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# **Part I Conference Schedule**

#### Tuesday Aug. 18, 2015

| Time        | Activity     | Location   |
|-------------|--------------|--|
| 08:00-19:00 | Registration | Lobby of Mecure Shanghai Royalton( Royalton Hotel) |

Notes: Please take Participating Card for the venue and Tour Card for the tour.

#### Wednesday Morning, Aug. 19

| Time        | Activity Location: 5 <sup>th</sup> floor, Crown Hall   |
|-------------|--|
| 08:30-08:40 | Opening Ceremony   |
| 08:40-09:25 | Keynote Speech 1: An LMS Algorithm for Characterization of BioSignal Shape<br>Dr. Edward J. Ciaccio  |
| 09:25-10:10 | Keynote Speech 2: Computer-Aided Diagnosis of Myocardial Infarction Using Ultrasound Images with Second-Order Statistics, DWT and HOS Methods:  A Comparative Study  Dr. Ng Yin Kwee |
| 10:10-10:30 | Pose for a Group Photo and Coffee Break  |
| 10:30-11:15 | Keynote Speech 3: Surgical Imaging, Biophotonics and Endoscopy  Dr. Daniel Elson   |
| 11:15-12:00 | Keynote Speech 4: Early Detection and Treatment of Metastatic Breast Cancer<br>Prof. Zheng-Rong Lu   |

#### Wednesday Noon, Aug. 19

| 12:30-13:30 | Buffet Lunch | Location: 2 <sup>nd</sup> floor, Hong Kong Hall |
|-------------|--------------|---|
|-------------|--------------|---|

#### Wednesday Afternoon, Aug. 19

| Time  | Poster Presentation   | Location                            |
|---|---|-------------------------------------|
| 14:00-14:45                                     | 14:00-14:45 Keynote Speech 5: The Importance of Scientific Journals for Advancement in Biomedicine  Prof. David De Jong |                                     |
| 14:45-15:00                                     | 14:45-15:00 Coffee Break  |                                     |
| 15:00-16:00                                     | Poster 1: Biomedical Engineering  |                                     |
| 15.00-16.00                                     | Poster 2: Biomedical Imaging & Signal Processing  | ord cr                              |
| 16:00 17:00                                     | Poster 3: Biomaterial   | 3 <sup>rd</sup> floor, Royal Hall I |
| 16:00-17:00 Poster 4: Biomechanical Engineering |   |                                     |

#### Wednesday Evening, Aug. 19

| 17:00-17:45  | Buffet Dinner Location: Oasis Tower Hote |                                      |
|--|--|--------------------------------------|
| 18:00-21:00 Gathering at the lobby of Oasis Tower Hotel at and Huangpu River Cruises |  | :45 and going for a trip to the Bund |
|  |  |                                      |

#### Thursday Morning, Aug. 20

| Time Oral Presentation |  | Location                                 |
|------------------------|--|--|
|                        | Oral 1: Biomedical Engineering                     | 4 <sup>th</sup> floor, Hugo Hall         |
| 08:00-12:00            | Oral 2: Biomedical Imaging & Signal Processing (1) | $3^{rd}$ floor, Royal Hall $\mathrm{II}$ |
|                        | Oral 3: Biomaterial                                | 4 <sup>th</sup> floor, Zola Hall         |

#### Thursday Noon, Aug. 20

| 12:00-13:00 | Buffet Lunch | Location: 2 <sup>nd</sup> floor, Hong Kong Hall |
|-------------|--------------|---|
|-------------|--------------|---|

#### Thursday Afternoon, Aug. 20

| Time        | Oral Presentation                                  | Location                             |
|-------------|--|--------------------------------------|
| 14:00-17:30 | Oral 4: Biomechanical Engineering                  | 4 <sup>th</sup> floor, Hugo Hall     |
| 14.00-17.30 | Oral 5: Biomedical Imaging & Signal Processing (2) | 3 <sup>rd</sup> floor, Royal Hall II |

#### Thursday Evening, Aug. 20

| 18:00-19:30 | Awarding Dinner  | Location: Oasis Tower Hotel  |
|-------------|------------------|------------------------------|
| 10.00 15.50 | Awaranig Dillici | Education: Oasis lower moter |

#### Friday, Aug. 21

|             | Royalton Hotel → Zhujiajiao Ancient Town → Having supper at Shanghai Classical |
|-------------|--|
| 07:00-18:00 | Hotel → The Oriental Pearl TV Tower → the Old City God's Temple → Royalton     |
|             | Hotel  |

# 大会日程(中文版)

#### 2015年8月18日-21日

| 时间          | 日程安排 | 地点                  |
|-------------|------|---------------------|
| 08:00-19:00 | 注册报到 | 上海虹桥美仑美居酒店(上海美仑大酒店) |

注:会议期间请随身携带参会胸牌,旅游需出示旅游券。

# 8月19日,星期三上午

| 时间          | 日程安排   | 地点: 皇冠厅(5楼)        |
|-------------|--|--------------------|
| 08:30-08:40 | 开幕式  |                    |
| 08:40-09:25 | 主题报告 1: An LMS Algorithm for Characterization of<br>报告专家: Edward J. Ciaccio 博士   | BioSignal Shape    |
| 09:25-10:10 | 主题报告 2: Computer-Aided Diagnosis of Myocardia<br>Images with Second-Order Statistics, DWT and HOS Me<br>报告专家: Ng Yin Kwee 博士 | •                  |
| 10:10-10:30 | 与会代表集体合影及茶歇  |                    |
| 10:30-11:15 | 主题报告 3: Surgical Imaging, Biophotonics and Endos<br>报告专家: Daniel Elson 博士  | сору               |
| 11:15-12:00 | 主题报告 4: Early Detection and Treatment of Metast<br>报告专家: Zheng-Rong Lu 教授  | atic Breast Cancer |

#### 8月19日,星期三中午

| 时间          | 日程安排 | 地点      |
|-------------|------|---------|
| 12:30-13:30 | 自助午餐 | 香港厅(2楼) |

# 8月19日,星期三下午

| 时间          | 日程安排   | 地点   |  |
|-------------|--|--|--|
| 14:00-14:45 | 主题报告 5: The importance of scientific journals for advancement in biomedicine<br>报告专家: David De Jong 教授 | 皇冠厅(5 楼)                                     |  |
| 14:45-15:00 | 茶歇   | 凯旋一厅(3 楼)                                    |  |
| 15:00-16:00 | 张贴报告 1: 生物医学工程   |  |  |
|             | 张贴报告 2: 生物医学影像   | 凯旋一厅(3 楼)                                    |  |
| 16:00-17:00 | 张贴报告 3: 生物力学工程   | 10 10 15 15 15 15 15 15 15 15 15 15 15 15 15 |  |
|             | 张贴报告 4: 生物材料   |  |  |

#### 8月19日,星期三晚上

| 时间          | 日程安排                      | 地点     |
|-------------|---------------------------|--------|
| 17:00-17:45 | 自助晚餐                      | 绿洲大厦酒店 |
| 18:00-21:00 | 夜游外滩及黄浦江(17:45 在绿洲酒店大厅集合) |        |

#### 8月20日,星期四上午

| 时间          | 日程安排              | 地点       |
|-------------|-------------------|----------|
|             | 口头报告 1: 生物医学工程    | 雨果厅(4楼)  |
| 08:00-12:00 | 口头报告 2: 生物医学影像(1) | 凯旋二厅(3楼) |
|             | 口头报告 3: 生物材料      | 左拉厅(4楼)  |

#### 8月20日,星期四中午

| 时间          | 日程安排 | 地点      |
|-------------|------|---------|
| 12:00-13:00 | 自助午餐 | 香港厅(2楼) |

# 8月20日,星期四下午

| 时间          | 日程安排              | 地点       |
|-------------|-------------------|----------|
| 14.00 17.20 | 口头报告 4: 生物力学工程    | 雨果厅(4楼)  |
| 14:00-17:30 | 口头报告 5: 生物医学影像(2) | 凯旋二厅(3楼) |

