Co-Chair: Sang-Mok Chang, Dong-A University, KOREA

6.1.1 Design And On-Chip Synthesis Technology Of Genechip (512)
Lu ZH,Zhao YJ, He NY,Sun X, Southeast University, China

6.1.2 Investigation Of Im-Sh Self-Assembled Monolayer Formation And Its Application (537)
Kim JM,Park JY,Muramatsu H,Lee BJ,Chang SM, Dong-A University, KOREA

6.1.3 Second-Order Nonlinear Optical Response Of Colloidal Gold Labeled Human Serum IGG (863)
Shen YCH,Tang ZM,Gui MZH,Lu ZH, Southeast University, China

6.1.4 Protein Sequences Analysis Using The RRM Model And Wavelet Transform Methods: A Comparative Study Analysis (17)
Cosic I,Trad CD,Fang Q,Akay Metin, Monash University, AUSTRALIA

6.1.5 A Software System For Gene Chip Design And Data Analysis (653)
Sun X,Wang Y,Zhang XL,Xie JM,Lu ZH, Southeast University, China

6.1.6 Measurement And Analysis Of Binding Property Based On The Rupture Force Between OBP And Antibody Of OBP Using AFM (704)
Cai Q,Pan M,Chen YQ, Zhejiang University, China

6.2 Molecular Electronics And Biosensors II (Oral)
WED 9:50-11:20, Regency Room
Chair: Ruggiero Camelina, University of Genova, Italy
Co-Chair: Shen Yaochun, Southeast University, China

6.2.1 Ion-Selective Microelectrode Sensitive To Neurotransmitter Dopamine (721)
Sun YH,Zheng XX, Zhejiang University, China

6.2.2 Usage Of Inisation Constant Of Amino Acid For Protein Signal Analysis Within The Resonant Recognition Model - Application For Oncogenes (18)
Cosic I,Pirogova E, Monash University, AUSTRALIA

6.2.3 The Study Of Microdialysis Glucose Sensor System Based On Co-Immobilized Peroxidase With Glucose Oxidase By Sol-Gel Technique (585)
Yu P,Chen YQ, Zhejiang University, China

6.2.4 The Features Of Infrared Absorption Of The Protein Molecules In The Living System (503)
Pang XF, University Of Electronic Science And Technology Of China, China

6.2.5 Resolution Of Amino Acid Derivative On Molecularly Imprinted Polymer (551)
Li P,Xi RB,Zhan SHZH,Lin BP,Yuan CHW, Southeast University, China

6.3 Molecular Electronics and Biosensors III (poster)
WED 14:30-15:45, Grand Ballroom

6.3.1 A Novel Strategy For Improving Single-Base Mismatch Detection On Oligonucleotide Arrays (554)
Fan KK,Li J,Zhao YJ,Lu ZH, Southeast University, China

6.3.2 Theoretical Model And Simulation Of Chemical And Biological Prism-Coupled Surface Plasmon Resonance Sensors (642)
Li X,Duan HL, Zhejiang University, China

6.3.3 Investigation Of Interval 6 Microdeletion Of Yq By DNA Chip (876)
Cheng L,LI J,Wang H,Zhao HJ,Lu ZH, Southeast University, China

6.3.4 The Research Of Piezoelectric Thick Film Polymer Pastes (764)
Lou ZHG,Wang YM,Nick H,Chen H, Zhejiang University, China.

6.3.5 Temperature-Mediated Hybridization For Single-Base Mismatch Detection On Chips (846)
Fan KK,Li J,Liu QJ,Wang H,Cheng L,Zhao Yj,Lu ZH, Southeast University, China

6.3.6 Biological And Medical Functions Of The Infrared Rays (502)
Pang XF, University Of Electronic Science and Technology Of China, China

Theme 7: Medical Instrumentation and Devices

***Chair**s: D Wei (Japan), M Wang (China), K Shung (USA)*

7.1 Portable Monitoring Devices (Oral)
TUE 13:15-14:45, Consulate Room
Chair: Zhenyu Guo, The George Washington University, USA
Co-Chair: Herbert Voigt, Boston Univ, USA

7.1.1 A Data Acquisition Card Suited For Implementing Low-Cost PC-Based Electrophysiological Monitoring Systems (61)
Martel S,Lafontaine S,Hunter I, Massachusetts Institute Of Technology, USA

7.1.2 Experience In The Design, Development And Marketing Of A New Eletronic Stethoscope - "Stethos?" (854)
Durand LG, Clinical Research Institute Of Montreal, Canada

7.1.3 A Multi-Purpose Telemonitoring Device (46)
Guo ZHY,Moulder JC, The George Washington University, USA

7.1.4 Applications Of A Battery-Free Approach To Bio-Telemetry (775)
Naber J, University Of Louisville, USA

7.1.5 Implementation Of A Complex AR Modeling In A Portable Doppler Device (29)
Zhang YF,Guo ZHY,Wang WL,Yang J, Zhang HL, Yunnan University, China

7.2 Methods And Devices For Studying Red Blood Cell Aggregation (Oral)
TUE 15:45-17:15, Consulate Room
Chair: Guy Cloutier, University of Montreal, Canada

7.2.1 Red Blood Cell Aggregation : from Syllectometer to LORCA
Hardeman MR, Academic Medical Center, The Netherlands (851)

7.2.2 Visualization Of Hemodynamics With Ultrasound
Shung KK, Cao P, Paeng D, Penn State University, USA (842)

7.2.3 Advantageous Technique For Monitoring Rbc Aggregability In Patients
Mchedlishvili G, I.Beritashvili Institute Of Physiology, Georgia (843)

7.2.4 Effect Of The Shear Rate On Erythrocyte Aggregation Studied By Ultrasonography: Modeling And Experimental Results.(750)
Guy C, Isabelle F, Zhao Q, University Of Montreal Hospital, Canada

7.2.5 A Novel Approach To The Investigation Of Erythrocyte Aggregation Based On Dielectric Properties Of Disperse Systems (749)
Pribush A,Meiselman HJ,Meyerstein D,Meyerstein N, Ben-Gurion University Of The Negev, Israel

