



26th August 2019, Lagoon 1 (14:00-16:00)

Session B1: **Biomedical Signal and Image Processing,  
Artificial Intelligent I**

1400	B1-1	<b>PCA-ELM Polynomial Model Optimal for Detection of NS1 Adulterated Salivary SERS Spectra</b> N. H. Othman, Khuan Y. Lee, A. R. M. Radzol, W. Mansor and N. A. Yusoff
1410	B1-2	<b>Analysis Of Genu and Splenium of the Corpus Callosum: Comparison Between Healthy Subjects With and Without Leukoaraiosis</b> S N F Salbinih, N H Mohd Taib, M Mustapha, A H Z Samsudin, M N S Yusoff, I L Shuaib, S Mat Isa
1420	B1-3	<b>Optimization of Non-Linear Features for Brain-Computer Interface (BCI) System</b> Zhi Ying Ong, A Saidatul and V Vijean
1430	B1-4	<b>Computer Aided Diagnosis of Eye Disease for Diabetic Retinopathy</b> W S Ng, W M Mahmud, A K C Huong, W N H W Kairuddin, H S Gan, R M A R Izaham
1440	B1-5	<b>Smoking Status Classification by Optical Spectroscopy and Partial Least Square Regression</b> Audrey Huong, Wan Mahani Hafizah Wan Mahmud, Kim Gaik Tay and Xavier Ngu
1450	B1-6	<b>Feature Detection of Mitral Valve Based on Image Processing Technique: A Review</b> Lina Farhana Mahadi, Nabilah Ibrahim, Mohd Thariq Zaluwi, Muhammad, Haniff S.M. Johan
1500	B1-7	<b>Design and Optimize Solid Microneedle using Genetic Algorithm</b> N. F. Zaharin, M. A. Markom, E.S. Mohd Muslim Tan and N. Sabani

1510	B1-8	<b>Computer Technologies for Living Systems State Monitoring Based on System Rhythms Assessment</b> Nikolay Korenevskiy, Sergei Filist, Tomakova Aleksandrovna, Korovin, Nikolaevich, Riad Taha Al-kasasbeh, Anwar AL-Mofleh
1520	B1-9	<b>Method of Virtual Flows Formation on the Basis of Hybrid Neural Network Technologies for Medical Calculators</b> Nikolay Korenevskiy, Tomakova Rimma Alexandrovna ,Riad Taha Al- kasasbeh, , Rybochkin Anatoly Fedorovich, Anwar Al-Mofleh
1530	B1-10	<b>Fuzzy Models of Choice of Prevention Schemes for the Occurrence and Development of Gangrene of the Lower Extremities</b> Nikolay Korenevskiy, Bykov Aleksandr, Riad Taha Al-Kasasbeh
1540	B1-11	<b>Finite Element Approach Using Electrical Tomography for Bioassay Application</b> W. A. N. Ropandi, N. A. Zulkifli, N. D. Nawi, F. A. Phang, J Puspanathan, Z. Zakaria



26th August 2019, Lagoon 3 (14:00-16:00)

Session B2: Biomaterials I

1400	B2-1	<p><b>Q-switching Zirconia-Erbium-doped Pulsed Fiber Laser with MWCNTs-PEO as Saturable Absorber</b></p> <p>A. M. Markom, M. T. Ahmad, H. Haris, A. R. Muhammad, Z. M. Yusoff, N. Burham, M. C. Paul, A. Dhar, S. Das, M. Pal, S. K. Bhadra and S. W. Harun</p>
1410	B2-2	<p><b>Number of Screws Affecting the Stability and Stress Distributions of Conventional and Locking Compression Plate: A Finite Element Study</b></p> <p>Herman Tumino, Mohamad Hafiz Mohamad Afandi, Hong Seng Gan, Mohammad Rafiq Abdul Kadir, Muhammad Hanif Ramlee</p>
1420	B2-3	<p><b>Fabrication and Biomechanical Evaluation of Polyurethane Material for Synthetic Bone Application</b></p> <p>Siti Adawiyah Zulkefli, Maryam Hanim Shaikhani, Ahmad Kafrawi Nasution, Asnida Abdul Wahab, Mohammed Rafiq Abdul Kadir, Muhammad Hanif Ramlee</p>
1430	B2-4	<p><b>Development and Verification of Three-Dimensional Model of Femoral Bone: Finite Element Analysis</b></p> <p>Aishah Umairah Abd Aziz, Hong Seng Gan, Ahmad Kafrawi Nasution, Mohammed Rafiq Abdul Kadir, and Muhammad Hanif Ramlee</p>
1440	B2-5	<p><b>Effect of Pressure and Infill Density Parameter Setting on Morphological and Mechanical Properties of Polycaprolactone Printed Scaffold Using Desktop 3D Bioprinter</b></p> <p>Khalida Fakhruddin, S I Abd Razak, M A Murad, N H Mat Nayan, and Shafizah Sa'adon</p>
1450	B2-6	<p><b>Study On Pulse Electric Field Exposure Effect On HeLa Cells For Wound Healing Application</b></p> <p>Muhammad Mahadi Abdul Jamil, Mohamed A. Milad Zaltum, Mansour Youseffi and Farideh Javid</p>