# 8月20日,星期四晚上

| 时间          | 日程安排 | 地点     |
|-------------|------|--------|
| 18:00-19:30 | 颁奖晚宴 | 绿洲大厦酒店 |

# 8月21日,星期五

| 07:00-18:00 | 上海一日游: 上海虹桥美仑美居酒店(上海美仑大酒店)→朱家角镇→上海老饭店<br>就餐→东方明珠广播电视塔→城隍庙→美仑大酒店 |
|-------------|---|
|-------------|---|

#### **Part II Invited Keynote Speakers**

**Keynote Speaker: Dr. Edward J. Ciaccio** 



Columbia University, USA



Dr. Edward J. Ciaccio is a computational biologist and biomedical engineer. Since 2010 he has been a faculty member in the Department of Medicine - Division of Cardiology at Columbia University Medical Center in New York City, and since 2014 he holds the top-level rank of senior research scientist. Dr. Ciaccio's main areas of research focus are biosignal analysis (cardiac

electrophysiology), and bioimage analysis (videocapsule studies for celiac disease). Dr. Ciaccio has received an Established Investigator Award from the American Heart Association (1998) and a Paper of the Year Award from Heart Rhythm Journal (2008). He became editor-in-chief of Computers in Biology and Medicine, published by Elsevier, in January 2013. He is also an editorial board member for BioMedical Engineering OnLine, Heart Rhythm, Journal of Cardiovascular Electrophysiology, World Journal of Gastroenterology, and World Journal of Gastrointestinal Endoscopy. Dr. Ciaccio reviews for over 30 scientific journals and has published over 80 peer-reviewed articles in his field. His current research focus includes the development of a electrical activation wavefront curvature model of reentrant ventricular tachycardia. This work may also be applicable to the mechanism of induction and maintenance of other heart arrhythmias. He is also working on a book entitled 'Handbook of Intelligent Bioengineering Systems' which will include methods and results for fast analysis of biomedical data.

Keynote Speaker: Dr. Ng Yin Kwee



Nanyang Technological University, Singapore



Dr. Ng Yin Kwee received his Ph.D. from Cambridge University, UK and is an associate professor at Nanyang Technological University, Singapore. He serves as editor for eight international journals and as Editor-in Chief for two SCIE indexed Journals. His research interests are in thermal imaging,

biomedical engineering, breast cancer detection, and computational fluid dynamics and heat transfer. Ng has had more than 250 ISI journal articles and 80 conference papers and 11 books published including "Compressor Instability with Integral Methods" by Springer (2007); "Cardiac Pumping and Perfusion Engineering" by WSPC Press (2007); "Imaging and Modelling of Human Eye" by Artech House (2008); "Distributed Diagnosis and Home Healthcare, D2H2 v.1 & 3" by ASP (2009, 2012); "Performance Evaluation in Breast Imaging, Tumor Detection & Analysis" by ASP (2010);

"Computational Analysis of Human eye with Applications" by WSPC (2011); "Multimodality Breast Cancer Imaging" by SPIE (2013); "Human eye imaging and modeling", "Image Analysis and Modeling in Ophthalmology" & "Ophthalmology Imaging and Applications" by CRC (2013, 2014). He has supervised more than 6 researchers as well as over 25 Master and PhD's students. He has amassed over SGD\$5M worth of research funding from various organizations in the capacity of the principal investigator.

#### **Keynote Speaker: Dr. Daniel Elson**



#### **Dr. Daniel Elson**

Imperial College, London, UK

Dr. Daniel Elson is a Reader (associate professor) in the Hamlyn Centre for Robotic Surgery, Department of Surgery and Cancer and the Institute of Global Health Innovation. Research interests are based around the development and application of photonics technology with endoscopy for surgical imaging applications, including multispectral imaging,

polarization-resolved imaging, fluorescence, and laser speckle contrast imaging. Further projects include work on the development of illumination and vision systems for endoscopy combining miniature light sources such as LEDs and laser diodes with computer vision techniques for structured lighting and tissue surface reconstruction. These devices are finding application in minimally invasive and in the development of new flexible robotic assisted surgery systems. This research has been funded by the national and European funding bodies and charities, as well as collaborations with industrial partners such as Karl Storz, Covidien, Cymtec and Intuitive Surgical. Dr. Elson has published over 60 peer reviewed journal articles, nine book chapters and has contributed to more than 200 conferences.

#### **Keynote Speaker: Prof. Zheng-Rong Lu**



Prof. Zheng-Rong Lu

Imperial College, London, UK

Dr. Zheng-Rong Lu is M. Frank Rudy and Margaret Domiter Rudy Professor of Biomedical Engineering at Case School of Engineering, Case Western Reserve University. Dr. Lu received his B.S. and M.S. in Chemistry from Lanzhou University, and Ph.D. in Chemistry from Lanzhou Institute of

Chemical Physics, Chinese Academy of Sciences, Lanzhou, China. In 1992, Dr. Lu was recruited as Associate Professor of Chemistry and promoted to Professor of Chemistry shortly after at Wuhan University in China. In 2002, Dr. Lu was recruited as Assistant Professor in Department of Pharmaceutics and Pharmaceutical Chemistry, University of Utah, and promoted to a tenured

Associate Professor in 2006. Dr. Lu's research efforts involve molecular imaging, novel MRI contrast agents, drug delivery systems, and multifunctional delivery systems for nucleic acids. He has over 140 peer-reviewed scientific publications, eight book chapters, and four US patents. He is a Principal Investigator of several major grants from the NIH. He has served on numerous NIH study sections, scientific advisory board of Pharmaceutical Research, Molecular Pharmaceutics, and American Journal of Nuclear Medicine and Molecular Imaging. He is a Fellow of the American Institute for Medical and Biological Engineering.

**Keynote Speaker: Prof. David De Jong** 



#### **Prof. David De Jong**

University of São Paulo, Brazil

David De Jong Ph.D. (Cornell University) is a geneticist and entomologist. He has been a faculty member of the Ribeirão Preto School of Medicine in the University of São Paulo since 1988, where he teaches genetics, evolution and scientific writing in the Genetics Department. He has also given scientific writing courses in various universities, throughout Brazil. Dr. De Jong's

principal areas of research are honey bee pathology, behavior, nutrition and genetics. He is an international consultant in apiculture, having participated in projects for FAO (Food and Agriculture Organization of the United Nations), IDB (Interamerican Devolopment Bank) and various other organizations in the majority of the countries in Central and South America, as well as South Korea, and has given talks and courses as an invited speaker in more than 20 countries. Dr. De Jong was associate editor of the Brazilian Journal of Genetics (renamed Genetics and Molecular Biology) from 1988 to 2001 and associate editor of Genetics and Molecular Research from 2002 to 2015. He is the author of over 100 refereed papers and has also authored several books and book chapters. He is known and consulted as a specialist on (honey bee) colony collapse disorder (CCD), Africanized honey bees, and honey bee pathology, especially because his research on the parasitic mite, Varroa destructor, the principal agent causing bee mortality worldwide.

# **Part III Invited Keynote Speeches**

#### Keynote Speech 1 An LMS Algorithm for Characterization of BioSignal Shape

**Speaker: Dr. Edward J. Ciaccio** *Columbia University, USA* 

Time: 08:40-09:25, Wednesday Morning, Aug. 19

**Location:** 5<sup>th</sup> floor, Crown Hall

Abstract:

Shape is an important biomedical signal component which is often overlooked in feature extraction, signal classification, and matching schemes. Presently, simple statistical and syntactic metrics are often used to capture signal morphology, such as mean and variance calculation and peak-counting. However, the essence of signal shape is not well elucidated by these methods. It would therefore be useful to improve the calculation paradigm. A biomedical signal can be defined by its extrinsic shape (x-axis and y-axis shift and scale) and intrinsic shape (shape after normalization of extrinsic features). To increase efficacy for morphologic characterization, a least mean squares (LMS) algorithm can be implemented to adaptively seek optimal performance criteria using the method of differential steepest descent. Equations for normalization of x-axis and y-axis shift and scale should be formulated to normalize and measure extrinsic signal shape, enabling the remaining, intrinsic signal shape to be identified.