Session 7.3 Biochemical Sensors And Measurements (Oral)
WED 8:00-9:30, Senator Room
Chair: Mingshi Wang, Tianjin Univ, China
Co-Chair: TR Nelson, Univ. of California, USA

7.3.1 Single Plane Calibration Method Based On Magnetometer Position Sensor In 3D Freehand TCD System (539)
Liu J,Gao SHK,Li ZH, Tsinghua University, China

7.3.2 A Low Cost Instrument For In Vivo Near Infra-Red Spectroscopy (779)
Rolfe P,Bottini F,Mondo G,Repetto D,Ruggiero C, University Of Genova, Italy

7.3.3 Improvement Of Emissivity Measurement Method Using Step Change In Ambient Radiation Temperature (72)
Otsuka K, Okada S, Shimase A, Togawa T, Tokyo Medical and Dental University, Japan

7.3.4 The Design Of A Low Cost Vibration Sensor For Animal Behavior Measurement (24)
Li YC,Huang CF,Huang KN,Young MS, I-Shou University, Taiwan

7.3.5 Determination Of Tissue Optical Properties By Time-Resolved Reflectance (513)
Liu XL,Zhang R, Bao HJ,Zhong JK, Shanghai Tiedao University, China

Session 7.4 Data Acquisition and Detection Systems (Oral)
WED 9:50-11:20, Embassy Room
Chair: Ned H. C. Hwang, National Health Research Institutes, Taiwan
Co-Chair: CX Zheng, Xi'an Jiaotong Univ, China

7.4.1 A New Index For The Online Detection Of Hypotensive Episodes During Hemodialysis (603)
Ning GM,Schulthei B,Maiwald J,Matth H,Henning G, Sperschneider H,Stein G, Ilmenau Technical University, Germany

7.4.2 A Combined Data Acquisition Device For Neurotransmission Of Brain Slice Based On USB Interface (41)
Meng-Hsiang Yang MH,Sheu YH,Young MS, National Cheng Kung University, Taiwan

7.4.3 A Pulsed Doppler Ultrasonic System Design For Measuring The Viscoelasticity Of Soft Tissue (847)
Hou CR,Chung KC,Chiu YH,Chen JT, National Cheng Kung University, Taiwan

7.4.4 A New EEG Sampling System Based On CAN Field Bus (804)
Yang ZHJ,Zhao GZH, Zhejiang University, China

7.4.5 The Research Of A Software Used Rejecting ECG Baseline Drift (683)
Lou ZHG, Shao LY,Wu P, Zhejiang Univeristy, R. P. China

7.4.6 A New Myocardial Infarction Monitoring Device (682)
Lou ZHG,Hong M,Zhang WT, Zhejiang Univeristy, China

7.4.7 Self-Inflatable Balloon Manometers For Body Interface Pressure Measurement (16)
TAKAHASHI, Makoto, OHURA, Takehiko, KUMAKAWA, Yoshiyuki, KIKUMOTO, Sanae, Hokkaido University, JAPAN

Session 7.5 Ambulatory and Non-Invasive Measurements (Oral)
WED 13:00-14:30, Senator Room
Chair: D Wei, Aizu Univ, Japan
Co-Chair: LG Zhou, Univ. of Macou, Macou

7.5.1 Investigating Factors Influencing Fetus And Expectation Of Perinatal Monitoring (615)
Chao Y, Zhou LG, Cao Y, Ye DT, Tsinghua University, China

7.5.2 An Integrated Upper Limb Motion Analysis System (ULMAS) (592)
Nazeran H,Jaberzadeh SH, Flinders University, Australia

7.5.3 Fuzzy Oxygen Controller For The Indirect Calorimeter Of Preterms (689)
Lin SHZH,Luo CH, Yeh TF, National Cheng-Kung University, Taiwan

7.5.4 High-End Ambulatory ECG Scanner System (678)
Lu XD,Hong W,Duan HL,Lu WX, Zhejiang University, China

7.5.5 Design And Development Of A Portable Vital Life Sign Monitoring System (670)
Du XL,Wu BM,He QH,Liu Y, The Third Military Medical University, China

Session 7.6 Clinical Testing and Experimental Systems (Oral)
WED 15:45-17:15, Dangui Building
Chair: KK Shung, Penn State Univ, USA
Co-Chair: Thomas R. Nelson, Univ. of Carlifornia, USA

7.6.1 Design Of A New Experimental System For The Study Of The Relation With Music And Visible Light Stimulating On Autonomic Nervous System (809)
Chang SH,Luo CH,Tzeng CB,Yeh TL, National Cheng Kung University, Taiwan

7.6.2 A Labview Based Portable EOG Instrument (69)
Chen SC,Tsai TT,Luo CS, National Cheng-Kung University, Taiwan

7.6.3 Haptic Interfacing Device In Computer Simulator For Interventional Procedure (714)
Ma X,Chui CK,Wang YP,Nowinski WL, Kent Ridge Digital Labs, Singapore

7.6.4 Development Of A 3D Display System For Biplane Cerebral Angiography (696)
Ooe Y,Kusuoka H,Nakanishi E,Furukawa S,Etani H, Isaka Y,Imaizumi M,Nagakura T,Inoue M, Osaka National Hospital, Japan

7.6.5 Design Of The Serial Data Sampling System For Portable Multi-Parameter Monitor (584)
He QH,Wu BM, Daping Hospital, China

7.6.6 Realization Of One-Shot Dual-Energy X-Ray Subtraction In General X-Ray Equipment (852)
Ying L, Xu LSH, Zhejiang University, China

Session 7.7 Electromagnetic Stimulation Devices and Systems (Oral)
WED 15:45-17:15, Shenshi Room
Chair: H Hosaka, Tokyo Denki University, Japan
Co-Chair: W Zhou, Shandong University, China

7.7.1 Multi-Electrode Defibrillation - A Large Capacitance Defibrillator (571)
Sasaki T,Hosaka H, Nihon Kohden Corporation, Japan

7.7.2 The Clinic Study Of Relieving Motion Gidiness By Electronic Stimulation (524)
Li YZH,Wang XM,Wang MSH, Tianjin University, China

7.7.3 A Novel Brain Magnetic Stimulation System Based On EEG Feedback (523)
Zhou WD,Hao XW,Wang ZHJ, Shandong University, China