1500	B2-7	<p><b>Influence of Diclofenac Sodium Loading on Physicochemical and Mechanical Properties of Dual Layer Polyvinyl Alcohol Transdermal Patch</b></p> <p>Shafizah Saadon, Saiful Izwan Abdul Razak, Al Emran Ismail, Nadirul Hasraf Mat Nayan and Khalida Fakhruddin</p>
1510	B2-8	<p><b>Effect of swelling agent on pore properties of mesoporous carbonated hydroxyapatite</b></p> <p>N F Mohammad, N L Amiruddin, S S Md Saleh, M A A Taib and N F Mohd Nasir</p>
1520	B2-9	<p><b>Antibacterial Ability of Mesoporous Carbonated Hydroxyapatite</b></p> <p>N F Mohammad, F S Ahmad Fadzli, C W S R Mohamad, S S Md Saleh, M A A Taib</p>
1530	B2-10	<p><b>Silane treatment of coated carbonate apatite scaffold affects bioactivity and cell viability</b></p> <p>N Mamat, M Jaafar, Z A Abdul Hamid and B H Yahaya</p>
1540	B2-11	<p><b>Effects of Electrospinning Voltage and Flow Rate on Morphology of Poly-vinyl Alcohol Nanofibers</b></p> <p>A I Asiri, R H Al-Ashwal, M H Sani and S Saidin</p>



26th August 2019, Lagoon 1 (16:15-18:15)

Session B3: **Bioinstrumentation and Biomedical Devices /  
Bioinformatics & IoT in Healthcare I**

1615	B3-1	<b>Stress Detection using Galvanic Skin Response: An Android Application</b> R F Navea, P J Buenvenida and C D Cruz
1625	B3-2	<b>Optimization of dual pathway AV nodal conduction model</b> M. Ryzhii, E. Ryzhii
1645	B3-3	<b>Electrical Stimulation in Combating Pressure Ulcer for Immobilize Subjects: A Conceptual Framework</b> Fawwaz Eniola Fajingbesi, Amelia Wong Azman, Zuraida Ahmed, Yasir Mohd Mustafah, Rashidah Funke Olanrewaj, Nur Azah Hamzaid
1655	B3-4	<b>Feature Extraction Using Discriminant Graph Laplacian Principal Component Analysis with Application to Biomedical Datasets</b> Muhammad Aminu and Noor Atinah Ahmad
1705	B3-5	<b>Design and Fabrication of Biodegradable Microneedle Using 3D Rapid Prototyping Printer</b> N. H. Ahmad Mansor, M. A. Markom, E.S. Mohd Muslim Tan and A. H. Adom
1715	B3-6	<b>Smart Medical Chatbot with Integrated Contactless Vital Sign Monitor</b> W M A Wan Zaki, M F Md Shakhiih, M H Ramlee, and A A Wahab
1725	B3-7	<b>A Review of Frequency Selection and Antenna Arrangement System for Microwave Imaging in Early Breast Cancer Detection</b> H Jumaat, M T Ali, K H Ping, N M Faudzi, N Miswadi, M H Yon
1735	B3-8	<b>Simulation Study of a Modified Rectangular Microstrip for Hyperthermia Breast Cancer Procedure using SEMCAD X</b>

### **Solver**

Kasumawati Lias, Norlida Buniyamin, Hazrul Mohamed Basri, Wan Azlan Wan Zainal Abidin

1745 B3-9 **Classification of Benign and Malignant Breast Cancer using Supervised Machine Learning Algorithms Based on Image and Numeric Datasets**