As an example, fractionated atrial electrograms, which are signals with multiple random deflections obtained from the endocardial heart surface with a standard ablation catheter during electrophysiologic study, can be utilized to demonstrate the new algorithm efficacy. These signals were acquired with a standard ablation catheter at a 977 Hz sampling rate in 10 paroxysmal and 10 persistent atrial fibrillation patients. Each original signal was matched with a version of itself that had been altered in x-axis and y-axis shift and scale. Over 24 trials, adaptation of the altered to the original signals, using the new algorithm with four weights, was compared to adaptation using the Widrow-Hoff LMS algorithm with four tapped delays. Time for convergence and error after convergence were compared. The new LMS algorithm was also applied to electrocardiograms acquired from atrial fibrillation patients, for atrial wave enhancement and for monitoring of extrinsic changes in signal shape.

Based on the mathematical formulation of the new LMS algorithm, y-shift and y-scale adjustments were shown to be equivalent to the scalar form of the Widrow-Hoff LMS algorithm. However, for x-shift and x-scale adjustment, rather than implementing a long tapped delay line as is utilized by the Widrow-Hoff LMS algorithm, the new method is comprised of a two-weight system. After convergence, the matching error for paroxysmal electrograms averaged  $0.46 \pm 0.49 \mu V^2/s$ ample for the new LMS algorithm versus  $0.72 \pm 0.35 \mu V^2/s$  sample for the Widrow-Hoff LMS. The matching error for persistent electrograms averaged  $0.55 \pm 0.95 \mu V^2/s$ ample for the new LMS algorithm versus  $0.62 \pm 0.55 \mu V^2/s$ ample for the Widrow-Hoff LMS. The mean convergence time was approximately 1 second (977 discrete sample points) for both algorithms. The new LMS algorithm was useful for electrocardiogram F wave enhancement by subtraction of an adaptively weighted prototypical reference. The extrinsic weighting over 25s demonstrated that patient respiration and other time-varying functions can be identified and monitored.

Based on the comparative analysis, the new LMS algorithm is able to normalize extrinsic electrogram signal shape and to enhance the electrocardiogram F wave in atrial fibrillation patients. The new LMS weighting at convergence provides an estimate of the degree of similarity between any two signals in terms of x-axis and y-axis shift and scale. The algorithm is computationally efficient with low estimation error. Applications for this implementation include monitoring of extrinsic and intrinsic signal shape, as well as enhancement of low-level signal components when a reference can be used for adaptive cancellation of larger masking features.

# Keynote Speech 2 Computer-Aided Diagnosis of Myocardial Infarction Using Ultrasound Images with Second-Order Statistics, DWT and HOS Methods: A Comparative Study

Speaker: Dr. Ng Yin Kwee

Nanyang Technological University, Singapore
Time: 09:25-10:10, Wednesday Morning, Aug. 19

**Location:** 5<sup>th</sup> floor, Crown Hall

#### **Abstract:**

Myocardial Infarction (MI) or heart attack is the most common type of coronary heart disease (CHD) and is the leading cause of cardiac death worldwide. Precise and timely identification of MI and extent of muscle damage helps in early treatment and reduction in the time taken for further tests. MI diagnosis using 2D echocardiography is prone to inter/intra observer variability in the assessment. Therefore, a computerised scheme based on image processing and artificial intelligent techniques can reduce the workload of clinicians and improve the diagnosis accuracy. A Computer-Aided Diagnosis (CAD) of infarcted and normal ultrasound images will be useful for clinicians.

In this talk, I will first discuss the application of various texture analysis methods to accurately extract the features and detect normal and infarcted myocardium using echocardiography images. In this work, the performance of CAD approach using DWT, second order statistics calculated from Gray-Level Co-Occurrence Matrix (GLCM) and Higher Order Spectra (HOS) texture descriptors are compared. The proposed system is validated using 1600 MI and 1600 normal ultrasound images, obtained from 80 patients with MI and 80 normal subjects respectively. The extracted features are ranked based on t-value and fed to the Support Vector Machine (SVM) classifier, to obtain the best performance using minimum number of features. The features extracted from DWT coefficients obtained an accuracy of 98.8%, sensitivity of 98.5%, specificity of 99%; GLCM have achieved an accuracy of 92.1%, sensitivity of 88.1%, specificity of 96%; and HOS obtained an accuracy of 98.6%, sensitivity of 98.0%, specificity of 99.2%. Among the three techniques presented HOS texture descriptor yielded the highest classification accuracy. Thus proposed CAD approach may be used as an adjunct tool to assist cardiologists in making a more accurate diagnosis on the presence of MI in hospitals and polyclinics.

### Keynote Speech 3 Surgical Imaging, Biophotonics and Endoscopy

**Speaker: Dr. Daniel Elson** *Imperial College, London, UK* 

Time: 10:30-11:15, Wednesday Morning, Aug. 19

**Location:** 5<sup>th</sup> floor, Crown Hall

#### **Abstract:**

Surgical imaging describes the application of a range of imaging, vision and optical techniques to

assist surgeons in intrasurgical decision making. In this talk I will describe how various biophotonics and optical imaging approaches may be adapted for surgical endoscopic application, including the use of multispectral imaging and polarization resolved imaging. Furthermore, the integration of these approaches with existing and new robotic platforms will be described, allowing improved ergonomics as well as better mechanical scanning of optical spectroscopic probes for more accurate optical diagnostics. A new approach for endoscopic structured lighting has also been developed for the detection of tissue surface curvatures during surgery. This work is driven by the need to provide a higher degree of control and vision for the surgeon, and to complement the standard white light reflection images.

#### **Keynote Speech 4 Early Detection and Treatment of Metastatic Breast Cancer**

Speaker: Prof. Zheng-Rong Lu

Department of Biomedical Engineering, Case Western Reserve University, USA

Time: 11:15-12:00, Wednesday Morning, Aug. 19

**Location:** 5<sup>th</sup> floor, Crown Hall

#### Abstract:

Early detection and diagnosis of high-risk cancer is critical in decision-making and tailoring effective treatment. Development of new therapeutics is essential to treat the patients diagnosed with high-risk cancer and to improve their survival and quality of life. Our lab is focused on translational development of new diagnostics and therapeutics for early detection and effective treatment of the diseases that impair and threaten human lives. We have designed and developed targeted Gd(III) based MRI contrast agents for detecting a biomarker associated with cancer metastasis and highly expressed in the extracellular matrix of malignant tumors. The targeted contrast agents specifically bind to the biomarker, resulting in high-resolution contrast enhanced molecular MRI of the tumors with a size as small as 0.5 mm and are effective for imaging and detection of micrometastases. We have also developed targeted multifunctional delivery systems to deliver therapeutic siRNAs to regulate the expression of disease related genes to effectively treat life-threatening diseases, including metastatic breast cancer. The targeted siRNA delivery system can effectively silence a target gene associated with breast cancer metastasis via systemic administration to prevent cancer progression and metastasis in mouse triple negative breast cancer models.

# **Keynote Speech 5 The Importance of Scientific Journals for Advancement in Biomedicine**

Speaker: Prof. David De Jong

Genetics Department, Ribeirao Preto Medical School, University of São Paulo, Brazil

Time: 14:00-14:45, Wednesday Afternoon, Aug. 19

**Location:** 5<sup>th</sup> floor, Crown Hall

#### **Abstract:**

Scientific journals are purveyors of knowledge. They divulge advancements in science in a way that both establishes credit for discovery and makes them available to other scientists and the public, who can use the new information. Technological advancement in all areas, including the health sciences, has helped man live better and longer. Making this knowledge available in an accessible and secure manner is a key part of this process. However, other aspects of the manner in which scientific journals deal with and transform submissions has a greater impact on how science is conducted than what is normally perceived by laymen, policy makers and even many scientists. Journal editorial boards evaluate manuscripts and those found to be potentially suitable are sent out for peer reviewer. Reviewers help determine if the research is original, pertinent, well conducted and worth publishing. They may find errors that if uncorrected would result in bad research being published that could confuse the field instead of adding useful knowledge. They also comment on the best ways to conduct research, helping the authors to improve their procedures and understanding of the field. They may point to pertinent publications unknown to the researchers that can affect or even completely change their conclusions. This process is not perfect, and mistakes are made. However, the process tends to be self correcting and has helped the health sciences advance considerably during the last 100 years. Scientists in third world countries also make important contributions, but many have difficulty publishing because of language and other limitations. Scientific journals in these countries, though often considered to be of less importance, have a key role because they help guide such authors through the publication process. These efforts should be recognized and facilitated so that research in these countries can advance and more effectively contribute to the health sciences worldwide.