7.7.4 A New Rehabilitation Method Of Dementia With Electrical Stimulation Through QingMing Points (753)
Guo Y,Uchiyama H,Hasegawa A,Shi XM,Nakagawa Y,Tanaka M,Fukumoto I, Nagaoka University Of Technology, Japan

7.7.5 Design Of A Fast Rate Magnetic Stimulator With Energy Recovery (520)
Qiao QL,Wang XL,Wang XM, Tianjin University, China

Session 7.8 Micro-Technology and Implantable Devices (Oral)
THU 8:00-9:30, Dangui Building
Chair: Toshifumi Sugiura, Shizuoka University, Japan
Co-Chair: Baikun Wan, Tianjin University, China

7.8.1 Gene Delivery Of Porcine Gastrointestinal Tract By Endoscopic Electroporation (792)
Lin CY,Jen CM,Luo CS,Liu HS,Lin XZ, National Cheng Kung University, Taiwan

7.8.2 Microtechnology For Monitoring Real-Time Electrical And Chemical Events At The Neuronal Level In Freely Ehaving Animals. (573)
Rebec GV,Wang ZHR, Indiana University, USA

7.8.3 Development Of A Miniature Three-Legged Bio-Instrumented Autonomous Robot (63)
Martel S,Bevilacqua J,Dyer R,Fofonoff T,Garcia DQW, Helm C,Sherwood M,Hunter I, Massachusetts Institute Of Technology, USA

7.8.4 A Passive Implantable Atrial Defibrillator System Using Transcutaneous Rf Power Delivery (618)
Santos JA,Manoharan G,Evans NE,Anderson JM,Kidawi BJ,Allen JD,Adgey AAJ, University Of Ulster, U. K.

7.8.5 A Flexible Arrhythmia Discrimination Method Based On Fuzzy Logic (659)
Sugiura T,Izumi T,Hirata H,Okita Y,Suzuki K,Kazui T, Shizuoka University, Japan

Session 7.9 Medical Instrumentation (Poster)
WED 14:30-15:45, Grand Ballroom

7.9.1 Sperical-Section Phased Arrays With Annular Pattern For Ultrasound Surgery And Hyperthermia (831)
Li GW,Chen YZH, Shanghai Jiaotong University, China

7.9.2 The Research Of Using Ultrasonic Nonlinear Parameter B/A To Measure The Temperature In Media (647)
Ma R,Xia YQ,Peng JSH, Beijing Polytechnic University, China

7.9.3 An Otoacoustic Emissions Test Instrument Using Sound Card. I. System Implementation (614)
Ye WX,Liu MX,Zhou JJ,Cao Y, Tsinghua University, China

7.9.4 A Study On An Equipment Of Double Ultrasound Pulse Emission And Reception (644)
Jia LQ,Xia YQ,Peng JSH, Beijing Polytechnic University, China

7.9.5 An Otoacoustic Emissions Test Instrument Using Sound Card. II. Clinical Practice (613)
Ye WX,Zhou JJ,Liu MX,Ye DT,Qi YSH,Nie YJ, Tsinghua University, China

7.9.6 Study of advanced technology used in monitoring system(900)
Chen H,Ge JG, Zhejiang University, China

Theme 8: Cellular & Tissue Engineering, Biomaterials

***Chair**s: L Qin (China), SH Teoh (Singapore), GV Rebec (USA)*

Session 8.1: Cellular & Tissue Engineering, Biomaterials I (Oral)
TUE 13:15-14:45, Senator Room
Chair: XX Zheng, Zhejiang University, China
Co-Chair: L Qin, The Chinese University of Hong Kong, Hong Kong

8.1.1 Cytoskeleton And Extra Cellular Matrix Computer Based Modelling For Tissue Engineering (780)
Camelina R, Mauro G, Peter R, DIST - University Of Genova, Italy

8.1.2 A Novel Method Of Direct Detection Of Nitric Oxide (763)
Sheng CH,Chen XCH,Zheng XX, Zhejiang University, China.

8.1.3 Tissue Engineering Of Bone Grafts - Cell Versus Tissue Culturing (631)
Schantz JT,Hutmacher DW,Teoh SH,Ng KW,Kiefer T,Cao T,Lim TC, National University Of Singapore, Singapore

8.1.4 3D Printing Method Used For Scaffold Fabrication Based On Chitosan-Polysaccharide Blends (626)
Mo XM,Teoh SH,Lam XF,Pek S,Hutmacher DW, National University Of Singapore, Singapore

8.1.5 Biaxially Stretched Poly (E-Caprolactone) Films As Matrices In Human Dermal Fibroblast Cultures (625)
Ng KW,Teoh SH,Schantz JT,Hutmacher DW,Lim TC,Too HP, National University Of Singapore, Singapore

Session 8.2: Cellular & Tissue Engineering, Biomaterials II (Oral)
WED 9:50-11:20, Senator Room
Chair: SH Teoh, National University of Singapore, Singapore
Co-Chair: GV Rebec, Indiana Univ, USA

8.2.1 Fatigue Fracture And Wear Of Biomaterials (593)
Teoh SH, National University Of Singapore, Singapore

8.2.2 Instron-Synchronised Wear Instrumentation For Dental Wear Testing (543)
Teoh SH,Ong LKF,Yap AUJ,Tsai KT, National University Of Singapore, Singapore

8.2.3 Micro Hardness Of Teeth (892)
Singh VR,Bhalla ST, National Physical Laboratory, India

8.2.4 Porosity And Ultrasonic Velocity Of Renal Calculi (893)
Singh VR,Singh S, National Physical Laboratory, India

8.2.5 The Antithrombosis Effect Of Paeoniflorin In Vivo And In Vitro (759)
Ye JF,Yang XM,Yan WM,Zheng XX, Zhejiang University, China.