Ratula Ray, Azian Azamimi Abdullah, Debasish Kumar Mallick, Satya Ranjan Dash

1755 B3-10 **Energy Saving Mechanism in Fog Assisted IoT Enabled Health Monitoring Framework**

Luina Pani, Chinmaya Misra, Azian Azamimi Abdullah, Satya Ranjan Dash



26th August 2019, Lagoon 3 (16:15-18:15)

Session B4: Biomechanics and Rehabilitation I

1615	B4-1	<b>Time-Frequency EMG Features Comparison of Biceps Brachii and Erector Spinae in Evaluating Work Level Categories of RTW Patients</b> E F Shair, S A Ahmad, A R Abdullah, M H Marhaban and S B Mohd Tamrin
1625	B4-2	<b>The Effect of Material Characteristic of Shoe Soles during Long Duration Running</b> S C Chan, J P Tan and Y Q Tan
1645	B4-3	<b>Low Cost Real-time Finger Flexion Strength Measurement System</b> Y Q Tan, S J Hwan and S C Chan
1655	B4-4	<b>Development of an Affordable, Accessible, and Available (3As) IoT-Enabled Motion Analysis System for Stroke Recovery Monitoring - An Introductory Approach</b> Yu Zheng Chong, Peng Yee Ng
1705	B4-5	<b>Gait Asymmetry Assessment using Muscle Activity Signal: A Review of Current Methods</b> Husnir Nasyuha Abdul Halim, Aizreena Azaman, Haidzir Manaf, Syafiqah Saidin, Izwyn Zulkapri, Azli Yahya
1715	B4-6	<b>Implementing a Brain-Computer Interface Wheelchair in Home-care Setting: Preliminary Result</b> K Kamala, L F Tan, DWK Ng, S Y Goh
1725	B4-7	<b>Preliminary Study on Muscle Force Estimation using Musculoskeletal Model for Upper Limb Rehabilitation with Assistive Device for Home Setting</b> Muhamad Fadzi, Akihiko Hanafusa, Yuji Kubota and Daigo Nishimori
1735	B4-8	<b>Development of a Biomechanical Model to Study the Effects of</b>

### **Lifting Load on Sciatic Pain**

Shehla Inam, Zainab Ali, Haleema Wahab, Hina Shaheen, Faisal Amin, Muhammad Zia Ur Rehman, Hamza Toor and Muhammad Shafique

1745 B4-9 **Three Dimensional Finite Element Modelling and Analysis of Human Knee Joint- Model Verification**

Nur Afikah Zainal Abidin, Mohammed Rafiq Abdul Kadir and Muhammad Hanif Ramlee

1755 B4-10 **Pulse Electric Field Effect on Cancer Cell Properties: Reversible Electroporation Study**

N A A Rahman, M M A Jamil, M N Adon and T N T Ibrahim

1805 B4-11 **Influence of Simulated Leg Length Discrepancy on the Spinal Kinematics during Stance Phases**

S M Mad Jusoh, A F Salleh, K S Basaruddin, M S Salim, M Juhairi Aziz Safar, H Sakeran





27th August 2019, Lagoon 1 (08:15-10:15)

Session B5: **Biomedical Signal and Image Processing,  
Artificial Intelligence II**

815	B5-1	<b>An Automated Segmentation and Counting of Ki67 Cells in Meningioma Using K-means Clustering Technique</b> F. A. Dzulkifli, M. Y. Mashor, and H.Jaafar
825	B5-2	<b>Classification of Acute Leukemia Based on Multilayer Perceptron</b> Nurul Hazwani Abd Halim, Mohd Yusoff Mashor, Rosline Hassan
835	B5-3	<b>Automated Intelligent Diagnostic Procedure for Chronic Leukemia</b> L P Chan, M Y Mashor, R Adollah and R Hassan
845	B5-4	<b>Automated Intelligent Identification and Counting Procedure for Tuberculosis</b> F. A. Rosli, M. Y. Mashor, S. S. M. Noor
855	B5-5	<b>A Study of Informative EEG Channel and Brain Region for Typing Activity</b> Ng W.B, A Saidatul, Chong Y.F, Lim C.C
905	B5-6	<b>Image Enhancement Using Modified Partial Contrast Technique in Ziehl-Neelsen Sputum Slide Images</b> R. A. A. Raof, M. Y. Mashor, S. S. M. Noor
915	B5-7	<b>Intelligent Fuzzy PD+I Controller with Stabilizer for Nano Satellite Attitude Control System</b> Hani Hazza.A.A, M. Y. Mashor, and Mohammed Chessab
925	B5-8	<b>Detection of Pulmonary Nodule using Shape-Based Feature Descriptor and Neural Network</b> Nurfahana Hazwani Jusoh, Haniza Yazid, Shafriza Nisha Basah, Saufiah Abdul Rahim
935	B5-9	<b>Gender Prediction by Speech Analysis</b>