#### **Part IV Poster Session**

#### Poster Presentation

#### **Materials Provided by the Conference Organizer:**

- X Racks & Base Fabric Canvases (60cm×160cm, see the figure below)
- Adhesive Tapes or Clamps

#### **Materials Provided by the Presenters:**

Home-made Posters

#### Requirement for the Posters:

- Material: not limited, can be posted on the Canvases
- Size: smaller than 60cm×160cm
- Content: for demonstration of the presenter's paper

#### **Requirement for the Presenters:**



• Stand beside his/her Poster through the Session, and discuss with the readers about his/her paper

#### Time:

• Aug. 19, 15:00-17:00

#### **Location:**

• 3<sup>rd</sup> floor, Royal Hall I

# Poster Session\_1 Biomedical Engineering

| Paper ID | Paper Title   | Author         |
|----------|---|----------------|
| CBB1030  | A passively safe cable driven upper limb rehabilitation exoskeleton   | Yanyan Chen    |
|          | Integration of multi-microarray datasets to identify chronic  |                |
| CBB1109  | obstructive pulmonary disease-related miRNAs  | Hua Lin        |
| CBB1166  | Large-scale production of recombinant plasmid pUDK-HGF for clinical application   | ChunSheng Hu   |
| CBB1187  | Small-area low-power heart condition monitoring system using dual-mode SAR-ADC for low-cost wearable healthcare systems | Young-San Shin |
| CBB1205  | Milkvetch root improves immune function in patients with acute exacerbation of COPD                                     | Donglin Jiang  |
| CBB1457  | Motion control of bacteriobots based on bacterial chemotaxis  | Shaohui Zheng  |
|          | Clilical application of GP73 for hepatocellular carcinoma with  |                |
| CBB1477  | transarterial chemoembolization combined radiofrequency   | Xinfeng Li     |
|          | albotion  |                |
|          | Laparoscopic Choledochoscopic (LC) Plasma Chock Wave  |                |
| CBB1502  | Lithotripsy in the Treatment of Intra and Extrahepatic Bile Duct  | Xinfeng Li     |
|          | Stones  |                |
|          | Effects of pH on sex organ differentiation and sexual   |                |
| CBB1527  | reproduction in the endangered aquatic fern Ceratopteris  | Yuan-Huo Dong  |
| 0004555  | pteridoides   | Cl 'l M        |
| CBB1555  | BBO Improves Tumor Detection in MRI Scanning  | Shuihua Wang   |
| CBB1571  | Outcome Analysis of Condylar Prosthesis in Large Head and Neck  | Jehn-Shyun     |
|          | Neoplasms Reconstruction  | Huang          |
| CBB1650  | Improve the Diagnosis of Atrial Hypertrophy with the Local  | Ping Ling      |
|          | Discriminative Support Vector Machine   |                |
|          | Identification of 13 blood-based gene expression signatures to  |                |
|          | accurately distinguish tuberculosis from other pulmonary  |                |
| CBB1677  | diseases and healthy controls   | Hai-Hui Huang  |
| CBB1696  | Preliminary Testing for the Markov Property of the Fifteen  | Kyung-Eun Lee  |
|          | Chromatin States of the Broad Histone Track   |                |

| CBB1708  | Development of a bacteria-based microrobot using chitosan-coated liposomes   | Van Du Nguyen      |
|----------|--|--------------------|
| CBB1725  | Smart healthcare system in dietary behavior recommendations based on physiological data  | Ying-Chieh Liu     |
| CBB1739  | Development of Biomarker Positivity Analysis System for Cancer Diagnosis Based on Clinical Data  | Peom Park          |
| CBB1763  | Expression of apolipoprotein M in human peripheral blood mononuclear cells   | Shuang Yao         |
| CBB1783  | An On-Chip Amperometric Sensor Readout Circuit with Current<br>Integrator and Redox Potential Generator for Biosensing<br>Applications                           | Shu-Yu Chang       |
| CBB1829  | Performance Evaluation of a Multichannel Fiber-optic Dosimeter to Measure Planar Dose Distribution of Diagnostic X-ray Beam                                      | Hyesu Jeon         |
| CBB1844  | Discrete virus infection model of hepatitis B virus  | Pengfei Zhang      |
| CBB1867  | Identification of dual active agents targeting 5-HT1A and SERT by combinatorial virtual screening methods  | Panpan Wang        |
| CBB1868  | Novel design for developing a compact enhanced drug penetration drug delivery device using iontophoresis technique   | Qun Wei            |
| CBB1907  | Wireless charing pillow for a fully implantable hearing aid: Design of a circular array coil based on finite element analysis for reducing magnetic weak zones   | Hyung-Gyu Lim      |
| CBB1922  | A Lightweight Interface for HL7 Messaging of Continuous Biometric Data   | Juyoung Park       |
| CBB2107  | Multichannel Visible Light Communication with Wavelength Division for Medical Data Transmission  | Wan-Young<br>Chung |
| CBB2121  | Osteogenic differentiation of three-dimensional bio-printed constructs consisting of human adipose-derived stem cells  | Xiao-Fei Wang      |
| CBB2125  | Human and Car Detection System for Blind People  | Ayat Nada          |
| CBB2145  | A preliminary study on the effect of nano hydroxyapatite on<br>human adipose- derived mesenchymal stem cells mixture 3D<br>bio-printing                          | Yang Song          |
| CBB2179  | Autonomous mobile medical service robot: scenarios of behavior and a world model   | Dmitry<br>Rogatkin |
| CBB2237  | Acoustic Assistance in Demand for the Aging on Computer Cursor Navigation  | Chi Nung Chu       |
| CBB2336  | Investigation of low-level laser therapy potentiality on proliferation and differentiation of human adipose-derived stromal cells with or without 3D bioprinting | Huaxin Sui         |
| CBB2379  | Okra Polysaccharide Inhibiting Hepatic Gluconeogenesis by Reducing KLF15 and PGC-1 $\alpha$ in Insulin-resistant Mice  | Lin Chen           |
| CBB2418  | Evaluation of Antioxidant Capacity of Chinese Medicine Formulae 1  | Zhiguan Huang      |
| ICBE2205 | Fuzzy Naive Bayesian for constructing regulated network with weights   | Xi Y. Zhou         |

| ICBE2314 | Hematocrit estimation using online sequential extreme learning |                |
|----------|--|----------------|
|          | machine  | Huynh          |
| ICBE2425 | Sleep snoring detection using multi-layer neural networks      | Tan Loc Nguyen |