Session 8.3: Cellular & Tissue Engineering And Biomaterials III (Poster)
WED 14:30-15:45, Grand Ballroom

8.3.1 Protein Competitive Adsorption And Its Effect On Cell Adhesion (710)
Ying PQ,Jin G,Tao ZL, China Institute Of Mechanics, Chinese Academy Of Sciences, China

8.3.2 Formation Of Mineralized Nodules By Bone Marrow Derived Cells In A 2D And 3D Matrix (624)
Kiefer T,Cao T,Hutmacher DW,Teoh SH, National University Of Singapore, Singapore

8.3.3 The Effect Of Compressive Stress On Cytokines Produced By Chondrocytes Cultured In Vitro (829)
Xing DM,Du LJ,Luo ZHCH, Tsinghua University, China

8.3.4 Single Cell Degenerate Oligonucleotide Primed-PCR And Comparative Genomic Hybridization(511)
Jin F,Huang HF,Ye YH,Xing LF,Matthews CD,Hussey DN, Zhejiang University, China

8.3.5 Three-Body Wear Of Composite Restoratives: Influence Of Water Exposure (544)
Yap AUJ,Teoh SH,Tan KB, National University Of Singapore, Singapore

8.3.6 A Method For Analysis Of Adhesion Of Platelet To Cultured Huvecs Under Conditions Of Flow (761)
Yang XM,Ye JF,Zheng XX, Zhejiang University, China.

8.3.7 Non-Invasive In Situ Measurement On Single Intact Cell Simultaneously In Cellular, Subcellular And Intracellular Molecule Levels (898)
Huang YX,Ji T,Chen GW, Ji nan University, China

Theme 9: Clinical & Rehabilitation Engineering

Chair*s: A Holmes (China), R Cai (China), C Robinson (USA)*

Session 9.1: Clinical & Rehabilitation Engineering I (Oral)
TUE 13:15-14:45, ***Regency Room***
Chair: L Qin, The Chinese University of Hong Kong, Hong Kong
Co-Chair: Dazong Jiang, Xi'an Jiaotong Univ, China

9.1.1 Engineered Allouologous Chondrocyte Pellet For Enhancing Bone Tendon Junction Healing (799)
Qin L,Wong WN,Tai KO,Lee KM,Leung KS, The Chinese University Of Hong Kong, Hong Kong

9.1.2 Enhancement Of Bone To Tendon Junctional Healing By Interpositional Implantation Of Autologous Cartilages (800)
Wong WN,Tai KO,Qin L,LEE KM,Zhang YT,Leung KS, The Chinese University Of Hong Kong, Hong Kong

9.1.3 Proximal Interphalangeal Joint Stiffness: Measurement And Analysis (812**)**
Dionysian E,Kabo JM,Dorey FJ,Meals R, UCLA School of Medicine, USA

9.1.4 Prediction Of Falls During Walking By Accelerometry (84)

Tamura T,Kadoya R,Fukunaga S,Horiuchi F,Sekine M,Higashi Y,Fujimoto T, National Institute For Longevity Sciences, Japan

9.1.5 Study On Biphasic Pulses Selective Stimulation Of Nerve Fibers Using Nonlinear Mammalian Model (582)
Shen Q,Jiang DZ, Xi'an Jiaotong University, China

9.1.6 Effects Of Blade Geometry On Centrifugal Blood Pump Impeller Performance (562)
Chan WK, Ng BTH, Yu SCM, Chua LP, Wong YW, Nanyang Technological University, Singapore

Session 9.2: Clinical & Rehabilitation Engineering II (Oral)
THU 9:50-11:20, Shenshi Room
Chair: A Holmes, Univ. of Hong Kong, Hong Kong
Co-Chair: Atsushi Kara, The University of Aizu, Japan

9.2.1 Examination Of Standards To Make Training Problems For Brain Function (68)
Yamawaki N,Kosako H,Nakagawa M,Komai N, Kinki University, Japan

9.2.2 A Consideration Of Effect To Senile Dementia Of Music Therapy Which Uses Songs Of Becoming Familiar (790)
Suzuki S,Kasamatsu K,Shobu K,Takahashi T,Ninomija SP, Aoyama Gakuin University, Japan

9.2.3 Verification Of The Effectiveness Of "Familiar Songs Method" For Senile Dementia By Using Electroencephalography (42)
Takahashi T,Suzuki S,Kasamatsu K,Shoubu K,Ninomija SP, Psycho-Music Therapy Institute, Japan

9.2.4 Effect Of Menstrual Cycle On Task Performance –Incorporation The Physical Workload Task (789)
Kasamatsu K,Anse M,Suzuki S,Funada M,Idogawa K, Ninomija SP, Aoyama Gakuin University, Japan

9.2.5 Classification Of Electromyogram And Its Application To Power Wheel Chair (768)
Sriyudthsak M,Vichienhotu K, Chulalongkorn University Bangko, Thailand

Theme 10: Physiologic Systems

***Chair**s: T Tamura (Japan), CX Zheng (China), M Akay (USA)*

Session 10.1 Physiologic Systems I (Oral)
WED 15:45-17:15, Embassy Room
Chair: T Tamura, National Institute for Longevity Sciences, Japan
Co-Chair: Toshio Kobayashi, Soka University, Japan

10.1.1 Hemodynamic Study Of A New Assisted Circulation Method Of Thoracic Pneumatic Vest With Enhanced External Counterpulsation (730)
Yuan HX,Qin BJ,Zhang CHX,Jian LY,Yuan ZHJ,Huang YH,Pan JX, Sun Yat-Sen University Of Medical Sciences, China

10.1.2 An Automatic Monitoring System For Artificial Hearts By Self-Organizing Map (55)
Wang XZH,Yoshizawa M,Tanaka A,Abe KI,Yambe T,Nitta SI, Tohoku University, Japan

10.1.3 Effect Of Diacetyl Monoxime On Action Potential Duration In Rabbit Hearts As Revealed By Fluorescence Emission Ratiometry (44)
Kong W, Knisley SB, University Of Alabama At Birmingham, USA

10.1.4 Chaotic Response Of Integral Pulse Frequency Modulation And Consid- Eration On A Pulse Train From A Primary Auditory Nerve (744)
Matsuoka T,Sano T, Utsunomiya Univ., Japan

10.1.5 Relaxation Of Paclitaxel/Lipid Monolayers At The Air-Water Interface (700)
Gong K,Feng SS, National University Of Singapore, Singapore

Session 10.2: Physiologic Systems II (Poster)

WED 14:30-15:45, Grand Ballroom

10.2.1 The Effects Of Selective Neuronal Nitric Oxide Synthase Inhibitors On Apoptosis Of Neurons After Hypoxic-Ischemic Brain Damage In Neonatal Rats (632)
Yao Y,Yu HM,Li JCH,Yu ZHSH, Zhejiang University, China