Chong Yen Fook, Nur Adlin Nazifa, Lim Chee Chin, Vikneswaran  
Vijean, Eng Swee Kheng

945 B5-10 **Segmentation of Cortical and Cancellous Bone with  
Osteogenesis Imperfecta using Thresholding-based Method**  
T V Tan, M H Mat Som, H Yazid, K S Basaruddin and A R Sulaiman

955 B5-11 **Voice Pathology Analysis using DT-CWPT and Relief  
Algorithm**  
Farah Nazlia Che Kassim, Vikneswaran Vijean, Hariharan  
Muthusamy, Rokiah Abdullah and Zulkapli Abdullah



27th August 2019, Lagoon 3 (08:15-10:15)

Session B6: Biomaterials II & Others

815	B6-1	<p><b>Design and Development of Artificial Spinal Ligaments for Paediatric Synthetic Spine</b></p> <p>N A Muhayudin, K S Basaruddin, F McEvoy, A Tansey</p>
825	B6-2	<p><b>The Characterization Of Bario Rice Starch-nanoHA Scaffolds using SEM and Dielectric Measurement</b></p> <p>M.Riza Roslan, N.F. Mohd Nasir, M.F. Abdul Khalid, E.M Cheng, N.A.M. Amin, N. Mohammad, C.Y. Beh and M.S.A. Majid</p>
835	B6-3	<p><b>The Optimization of the Hydroxyapatite (HA) Material Characteristics Produced from Corbiculacea (Etok) Shells</b></p> <p>M. Riza Roslan, N.F. Mohd Nasir, M.F. Abdul Khalid, N. F. Mohammad, E.M. Cheng, N.N.N. Hashim, C.Y. Beh, M.S.A. Majid and N.A.M. Amin</p>
845	B6-4	<p><b>Investigation on Gas Plasma and Liquid Plasma Treatment for Polyether Ether Ketone (PEEK) Surface for Wettability Enhancement</b></p> <p>Theng Saw Vira, SK Zaaba, MT Mustaffa</p>
855	B6-5	<p><b>Image Quality Assessment (IQA) using High-Frequency and Image Variance (HFIV) for Colour Image</b></p> <p>L C Tan, H Yazid and Y F Chong</p>
905	B6-6	<p><b>Investigation on Green Properties of Magnesium Feedstocks molded via Metal Injection Molding Process</b></p> <p>Z. Nooraizedfiza, M.A. Omar, M.R.N. Liyana, M. Marina</p>
915	B6-7	<p><b>Hardened Glass Particle and Carbon Black using Resin for Potential Electromagnetic Shielding in Biomedical Electronic Equipments</b></p> <p>E M Cheng, M S Abdul Majid, Shahrman A B, N F Mohd Nasir, S F</p>

Khor, K Y You, K Y Lee, M R Mohd Jamir, W H Tan, S R  
Shaharuddin and C Y Beh

925 B6-8 **Fibre Based Bioplastic Film from Morus Sp. (Mulberry) Leaves  
for Medical Purpose**

I A Aziz, C W S R Mohamad and R Adollah

935 B6-9 **Encapsulation of C. Odorata Extracts for Antimicrobial Activity**

S.N.A. Azmi, C.W.S.R. Mohamad, K.F. Kasim

945 B6-10 **Atrial Fibrillation Prediction through ECG Signals**

Ng Joe Yee, Vikneswaran Vijejan, Saidatul Ardeenawatie Awang,  
Chong Yen Fook, Lim Chee Chin



27th August 2019, Lagoon 1 (10:30:-12:30)

Session B7: **Bioinstrumentation and Biomedical Devices /  
Bioinformatics & IoT in Healthcare II**