# Poster Session\_2 Biomedical Imaging & Signal Processing

| Paper ID | Paper Title  | Author             |
|----------|--|--------------------|
| CBB1134  | A study of sleep staging based on a sample entropy analysis of electroencephalogram  | Datian Ye          |
| CBB1146  | Psychophysiological Classification and Experiment Study for Spontaneous EEG Based on Two Novel Mental Tasks                                      | Hui Wang           |
| CBB1237  | Atypical Cortical Thickness and Subcortical Volumes in Cerebral Microbleed Patients: a Combined Freesurfer and Diffusion Tensor Imaging Study    | Yan Tang           |
| CBB1274  | A Constrained Optimization Reconstruction Model for X-ray CT Metal Artifact Suppression  | Ming Li            |
| CBB1308  | Changes in cerebral metabolism over different lengths of course in Parkinson disease ——A <sup>18</sup> F-FDG PET study in a Han Chinese cohort   | Lanlan Pu          |
| CBB1318  | Lung Carcinoma Recognition by Blood Dielectric Spectroscopy  | Xiaoyan Chen       |
| CBB1327  | A study on locating the sonic source of sinusoidal magneto-acoustic signals using a vector method  | Shunqi Zhang       |
| CBB1329  | Effect of computed tomography dose on quantitative measurement and automated segmentation of airway tree   | Yu Nan             |
| CBB1387  | Automatic brain MR image denoising based on texture feature-based artificial neural networks   | Herng-Hua<br>Chang |
| CBB1393  | Fast iterative reconstruction for helical pinhole SPECT imaging  | Po-Chia Huang      |
| CBB1400  | Noncontact measurement of heart rate using facial video illuminated under natural light and signal weighted analysis                             | Yonggang Yan       |
| CBB1418  | A joint ROI extraction filter for computer aided lung nodule detection   | Zhenghao Shi       |
| CBB1458  | A review of Magnetic Resonance Imaging for neuropharmacology   | Yudong Zhang       |
| CBB1548  | Classification of focal liver lesions on ultrasound images by extracting hybrid textural features and using an artificial neural network         | Yoo Na Hwang       |
| CBB1575  | Classification of osteoporosis by extracting the microarchitectural properties of trabecular bone from DXA scans based on thresholding technique | Ga Young Kim       |
| CBB1577  | Speckle noise reduction in ultrasound images using a discrete wavelet transform-based image fusion technique                                     | Ju Hwan Lee        |
| CBB1578  | Validation of the Mobile Emotiv Device Using a Neuroscan ERP System  | Haixia Huang       |

| Intraductal Growing Cholangiocarcinoma: MR Findings and Histopathological Correlation   | Longlin Yin  |
|---|--|
| A novel approach for arrhythmia diagnosis: Self-adaptive and distribution-free mode   | Fenghuan Li  |
| Study on the diagnostic system of scoliosis by using infrared camera  | Jin-hyoung-Jeo<br>ng   |
| Study of Somesthesis according to Change in Pulse Diode Laser Parameters  | Jae-Hoon Jun   |
| Auditory Evoked Potentials in Patients with Major Depressive Disorder Measured by Emotiv System   | Dongcui Wang   |
| A fuzzy c-means clustering scheme incorporating non-local   | Jianhua Song   |
| An efficient sampling algorithm for uncertain abnormal data   | Fei Liu  |
| Automatic calculation and visualization of nuclear density in whole slide images of hepatic histological sections   | Akito Nagase   |
| Automatic Landmark Based Multi-modality Medical Image Registration Using Block Matching   | Yuanjun Wang   |
| Diffusion tensor imaging to determine the potential motor network connectivity between the involved and non-involved hemispheres in stroke                | Min-Hee Lee  |
| Removal of baseline wandering in ECG signal by improved detrending method   | Kyeong-Seop<br>Kim   |
| FASART: an Iterative Reconstruction Algorithm with Inter-iteration Adaptive NAD Filter  | Fa Zhang   |
| New index structures for uncertain biomedical image analysis  | Fei Liu  |
| A study of stereo microscope measurements based on interpolated feature matching  | Yigang Wang  |
| AFW extraction based on MCA   | Jianhao Du   |
| Clinical Applications of Computed Tomography (CT) Perfusion Imaging in Gastric Cancer   | Zong-qiong Sun   |
| Three-dimensional (3D) image reconstruction in a truncated Archimedean-spiral scan geometry based on the compressed-sensing (CS) theory: simulation study | Hyosung Cho  |
| An adaptive segmentation method of the overlapping liver cell image   | Huiyan Jiang   |
| Comparison of conventional ultrasound and contrast-enhanced ultrasound in breast invasive ductal carcinoma in different T stages                          | Zhiyuan Wang   |
| A multi-classification method of liver pathology images based on sparse multi-scale LBP-LDP   | Huiling Liu  |
| Smartphone-based heart-rate measurement using facial imaging and a spatiotemporal alpha-trimmed mean filter   | Jiann-Shu Lee  |
|   | Histopathological Correlation A novel approach for arrhythmia diagnosis: Self-adaptive and distribution-free mode Study on the diagnostic system of scoliosis by using infrared camera Study of Somesthesis according to Change in Pulse Diode Laser Parameters Auditory Evoked Potentials in Patients with Major Depressive Disorder Measured by Emotiv System A fuzzy c-means clustering scheme incorporating non-local spatial constraint for brain MR image segmentation An efficient sampling algorithm for uncertain abnormal data detection in biomedical image processing and disease prediction Automatic calculation and visualization of nuclear density in whole slide images of hepatic histological sections Automatic Landmark Based Multi-modality Medical Image Registration Using Block Matching Diffusion tensor imaging to determine the potential motor network connectivity between the involved and non-involved hemispheres in stroke Removal of baseline wandering in ECG signal by improved detrending method FASART: an Iterative Reconstruction Algorithm with Inter-iteration Adaptive NAD Filter New index structures for uncertain biomedical image analysis A study of stereo microscope measurements based on interpolated feature matching AFW extraction based on MCA Clinical Applications of Computed Tomography (CT) Perfusion Imaging in Gastric Cancer Three-dimensional (3D) image reconstruction in a truncated Archimedean-spiral scan geometry based on the compressed-sensing (CS) theory: simulation study An adaptive segmentation method of the overlapping liver cell image Comparison of conventional ultrasound and contrast-enhanced ultrasound in breast invasive ductal carcinoma in different T stages A multi-classification method of liver pathology images based on sparse multi-scale LBP-LDP Smartphone-based heart-rate measurement using facial imaging |

| CBB2250  | Discrimination of Motor Imagery Tasks via Information Flow Pattern of Brain Connectivity                              | Shuang Liang         |  |
|----------|---|----------------------|--|
| CBB2278  | Development of reflection type laser scatterometer for bacterial colony analysis                                      | Huisung Kim          |  |
| CBB2287  | Optical Flow Based Non-rigid Medical Image Registration Using a Novel Anisotropic Diffusion                           | Xiuzhi Li            |  |
| CBB2304  | Development of smartphone based fluorometer for a portable instrument   | Iyll-Joon Doh        |  |
| CBB2332  | Fever of unknown origin (FUO) due to the Bentall-De Bono Procedure: Diagnostic importance of FDG PET/CT               | Tunc Ones            |  |
| CBB2333  | 18F-FDG PET/CT findings in a patient with Cowden's syndrome   | Tanju Yusuf<br>Erdil |  |
| CBB2382  | Detecting Occurrence of Wheeze Using Biorthogonal Wavelet Filter Banks  | Gwo-Ching<br>Chang   |  |
| CBB2412  | Region-of-interest reconstruction from truncated data in CT imaging   | Chia-Jui Hsieh       |  |
| ICBE1169 | Is the Gult expression related to FDG uptake in PET/CT of non-small cell lung cancer patients?                        | Woo Hee Choi         |  |
| ICBE1404 | Design of electrostatic focusing lens for an X-ray source with carbon nanotube cathode                                | Jianbao Gui          |  |
| ICBE1659 | The detection of long-range correlations of operation force and sEMG with multifractal detrended fluctuation analysis | Fan Li               |  |
| ICBE2073 | A novel movement monitoring system of KOA using the Android system  | Yurong Li            |  |
| ICBE2161 | EEG feature selection method based on decision tree   | Hui Ge               |  |
| ICBE2312 | Fully automatic scheme for measuring liver volume in 3D MR images   | Hieu Trung<br>Huynh  |  |
| ICBE2324 | Sparse coded image super-resolution using K-SVD trained dictionary based on regularized orthogonal matching pursuit   | Sung Wook<br>Baik    |  |
| ICBE2347 | Novel irregular mesh tagging algorithm for wound synthesis on a 3D face   | Seongah Chin         |  |
| ICBE2400 | Analog front-end measuring biopotential signal with effective offset rejection loop                                   | Haryong Song         |  |
| ICBE2457 | A new approach to compensate the geometric distortion in the synthetic aperture ultrasonic imaging system             | Xiaonian He          |  |