10.2.2 A Numerical Solution For Rolling Contact Of Two Biphasic Cartilage Layers In Synovial Joint (707)
Wu JG,Gao JX, Tongji University, China

10.2.3 Non-Linear Disturbance Of Mouse Immune System By Airborne Particle Extract (853)
Qin ZHP,Shen GY, Southeast University, China

10.2.4 The Research Of Cerebral Microvascular Permeability On Cerebral Ischemia-Reperfusion Rats (716)
Zhou JY,Yan WM,Zheng XX, Zhejiang University, China

10.2.5 Robust Adaptive Monitoring Of SEP During Scoliosis (685)
Du MH,Chan FHY,Wan LL, South China University Of Technology, China

Theme 11: Neural Engineering

***Chair**s: F Yang (China), A Iwata (Japan), B He (USA)*

11.1 Brain Mapping (Oral)
WED 13:00-14:30, Embassy Room
Chair: Shangkai Gao, Tsinghua University, China
Co-Chair: Fusheng Yang, Tsinghua Univ, China

11.1.1 A Computer Simulation And Experimental Study Of Brain Equivalent Dipole Layer Imaging (545)
Lian J,Wu D,He B, University Of Illinois, USA

11.1.2 A New Approach For The Estimation Of Multiple Current Sources From MEG/MCG Using Renormalized Orthogonal Transformation (872)
Tachikawa A,Hara H,Uchida S,Iramina K,Ueno S,University Of Tokyo, Japan

11.1.3 Biomagnetic Measurement Of Neural Activation Associated With Chinese Word Recognition Processes (885)
Hara H,Huang S,Iramina K,Yumoto M,Ueno S, University Of Tokyo, Japan

11.1.4 Human Brain Mapping With Functional Magnetic Resonance Imaging (fMRI) During Calculation Task (75)
Wang LQ,Kobayashi K,Suzuki M,Saito M, Tokyo Denki University, Japan

11.1.5 Spatio-Temporal MEG Source Localization Using Simulated Annealing (645)
Huo XL,Wang YM, Zhejiang University, China

11.1.6 The Improvements Of LORETA For Solving EEG Inverse Problems (698)
Li Y,He SHJ,Li ZHD,Xu GZH,Song CHY,Yan WL, Hebei University Of Technology, China

11. 2 Current Clinical Neurophysiological Approaches In Human Brain (Oral)
TUE 15:45-17:15, Embassy Room
Chair: M Nakagawa, Juntendo University, Japan
Co-Chair: K Nagata, Research Institute For Brain And Blood Vessels, Japan

11.2.1 What Is The Best-Fit Paradigm For Multi-Modal Integration For Brain Study? (56)
Nakagawa M, Juntendo University Urayasu Hospital, Japan

11.2.2 Functional Imaging Of Conscious Perception In Binocular Rivalry (32)
Kobayashi T,Katsura T, Hokkaido University, Japan

11.2.3 Relaxation Effects Of Wine Odor Using Quantitative EEG Analysis (891)
Koga Y,Hirayasu Y, Kyorin University School Of Medicine, Japan

11.2.4 Can Functional Neuroimagings Differentiate Alzheimer's Disease From Vascular Dementia ? (889)
Nagata K,Wright DK,Hatazawa J, Research Institute For Brain And Blood Vessels, Japan

11.2.5 A Computer Simulation Of The New Dementia Diagnosing Method By Human Eye Light-Reflexes (620)
Fukumoto I, Nagaoka University Of Technology, Japan

11.2.6 Changing Neural Activity During Maturation Of Motor Learning: A Positron Emission Tomography Study (890)
Wright D,Nagata K,Kanno I,Box G,Atchison R,Rottenberg D,Frutiger S, Research Institute For Brain And Blood Vessels, Japan

11.3 Neural Networks I (Oral)
WED 8:00-9:30, Embassy Room
Chair: T Togawa, Japan
Co-Chair: F Gu, Fudan Univ, China

11.3.1 Complexity Of Chinese Characters And A Similarity To The Cortical Neural Representation (20)
Togawa T,Otsuka K,Hiki S, Tokyo Medical and Dental University,Japan

11.3.2 An Interpretation Of A Cortical Neural Network Model As An Explanation Of Consciousness (21)
Togawa T, Tokyo Medical and Dental University, Japan

11.3.3 The Relationship Between ECoG And Dentate Gyrus Evoked Responses In Rat (720)
Feng ZHY,Zheng XX, Zhejiang University, China

11.3.4 Prevention Of Spinal Cord Injury With Time-Frequency Analysis(TFA) Of Evoked Potentials(EP) (850)
Hu Y,Luk KDK,Lu WW,Holmes A,Leong JCY, The University Of Hong Kong, Hong Kong

11.3.5 Study On Dynamics Of Multi-Layers And Multi-Neurons Network (623)
Hao YF,Sun X,Wang JSH, Southeast University, China

11.4 EEG And Evoked Potentials (Poster)
WED 14:30-15:45, Grand Ballroom

11.4.1 EEG Decomposition And Denoising Using Wavelet Transform (522)
Zhou WD,Hao XW, Shandong University, China,

11.4.2 A Detecting Method Of Epilepsy By Chaotic Filtering In Sleep EEG (814)
Li CY,Chen QH,Jiang GT, Tongji University, China

11.4.3 Application Of Boundary Element Method In EEG (699)
Song CHY,Bai XM,He SHJ,Li Y,Rao LY,Yan WL, Hebei University Of Technology, China

11.4.4 A Novel EEG Feedback System (542)
Zhou WD,Wang ZHJ, Shandong University, China

11.4.5 Quantitative Analysis Of The Evoked Field Potential On Hippocampal Slice (718)
Wang J,Shou CH,Zheng XX, Zhejiang University, China

11.4.6 Estimate Of Brain Electric Activities By A Fourth-Order Cumulant Algorithm (611)
Yao DZH,Li YJ,Zeng M, University Of Electronic Science And Technology Of China, China