# Poster Session\_3 Biomaterial

| Paper ID | Paper Title   | Author      |
|----------|---|-------------|
| CBB1478  | Study on the changes of hepatic function and T-lymphocyte subsets in combination Laparoscope with Choledochoscope for | Xin-feng Li |
|          | Aged holelithiasis  |             |

| CBB1623  | A novel self-assembled nano micelle as a highly efficient artificial peroxidase based on hexadecyl trimethyl ammonium bromide and cytochrome c | Jun Hong                |
|----------|--|-------------------------|
| CBB1679  | Superparamagnetic calcium ferrite nanoparticles synthesized using a simple sol-gel method for targeted drug delivery                           | Jumril Yunas            |
| CBB1701  | Magnetically Guided Capsule Endoscope Integrating Active Triggerring Biopsy Device   | Viet Ha Le              |
| CBB1711  | Synthesis and characterization of water-soluble CdTe quantum dots  | Hao Yang                |
| CBB1801  | Nanofiber containing carbon nanotubes enhanced PC12 cell proliferation and neuritogenesis by electrical stimulation                            | Wen-Ta Su               |
| CBB1918  | Enhanced Germicidal Effects of UV-LED Irradiation on Electrospun Polyurethane-ZnO Nanofibrous Mats   | Jun Hee Kim             |
| CBB1932  | "Smart" ferrite nanoparticles for biomedical applications  | C. Dendrinou-<br>Samara |
| CBB2105  | A directed self-assembly quasi spider silk protein expressed in Pichia pastoris and its mechanical properties                                  | Bin Liu                 |
| CBB2299  | Synergistic effect of PEGylated resveratrol on delivery of anticancer drug   | Wenlong Wang            |
| CBB2385  | Application of Nucleic Acid Aptamers in Forensic Drug Analysis   | Natalia<br>Pawlowska    |
| ICBE2361 | Design for minimizing fracture risk of all-ceramic cantilever dental bridge  | Wei Li                  |
| ICBE2629 | Biocompatibility and characterization of polylactic acid/styrene-ethylene-butylene-styrene composites  | Chi-Hui Tsou            |

# Poster Session\_4 Biomechanical Engineering

| Paper ID | Paper Title  | Author        |
|----------|--|---------------|
| CBB1170  | Detecting differences in volume pulse wave parameters among fingers and toes in four different postures  | Tingting Yan  |
| CBB1417  | Optimization of configuration of attachment in tooth translation with transparent tooth correction by appropriate moment-to-force ratios: Biomechanical analysis | Yongqing Cai  |
| CBB1461  | Numerical analysis of the urine flow in a stented ureter with no peristalsis   | Hyoung-Ho Kim |
| CBB1515  | Research on musculoskeletal model of elbow joint for evaluating the feasibility of FES   | Shengxin Wang |
| CBB1517  | Influential factors for pressure pulse waveform in healthy young adults  | Chi Zhang     |
| CBB1523  | A robo-pigeon based on an innovative multi-mode telestimulation system   | Junqing Yang  |
| CBB1557  | Numerical study of the effect of blood vessel on the microwave ablation shape  | Xiaohui Nie   |

| CBB1779  | Numerical simulation of RF catheter ablation for the treatment of arterial aneurysm   | Qun Nan        |
|----------|---|----------------|
| CBB1827  | Development of an integrated digital hand grip dynamometer and norm of hand grip strength   | Ho Chang       |
| CBB1995  | Wall stress and deformation analysis in a numerical model of pulse wave propagation   | Fan He         |
| CBB2078  | Experiments and kinematics analysis of a hand rehabilitation exoskeleton with circuitous joints   | Fuhai Zhang    |
| CBB2115  | Forward and Inverse Dynamic Study during Pedaling: Comparison between the Young and the Elderly   | Gyerae Tack    |
| CBB2120  | Discovery of Bone Marrow Stem Cell Mobilizers with Kidney   | Chung-Yu       |
| CDD2120  | Damage Protection Activity  | Huang          |
| CBB2226  | Study on loss mechanism of SMA tracheal stent subjected to cough excitation   | Xinmiao Li     |
| CBB2412  | Region-of-interest reconstruction from truncated data in CT imaging   | Chia-Jui Hsieh |
| ICBE1536 | Changes of Pelvis control with subacute stroke: a comparison of body-weight-support treadmill training coupled Virtual Reality system, over-ground training | Lifang Li      |
| ICBE2219 | Evaluation of joint moment patterns of a wearable walking assistant robot: Experimental and simulation analyses   | Ju Hwan Lee    |
| ICBE2398 | Effects of custom-made insoles on idiopathic pes cavus foot during walking  | Jung-Kyu Choi  |
| ICBE2399 | Influence of pelvic asymmetry and idiopathic scoliosis in adolescents on postural balance during sitting  | Ji-Yong Jung   |

NOTE: If you want to make a poster presentation but your paper ID is not included in the list, please contact the organizing committee to arrange it.

#### **Part V Oral Session**

#### **Oral Presentation**

#### **Devices Provided by the Conference Organizer:**

- Laptops (with MS-Office & Adobe Reader)
- Projectors & Screen
- Laser Sticks

#### **Materials Provided by the Oral Presenters:**

• PowerPoint( Note: Please show your paper ID as CBB\*\*\*\*/ICBE\*\*\*\* in the last page )

#### **Duration of each Presentation (Tentatively):**

• Regular Oral Session: 10 Minutes of Presentation, 3-5 Minutes of Q&A

#### **Awarding for the Oral Presentation**

• We will hold a voting for the Oral Presentation, participants will get a vote to elect the best 1-3 oral presentations in each session. Top elected presenters will each be awarded with a free ticket to the next conference ICBEB2016.

#### Time:

• Aug. 20, 08:00-12:00, 14:00-17:30

#### **Location:**

• 3<sup>rd</sup> floor, Royal Hall II, 4<sup>th</sup> Hugo Hall

#### Oral Session\_1 Biomedical Engineering

Session chair: Alexander Spector

Time: 08:00-12:00 Location: 4<sup>th</sup> floor, Hugo Hall

| Time        | Paper ID | Paper Title  | Author               |
|-------------|----------|--|----------------------|
| 08:00-08:15 | CBB1164  | Temporal integration reflected by frequency following response in auditory brainstem   | Qin Xu               |
| 08:15-08:30 | CBB1459  | A new method to accurately assess post-laser-surgery refractive changes with the intrinsic corneal power changes                             | Yongji Liu           |
| 08:30-08:45 | CBB1536  | A Method to Optimize the Socket Design of a Lower Extremity Prosthesis   | Kivilcim<br>Ersoy    |
| 08:45-09:00 | CBB1617  | Mental workload prediction based on attentional resource allocation and information processing   | Xiao Xu              |
| 09:00-09:15 | CBB1622  | A Method of Extracting Disease-Related microRNAs Through the Propagation Algorithm Using the Environmental Factor Based Global miRNA Network | Jihwan Ha            |
| 09:15-09:30 | CBB1755  | Effect of Mechanical Cues on Adipose-Derived Stem Cell Myogenesis: Insight from a Kinetic Model  | Alexander<br>Spector |
| 09:30-09:45 | CBB1852  | A portable wireless power transmission system for video capsule endoscopes   | Gang Liu             |
| 09:45-10:00 | CBB2026  | Study of amyloid- $\beta$ peptide functional brain networks in AD, MCI and HC  | Huoqiang<br>Duan     |
| 10:00-10:15 | CBB2029  | A Computational Model of Platelet Flow in a Carotid Artery Bifurcation   | Guojie Li            |
| 10:30-10:45 | CBB2118  | The Temperature Field Simulation and Phantom<br>Validation of a Two-armed Spiral Antenna for<br>Microwave                                    | Lingze<br>Zhang      |
| 10:45-11:00 | CBB2158  | Design and Compatibility Evaluation of MRI-Guided Needle Insertion System  | Peng Zhang           |

| 11:00-11:15 | CBB2305  | Analysis of Protein Complex Associated to Actin Homolog MreB in Helicobacter pylori                       | Xianwu Guo           |
|-------------|----------|---|----------------------|
| 11:15-11:30 | CBB2373  | Antipyretic mechanism of cinnamaldehyde involved in regulation of TRPV1 channel in DRG neurons            | Feng Sui             |
| 11:30-11:45 | ICBE2169 | Investigating the modulation of brain activity associated with handgrip force and fatigue                 | Liu Cao              |
| 11:45-12:00 | ICBE2204 | Studying Frequency Processing of the Brain to Enhance<br>Long-term Memory, Develop a Human Brain Protocol | Wernher<br>Friedrich |

# Oral Session\_2 Biomedical Imaging & Signal Processing (1)

Session chair: Lung Kwang Pan

Time: 08:00-12:00 Location: 3<sup>rd</sup> floor, Royal Hall II

| Time: 08:00-12:00 Location: 3 Hoor, i |          |  | NOyai Hali II       |
|---------------------------------------|----------|--|---------------------|
| Time                                  | Paper ID | Paper Title  | Author              |
| 08:00-08:15                           | CBB1066  | Binary particle swarm optimization for frequency band selection in motor imagery based brain-computer interfaces                           | Qingguo<br>Wei      |
| 08:15-08:30                           | CBB1079  | EEG-based research on brain functional networks in cognition   | Li Zhang            |
| 08:30-08:45                           | CBB1171  | An analysis of pulse wave signals during Visual Display<br>Terminal operations   | Yang Lu             |
| 08:45-09:00                           | CBB1292  | Automatic detection of regions of interest in breast ultrasound images based on local phase information                                    | Xin Wang            |
| 09:00-09:15                           | CBB1325  | Scattered radiation doses absorbed by technicians at different distances from X-ray exposure: Experiments on prosthesis                    | Hsien-Wen<br>Chiang |
| 09:15-09:30                           | CBB1369  | Automatical segmentation of adrenal tumor in CT images based on sparse representation  | Hanchao<br>Chai     |
| 09:30-09:45                           | CBB1401  | Optimization of the imaging quality of 64-slice CT acquisition protocol using Taguchi analysis: A phantom study                            | Lung Kwang<br>Pan   |
| 09:45-10:00                           | CBB1456  | Pathological brain detection based on wavelet entropy and Hu moment invariants   | Yudong<br>Zhang     |
| 10:00-10:15                           | CBB1467  | In vivo evaluating skin doses for lung cancer patients undergoing Volumetric Modulated Arc Therapy treatment                               | Chien Yi<br>Chen    |
| 10:30-10:45                           | CBB1468  | Quantitative evaluation of contrast-induced-nephropathy in vascular post-angiography patients: Feasibility study of a semi-empirical model | Lung Fa Pan         |
| 10:45-11:00                           | CBB1507  | Ultrasound Imaging and Pulsed Wave Doppler Stimulus<br>Fetal Reflex Action Test  | Samreen<br>Amir     |

| 11:00-11:15 | CBB1531 | Detection of Perlger-Huet anomaly based on<br>augmented Fast Marching Method and Speeded Up<br>Robust Features                          | Shaobao<br>Yang    |
|-------------|---------|---|--------------------|
| 11:15-11:30 | CBB1533 | Assessment of the Effectiveness of DWI-ASPECTS in Predicting the Functional Outcomes of Cerebral Infarction Patients after Thrombolysis | Liang Jiang        |
| 11:30-11:45 | CBB1576 | A CT reconstruction approach from sparse projection with adaptive-weighted diagonal total-variation in biomedical application           | Luzhen<br>Deng     |
| 11:45-12:00 | CBB2256 | Assessment of Cardiac Time Intervals by Wavelet Transform of the Impedance Cardiogram   | Rodion<br>Stepanov |

# **Oral Session\_3 Biomaterial**

Session chair: Hong Qiu

Time: 08:00-12:00 Location: 4<sup>th</sup> floor, Zola Hall

| Time: 00:00 12:00 |          |  |                 |
|-------------------|----------|--|-----------------|
| Time              | Paper ID | Paper Title  | Author          |
| 08:00-08:15       | CBB1123  | Antibacterial, anti-inflammatory, and antioxidant effects of Yinzhihuang injection   | Hong Qiu        |
| 08:15-08:30       | CBB1546  | Color difference threshold determination for acrylic denture base resins   | Jiabao Ren      |
| 08:30-08:45       | CBB1560  | Analysis of nervous fiber, muscle, and blood vessels using their ulraviolet near infrared reflectance characteristics                                | Kadir Tufan     |
| 08:45-09:00       | CBB1939  | Evaluation of the micro-shear bond strength of four adhesive systems to dentin with and without adhesive area limitation                             | Yuan Chai       |
| 09:00-09:15       | CBB1947  | A comparison study on the flexural strength and compressive strength of four resin-modified luting glass ionomer cements                             | Yuan Li         |
| 09:15-09:30       | CBB2062  | Strength degradation and lifetime prediction of dental zirconia ceramics under cyclic normal loading   | Wanzhong<br>Li  |
| 09:30-09:45       | CBB2077  | Increased sensitivity of 3D-Well enzyme-linked immunosorbent assay (ELISA) for infectious disease detection using 3D-printing fabrication technology | Harpal Singh    |
| 09:45-10:00       | CBB2368  | Hepatoprotective effect of Cinnamon on cholesterol induced Fatty changes in albino rats  | Zahid Iqbal     |
| 10:00-10:15       | CBB2415  | Biopolymer-graphene nanocomposite microneedles for transdermal   | Biqiong<br>Chen |
| 10:30-10:45       | CBB2423  | Biodegradable nanoporous microspheres for controlled drug delivery system  | Ildoo Chung     |

# Oral Session\_4 Biomechanical Engineering

Session chair: Bin Chen

Time: 14:00-17:30 Location: 4<sup>th</sup> floor, Hugo Hall

| Time: 14.00 17.50 |          |  |                       |  |  |
|-------------------|----------|--|-----------------------|--|--|
| Time              | Paper ID | Paper Title  | Author                |  |  |
| 14:00-14:30       | CBB1942  | Computational hemodynamics of the portal vein hypertension in hepatic cirrhosis patients                         | Bin Chen              |  |  |
| 14:30-14:45       | CBB1144  | Research of gestational diabetes mellitus risk evaluation method   | Zhenyu Chi            |  |  |
| 14:45-15:00       | CBB1258  | Improved walking ability with wearable robot-assisted training in patients suffering chronic stroke              | Lifang Li             |  |  |
| 15:00-15:15       | CBB1302  | Application of uniform design to improve dental implant system   | Yung-Chang<br>Cheng   |  |  |
| 15:15-15:30       | CBB1462  | Numerical analysis of the effect of side holes of a double J stent on flow rate and pattern                      | Young<br>Ho Choi      |  |  |
| 15:45-16:00       | CBB1565  | Design of a biped robot actuated by pneumatic artificial muscles   | Yixiang Liu           |  |  |
| 16:00-16:15       | CBB1604  | Hemodynamics investigation for a giant aneurysm treated by a flow diverter                                       | Shengzhang<br>Wang    |  |  |
| 16:15-16:30       | CBB1728  | 4D Model of Hemodynamics in the Abdominal Aorta  | Ireneusz<br>Zbicinski |  |  |
| 16:30-16:45       | CBB1956  | Experimental analysis of robot-assisted needle insertion into porcine liver                                      | Wendong<br>Wang       |  |  |
| 16:45-17:00       | ICBE1468 | Research on seamless development of surgical instruments based on biological mechanisms using CAD and 3D printer | Ikuo<br>Yamamoto      |  |  |
| 17:00-17:15       | ICBE2320 | Design improvement and dynamic finite element analysis of novel ITI dental implant under dynamic chewing loads   | Yung-Chang<br>Cheng   |  |  |