11.4.7 A System Of Real-Time Time-Frequency Analysis For EEG Monitoring (547)
Zhou WD,Zhou J, Shandong University, China

11.4.8 Using Nonlinear Dynamical Approaches Of EEG Signals To Characterize Anesthetic States (690)
Jia WY,Wang BG,Cao HY,Li Y, Qin B,Zhang G,Kai OY, Capital University Of Medical Sciences, China

11.5 Neural Information Processing (Poster)
WED 14:30-15:45, Grand Ballroom

11.5.1 Wavelet Based Study About The Reduction Of The Stimulus Artifact In Transient Evoked Otoacoustic Emissions (577)
Gong Q,Ye DT,Guo LS,Liu B,Liu C, Tsinghua University, China

11.5.2 Single Trial Estimation Of Event-Related Potentials Based On Adaptive Median Filter (590)
Qi CH,Chang CH,Liang DQ,Jiang HY, Xi'an Jiaotong University, China

11.5.3 Non-linearity In The EEG of Schizophrenic Patients: Testing And Interpretation (579)
Lee YJ,Zhu YSH,Shen MF,Thakor NV,Wang Y, Shanghai Jiaotong University Shanghai, China

11.5.4 Simplification Of High Dimensional Chaos In EEG (561)
Song Y,Tian X, Tianjin Medical University, China

11.5.5 To Realize The Single Extraction Of Auditory Induced Potential By Wavelet Transformation (531)
Sun Y,Ye Y, Shanghai Medical Apparatus College,China

11.5.6 Analysis Of EEG Based On The Complexity Measure (636)
Wang P,Zheng XL,Zheng EX,Dong WW,Wang YH, Chongqing University, China

11.5.7 A Chaotic Circuit Simulates The Function Of Biological Ssense Organ (703)
Fan YL,Zhang H,Li Y,Tong QY, Zhejiang University, China

11.6 Neural Networks II (Poster)
WED 14:30-15:45, Grand Ballroom

11.6.1 Application Of An Olfactory Model Simulation To An Artificial Nose System For Vapor Recognition (692)
Xu Y,Wang P,Gu YP, Zhejiang University, China

11.6.2 A Neural Network Based Method For Differential Diagnosis Of Solid Breast Tumors (778)
Koushik K, Sri Venkateswara College of Engineering, Pennalur, India

11.6.3 Morse-Code Auto-Recognition With Neural Network System For Person With Disabilities (80)
Fuh DT,Luo CH, No. 1 Road University Tainan City, Taiwan

11.6.4 Designing Music According To A Certain Style With Neural Networks (691)
Kai OY,Jia WY, Capital University Of Medical Sciences, China

11.7 Neural Modeling And Instrumentation (Poster)
WED 14:30-15:45, Grand Ballroom

11.7.1 Modeling Of Magnetic Stimulation Of Bent Peripheral Nerve (521)
Qiao QL,Wang XH,Saxby P,Wang Mingshi, Tianjin University, China

11.7.2 A Kind Of Proof Technique Of Activity Source Localization With EEG Signal (784)
Jiang GT,Li CY,Zhang ZL, Tongji University, China

11.7.3 A Fast Solution Method For Electromagnetic Inverse Problems In Biomedicine (687)
Wu Q, Shen XQ,Yan WL, He SHJ, Song CHY, Hebei University Of Technology, China

11.7.4 Development Of A Matlab-Based Software System For Realistic Geometry BEM Head Modeling (740)
Zhang X,Sasaki H,Towle VL,Alperin N,Lian L,He B, University Of Illinois, USA

11.7.5 A Completely Programmable Transcutaneously Controlled Multichannel Urinary Prosthesis (894)
Mouine J, Brunner D, University Of Sherbrooke, CANADA

11.7.6 An Advanced Cochlear Prosthesis Stimulation Algorithm Based On A Finite Set Of Stimulation Sequences (865)
Mouine J, Chtourou Z, University Of Sherbrook, CANADA

Theme 13: Emerging Technologies In Biomedical Engineering

***Chairs**: S Ueno (Japan), Y Miyazaki (Japan), VR Singh (India)*

Session 13.1: Magnetic Resonance Imaging, Progress In The 20th Century And Horizons In The 21st Century
WED 13:00-14:30, Dangui Building
Chair: Norio Iriguchi, University of Tokyo, Japan
Co-Chair: S Ueno, University of Tokyo, Japan

13.1.1 Mind Reading In The 21st Century: Functional MRI Studies Of Human Action And Perception (899)
Menon RS, The John P. Robarts Research Institute, Canada

13.1.2 Holographic Reconstruction Of MR Images Using A Liquid Crystal Spatial Light Modulator (23)
Ito S,Yamada Y,Kamimura Y, Utsunomiya University, Japan

13.1.3 Temperature And Velocity Measurements In Complex Materials In Thermal Engineering (752)
Ogawa K, Keio University, Japan

13.1.4 Non-Invasive MR Thermography (788)
Kuroda K, Tokai University Research Institute Of Science And Technology, Japan

13.1.5 Phosphorous-31 MRI And Clinical Applications (71)
Nakamura K,Fujimoto T,Yatsushiro K,Noguchi S, Wakimaru N,Matsumoto T, Fujimotohayasuzu Hospital, Japan

13.1.6 Electrical Properties Of Tissues Revealed By MRI Techniques (795)
Iriguchi N,Ueno S, University Of Tokyo, Japan

Session 13.2 Evolution In Biomedical Systems (Oral)
THU 8:00-9:30, Shenshi Room
Chair: VR Singh, National Physical Laboratory, India

13.2.1 Emerging Technologies In Biomedical Engineering (811)
McQuiston BK, YSI, USA

13.2.2 Development Of Portable Ultrasonic Lithotripters (883)
Singh VR, National Physical Laboratory, India

13.2.3 A New Strain Estimation Method Utilizing The Matched Filters Based On WT For Elasticity Imaging (546)
Cui YY,Wan MX,Zhen B, Xi'an Jiaotong University, China

13.2.4 Monitoring Appearance Of Electric Discharge Inside Human Body By Integrated System For Visualization EMF Effects On Humans (793)
Loskovska S,Ololoska-Gagoska L,Janev Lj, Faculty Of Engineering, Skopje, Macedonia

13.2.5 A Study For A New Diagnostic And Rehabilitation Method For Dementia Using Miosis By Light-Reflex (802)
Shi XM,Guo Y,Uchiyama H,Fukumoto I, Nagaoka University Of Technology, Japan

13.2.6 Mathematical Morphology -Based Clustering and Feature Extraction Technique For Classification Of Microcalcifications In A Digital Mammogram (787)
Bhajammanavar VM,Kwoh CK,Krishnan SM, Nanyang Technological University, Singapore

Session 13.3 New Approaches To Biomedical Imaging And Detection (Oral)
THU 9:50-11:20, Dangui Building
Chair: S Ueno, U of Tokyo, Japan
Co-Chair: Wang Mingshi, Tianjin University, China

13.3.1 Study On The Effects Of Magnetic Stimulation On Cell Spontaneous Discharge Of Median Raphe Nuclei Of Rabbit (737)
Wang MSH, Wang XM, Han JX, Tianjin University, China

13.3.2 A New Approach For Detecting And Delineation Of QRS Complex For PVC Detection (748)
Misra S, Kwoh CK,Krishnan SM, Nanyang Technological University, Singapore

13.3.3 A Current Density Mapping Approach For The Design Of Clinical MRI Magnets (516)
Zhao H,Crozier S, University Of Queensland, Australia

13.3.4 A New Objective Approach To Diagnose Dementia By Pupillary Light Reflex Method (785)
Fukushima S,Shi XM,Tuchida Y,Guo I,Uchiyama H, Fukumoto I,Suzuki K,Murakami S,Nakajima R, Matsushita Electric Works, Japan

13.3.5 ECG Beat Classification By A Novel Hybrid Neural Network And Wavelet Transform (897)
Olmez T,Dokur Z, Istanbul Technical University, Turkey

Section 13.4 Emerging Technologies In Biomedical Engineering (Poster)
WED 14:30-15:45, Grand Ballroom

13.4.1 Microscopic Study Of Gall Bladder Stones (867)
Singh VR,Kaur P, National Physical Laboratory, India

13.4.2 Ultrasonic Characteristics Of Leiomyoma, A Uterine Tumor, In Vitro (886)
Singh VR,Bhatia K(G), National Physical Laboratory, India

13.4.3 Infra-red Study Of Human Teeth (866)
Singh VR,Kumar S,Bansal V, National Physical Laboratory, India

13.4.4 A Nonlinear Least Squares Method For Microwave Tomography With Tikhonov Regularization (797)
Gong X, Wang YM, Zhejiang University, China

13.4.5 Study On An In-Vivo And Real-Time Method To Measure Blood Viscosity (736)
Wang XM,Han JX,Wang MSH, Tianjin University, China

13.4.6 Focusing-Analysis Of Induced Electric Field In Magnetic Brain Stimulation (757)
Shen SH, Zheng XL, Chongqing University, China

13.4.7 Watermarking Using Chaotic System (609)
Mao YD, Li CH, Xiamen University, China

13.4.8 Improving Assembly Of Oligonucleotide On Slides Using Glutaraldehyd (810)
Li J, Wang H, Fan KK, Zhao YJ, Zhang XL, Cheng L, Lu ZH, Southeast University, China

13.4.9 Computer Simulation And Experimental Research Of An Olfactory Model (697)
Xu Y, Li R, Wang P, Zhejiang University, China

13.4.10 3D Finite Element Thermal Modelling Of The Human Body Under Ultrasound Surgery And Hyerperthermia (839)
Li GW,Chen YZH, Shanghai Jiaotong University, China

13.4.11 Development Of The Multiple Heating Pad With The Artemisia Patch For Moxibustion Remedy (53)
Jo BK,Yoon DE,Kim JH,Seo JP,Kong GH,Kim ES,Kim HY,Bae JI,Kim JK, Lee DC,Lee HJ,Kim NM,Kim JO,Park SJ,Nam WG,Kim K,Kwon MJ,You MG, Pukyong National University, KOREA

13.4.12 The Experimental Estimation Of The Effect On The Body Heat By The Moxa Cauterizer And The Artemisia-Lotion (747)
Jo BK,Yoon DE,Kim JH,Seo JP,Kong GH,Kim ES,Kim HY, Bae JI,Kim JK,Lee DC,Lee HJ,Kim NM,Kim JO,Park SJ, Nam WG,Kim K,Kwon MJ,You MG, Pukyong National University, The Republic Of Korea

13.4.13 Design Of A Practical And Efficient LIMS For Clinical Laboratories (671)
Wang ZHG, Zhang ZHG, Tsinghua University, China

13.4.14 Rehabilitation Of Cochlear Implant Candidates By A Versatile Design Of An Eight-Channel-Stimulator (904)
Hamida AB, University of Sfax, Tunisia

13.4.15 New Design Of Biomedical Electrodes For Physiological Data Acquisition (905)
Asim R, Harris M.B, Sikander A.S, Masroor A.K, Fahd U, Sir Syed University Of Engineering &Technology

13.4.16 Design Of Healthcare Enterprise Intergration Platform (591)
Lu XD,Duan HL,Lu WX, Zhejiang University, China

13.4.17 Long Bone Strength Index Predicts Better Its Breaking Strength Than Bone Mineral Density (798)
Qin L,Siu WS,Leung KS, The Chinese University Of Hong Kong, Hong Kong

13.4.18 Application Of Computer Aided Design For Dental Prosthetics (781)
Gao JX,Ding ZQ,Wu JG,Zhang XY, Tongji University, China

Special Session: Student Paper Competition (Poster)

TUE 14:45-15:45, Grand Ballroom

SS-1 Analysis Of Breast Bio-Impedance Using A Finite Element Method (629)
Zhao X,Ihara A,Kinouchi Y,Morimoto T,Takeuchi M, The University Of Tokushima, Japan

SS-2 The Development Of A Digital EEG Telemetry System (526)
Peng S, Zhou H, Zhang W, Luo Q, Fudan University, China

SS-3 Evaluation Of The Noise Level And SNR In Laplacian ECG During Ventricular Deploarization (738)
Lian J, Srinivasan S, Tsai HC, Wu D, He B, University Of Illinois, USA