# Oral Session\_5 Biomedical Imaging & Signal Processing (2)

Session chair: Chunliang Wang

| Time        | Paper ID  | Paper Title   | Author      |
|-------------|-----------|---|-------------|
|             | . aper 12 | -   |             |
| 14:00-14:15 | CBB1672   | The application of EMD in activity recognition based on | Mengjia     |
|             |           | a single triaxial accelerometer                         | Liao        |
| 14:15-14:30 | CBB1715   | Automatic localization of macula fovea based on         | Xinpeng     |
|             |           | wavelet transformation and gray contours                | Zhang       |
| 14:30-14:45 | CBB1730   | Computer-aided detection of lung nodules using outer    | Önder       |
|             |           | surface features  | Demir       |
| 14:45-15:00 | CBB1741   | An Integrated Approach Utilising Imaging and            | Ahmad       |
|             |           | Computer Aided Design of MR images for Customized       | Majdi Abdul |
|             |           | Medical Knee Implants Production                        | Rani        |
| 15:00-15:15 | CBB1744   | EEG functional network properties related to visually   | Yuanyuan    |
|             |           | induced unrecognized spatial disorientation             | Chen        |

| 15:15-15:30 | CBB1805 | Simultaneous measurement of multiple scattering coefficient and scattering anisotropy factor in dental demineralization    | Meng-Chun<br>Kao           |
|-------------|---------|--|----------------------------|
| 15:45-16:00 | CBB1898 | Enhance contrast in PCA based beamformers using smoothing kernel   | Saeid<br>Aliabadi          |
| 16:00-16:15 | CBB1924 | Preliminary Research on Abnormal Brain Detection by Wavelet-Energy and Quantum-Behaved PSO                                 | Shuihua<br>Wang            |
| 16:15-16:30 | CBB1967 | Electroencephalogram assessment of mental fatigue in visual search   | Xiaoli Fan                 |
| 16:30-16:45 | CBB2025 | A novel Aβ segmentation algorithm based on 3D Lattice Boltzman Method  | Xinghui Shu                |
| 16:45-17:00 | CBB2234 | A Modified Fuzzy C-Means Method for Segmenting MR Images Using Non-local Information                                       | Yuan Feng                  |
| 17:00-17:15 | CBB2297 | Real-time Interactive 3D Tumor Segmentation Using a Fast Level-set Algorithm   | Chunliang<br>Wang          |
| 17:15-17:30 | CBB2432 | Electroencephalography (EEG) for Detecting Acute Ischemic Stroke   | Sastra<br>Kusuma<br>WIjaya |
| 17:30-17:45 | CBB2131 | Analysis of the effect of the secondary Procedure in Magneto-Acoustic Tomography and Magneto-Acousto-Electrical Tomography | Zhishen Sun                |

NOTE: If you want to make an oral presentation but your paper ID is not included in the list, please contact the organizing committee or the session chair to arrange it.

#### **Part VI Hotel Information**

#### 1. Hotel Information

The Shanghai Royalton Hotel is located on the western side of Shanghai, near the International Gymnastics Center. It is a part of the Hongqiao Development Area. The Royalton Hotel Shanghai is within 5 minutes' walk of the nearest metro station. Lines 2, 3, and 4 provide service into the city.

Address: 789 Wu Yi Road, Shanghai, China

Tel.: 86-21-52068000

Website: www.royalton.com.cn

#### 2. How to get to the hotel

#### 1) From Shanghai Pudong International Airport (about 55 kilometres from the Hotel)

a) Take subway line 2 east extension (GUANGLANLU Direction) from Pudong International Airport Stop (浦东国际机场站) to the stop-GUANLAN ROAD (广兰路站), and then change for subway line 2(XUJINGDONG Direction) to the stop-ZHONGSHAN PARK (中山公园站) and get out from Exit 2. It is about 1.1 kilomemres from the Hotel.

b) Take the Magnetism Aerosol Train from Pudong International Airport Stop(浦东国际机场站) to the stop-LONGYANGLU (龙阳路站), and then change for subway line 2(XUJINGDONG Direction) to the stop-ZHONGSHAN PARK (中山公园站) and get out from Exit 2.

#### 2) From Shanghai Hongqiao International Airport (about 9 kilometres from the Hotel)

- a) Take the subway line 10(XINJIANGWANCHENG Direction)from stop-Hongqiao Airport Terminal (虹桥 1 号航站楼站) to the stop HONGQIAO ROAD (虹桥路站), and change for the subway line 4(YISHAN ROAD direction) to the stop- ZHONGSHAN PARK (中山公园站) and get out from Exit.
- b) Take bus 941 from the stop-YOULELUYINGBINYILU (友乐路迎宾一路站) to the stop ZHONGSHANXILUTIANSHANLU (中山西路天山路).

#### 3) From Shanghai Railway Station (about 9 kilometres from the Hotel)

Take the subway line 4 or line 3 (JIANGYANGBEILU Direction) to the stop- ZHONGSHAN PARK (中山公园站) and get out from Exit 2.

#### 4) From Shanghai South Railway Station (about 8 kilometres from the Hotel)

Take the subway line 3 (JIANGYANGBEILU Direction) to the stop- ZHONGSHAN PARK (中山公园站) and get out from Exit 2.

#### **5) From Shanghai West Railway Station** (about 6.5 kilometres from the Hotel)

Take a taxi (fee: about 25RMB).

For non-Chinese attendees, please show the following information to the driver if you are taking a taxi: 请送我到: 上海市长宁区武夷路 789 号上海虹桥美仑美居酒店(上海美仑大酒店)

#### 3. Map of the hotel

local merchants built a new City God's Temple in the Foreign Concession (between Lianyun Road and West Jinling Road). That area is now a high-rise residence building. The "former" temple is known as the Old City God's Temple. The Old City God's Temple and the enclose Yuyuan are not only famous tourist sites but also popular shopping attractions. There are boutiques, shops selling local specialties, as well as large jewelry stores, department stores and fabulous local snack restaurants to be found here.

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2015 Feb.; hardcopy; 392 pages;

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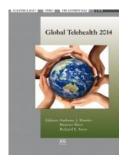
Editor: Graña, M.; Toro, C.; Howlett, R.J.; Jain, L.C.

2014 December; hardcopy; 428 pages;

Price: 145 Euro

ISBN: 978-1-61499-473-2

Web: www.iospress.nl/book/innovation-in-medicine-and-healthcare-2014/



**Title**: Global Telehealth 2014 《2014 年全球远程医疗》

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第22届澳大利亚国家卫生信息大会(2014年HIC)入选论文

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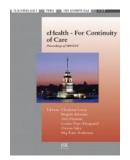
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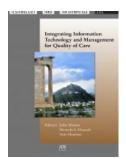
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2014 July; hardcopy; 344pages;

Price: 120Euro

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Web: www.iospress.nl/book/integrating-information-technology-and-management-for-quality-of-

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Title: pHealth 2014

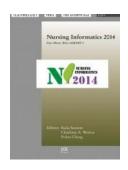
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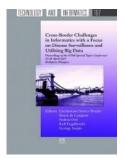
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ISBN: 978-1-61499-396-4

Web: www.iospress.nl/book/ehealth2014-health-informatics-meets-ehealth/



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Utilising Big Data

Editor: Stoicu-Tivadar, L.; De Lusignan, S.; Orel, A.; Engelbrecht, R.; Surján, G.

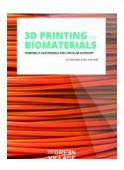
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Price: 100Euro

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Web: www.iospress.nl/book/cross-border-challenges-in-informatics-with-a-focus-on-disease-

surveillance-and-utilising-big-data/



**Title**: 3D Printing with Biomaterials **Editor**: Van Wijk, A.J.M.; Van Wijk, I. 2015 January; softcover; 86pages;

**Price**: 35Euro

**ISBN**: 978-1-61499-485-5

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