SS-4 Electrocardiogram Simulation Considering The Displacement Of The Equivalent Dipole (560)
Zhang LF,Wu GH, Zhejiang University, China

SS-5 Combining Independent Component Analysis with Time-Scale Analysis in Single-Trial VEP Estimation (600)
Zhu CHF, Hu GSH, Tsinghua University, China

SS-6 Fractal Characters Study of Transient Evoked Otoacoustic Emissions (525)
Wu ZhX, Chai XY, Yu P, Cheng JZH, Xi'an Jiaotong University, China

SS-7 High Resolution EEG: Three Dimensional Spline Laplacian Imaging In A Realistically Shaped Head Model (739)
Lian J,Li G,Sasaki H,He B, University Of Illinois, USA

SS-8 MRI Reconstruction Using A High-Rank Complex Domain Neural Network (535)
Bian X, Wang YM, Zhejiang University, China

SS-9 Computerized Ananlysis Of Trans-valvalue Doppler Flow Patterns Using Fuzzy Logic Techniques (786)
Gong J, Kirsner R, Cameron J, MacIsaac A,Drossos C, La Trobe University, Bundoora, Australia

SS-10 A Neural Network Approach To Microwave Tomography (680)
Gong X, Wang YM, Zhejiang Univeristy, China

SS-11 Analyzing ECS For Perinatal Pregnant And Fetus (548)
Lee ZY, Xie ZX, Wei YS, Yang JC, Chongqing University Of Medical Sciences, China

SS-12 The Effect of Jujuboside A On Hippocampal Pyramidal Cell In Vitro (717)
Shou CH, Wang J, Zheng XX, Zhejiang University, China

SS-13 Data Management And Analysis For Gene Chip (837)
Zhang XL, Xie JM, Sun X, Wang H, Lu ZH, Southeast University, China

SS-14 Investigation Of The Melting Curve Of Immobilized Oligonucleotide (777)
Wang H, Li J, Zhang XL, Zhang M, Zhao YJ, Lu ZH, Southeast University, China

SS-15 Assessment Of Leg-To-Leg Muscle Mass By Bioeletrical Impedance: A New Method Based On MRI Ddata Analysis (536)

Ding HY, Sun YG, Ye DT, Tsinghua University, China

SS-16 EEG Data Compression Based On Modified LADT Algorithm (527)
Peng S, Fang ZX, Wei DM, Fudan University, China

SS-17 Jujuboside A Inhibited Penicillin G Stimulated Releasing Of Glutamate And Nitric Oxide In Hippocampal Neurons (762)
Chen XCH, Sheng CH, Zheng XX, Zhejiang University, China

SS-18 Use Of Biomechanics In A Robotic Arm Manipulator (901)
Haris MB, Asim R, Sikander AS, Masroor AK, Fahd U, Sir Syed University Of Engineering And Technology, Pakistan

SS-19 Calculation Of The Realistic Head Model With Anisotropic Conducting Media By The Finite Volume Method (902)
Xie YQ, Ma XSH, Yuan JSH, Cheng SHP, Tsinghua University, China

SS-20 A GA-Based Optimization Method On Target Temperature Control In RF-Capacitive Hyperthermia (506)
Zhu X, Wan BK, Cheng XM, Zhang LX,Lin SHY,Wang W, Tianjin University, China

SS-21 3-D Micro Channel System In A Quartz Cube For Biomedical Applications (607)
Qin SHJ, Li WJ, The Chinese University Of Hong Kong, Hong Kong

SS-22 Edge Based Noise Reduction Of Ultrasound Prostate Images Using The Wavelet Transfrom (67)
Zhao FW, DeSilva CJS, The University Of Western Australia, AUSTRALIA

SS-23 Use Of Functional MRI To Evaluate Correlation Between Acupoints And Brain Cortex Activities: Comparison Between Conventional And Electrical Acupuncture. (528)
Li G, Wong KKK, Leung MCT,Ma QY,Yang ES,Chan JHM,Wong V,Li R., The University Of Hong Kong, Hong Kong

SS-24 Variation Of Chaotic And Spectral Features Of Heart Period Signal With Age (549)
Lee ZY, Xie ZX, Xu XH, Yin YH, Wei YS, Xie DM, Chongqing University Of Medical Sciences, China

SS-25 Real-Time Adaptive Reduction of Heart Sounds from Lung Sound Recordings Using a New Electronic Stethoscope (559)
Yip L, Zhang YT, The Chinese University Of Hong Kong, Hong Kong

SS-26 A WAP-Based Patient Monitoring System (599)
Hung K, Zhang YT, The Chinese University Of Hong Kong, Hong Kong

SS-27 The Admissible Condition Of Bionic Wavelet Transform And It's Inverse Transform (648)
Yao J, Zhang YT, The Chinese University Of Hong Kong, Hong Kong

SS-28 The Effects Of Synaptic Capacitance And Ionic Pump On The Excitability Of The Membrane (674)
Hu XL, Zhang YT, The Chinese University Of Hong Kong, Hong Kong

SS-29 Binocular Convergence In Disparity Depth Computation Of Panum (724)
Guo XH,Ge JG,Zhang ZHL, Hong XF, Zhejiang University, China

SS-30 Studies On Visual Evoked Potentials Of Stereoscopic Depth Cognition (725)
Guo XH,Ge JG,Zhang ZHL,Hong XF, Zhejiang University, China

SS-31 Multi-parameters Multi-levels Information-fusion Architecture In Modern Biomedical Instrument System (727)
Liu F,Ge JG, Zhejiang University, China

SS-32 The Study Of Mandarin Speech Signal Based On Fractal (731)
Bu FL,Yu P,Wu ZHX,Cheng JZH, Xi'an Jiaotong University, China

SS-33 The Pattern Recognition Of Fractal Parameters Based On Genetic Algorithm (745)
Yu P,Wu ZHX,Cheng JZH, Xi'an Jiaotong University, China

SS-34 The Language Healing System Of Deaf Children Based On Wavelet Transform (791)
Wang B, Ma L,Bu FL,Cheng JZH, Xi'an Jiaotong University, China

SS-35 Hardware Support Flexible Low Overhead Fault Tolerance Scheme In Scalable Shared-Memory Multiprocessors (816)
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SS-36 Biomedical MEMs With ASE Technique (884)
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