1030	B7-1	<b>Pearson's Correlation Coefficient Analysis of Non-invasive Jaundice Detection based on Colour Card Technique</b> A H A Bakar, N M Hassan, A Zakaria, A A A Halim
1040	B7-2	<b>A Study of Biomagnetic Stimulation for Transcranial Application</b> Nor Shahira Ab Ghafar, Zulkarnay Zakaria
1050	B7-3	<b>Analysis of CD45+ Cells Distribution by Pillar-Based Filtration Cell Sorting on Clogging-Free Microfluidic Chip</b> Anas Mohd Noor, Taisuke Masuda, Wu Lei, Koji Horio, Fumihito Arai
1100	B7-4	<b>Characterization of Plasma Based on the Electrode Size of Atmospheric Pressure Plasma Jet (APPJ)</b> Jeyashri Veeraiah, SK Zaaba, MT Mustaffa
1110	B7-5	<b>Assessment of an Arterial Stiffness to Demonstrate AVF Performance: Modelling Approach</b> T C Mien and S Yahud
1120	B7-6	<b>Evaluation on Machine Learning Algorithms for Classification of Autism Spectrum Disorder (ASD)</b> Azian Azamimi Abdullah, Saroja Rijal and Satya Ranjan Dash
1130	B7-7	<b>Prediction of Alzheimer's Disease (AD) Using Machine Learning Techniques with Boruta Algorithm as Feature Selection Method</b> Lee Kuok Leong and Azian Azamimi Abdullah
1140	B7-8	<b>Classification of Microorganism Species Based on Volatile Metabolite Contents Similarity</b> Azian Azamimi Abdullah, Amira Najihah Abdul Aziz, Shigehiko

Kanaya and Satya Ranjan Dash

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| 1150 | B7-9  | <b>Prediction of Parkinson's Disease using Ensemble Machine Learning Classifiers from Acoustic Analysis</b><br>Amit Kumar Patra, Ratula Ray, Azian Azamimi Abdullah, Satya Ranjan Dash |
| 1200 | B7-10 | <b>Predictive Systems: Role of Feature Selection in prediction of heart disease</b><br>Debjani Panda, Ratula Ray, Azian Azamimi Abdullah, Satya Ranjan Dash                            |



27th August 2019, Lagoon 3 (1030-12:30)

Session B8: Biomechanics and Rehabilitation II & Others

1030	B8-1	<b>Software solution for Testing Image Processing Algorithm on Conveyor-Based Vision Systems</b> Azman M. Yusof, Ali Yeon Md. Shakaff and Saufiah Abdul Rahim
1040	B8-2	<b>Variation of Stress Intensity Factor and Strain Energy Release Rate in Human Cortical Bone using Finite Element Analysis</b> Mohammad Shahril Salim
1050	B8-3	<b>Determination of Fracture Risk on Patient-specific Model of Femur with Osteogenesis Imperfecta</b> S F Z Ahmad, M H Mat Som, K S Basaruddin, R Daud and M S Awang
1100	B8-4	<b>Surface Inclination Effects on Muscle and Joint Contact Force during Walking: A Systematic Review</b> N A A Abdul Yamin, K S Basaruddin, A F Salleh, M H Mat Som and M J A Safar
1110	B8-5	<b>Mitotic Cell Detection in Breast Histopathology Image: A Review</b> Tan X.J., Mustafa N., Mashor M.Y., Ab Rahman K.S.
1120	B8-6	<b>Segmentation of Irrelevant Regions Using Color Thresholding Method: Application in Breast Histopathology Images</b> Tan X.J., Mustafa N., Mashor M.Y., Ab Rahman K.S.
1130	B8-7	<b>Segmentation of Relevant Region in Breast Histopathology Images using FCM with Guided Initialization</b> Tan X.J., Mustafa N., Mashor M.Y., Ab Rahman K.S.
1140	B8-8	<b>Fundamental Design of Thermoelectrical Nature Air Conditioning System in Small Room for Living Mammalian</b> M N Rahman Y, E Zainon, Z Razlan, M Izham, Shahrman A B, Wan Khairunizam, I Zunaidi

1150	B8-9	<p><b>Numerical Analysis on Modelling Thermal Comfort Minor Operation Theatre</b></p> <p>M N Rahman Y, M A Amin, M I Ismail, Z M Razlan, Shahriman A B, Wan Khairunizam, I Zunaidi</p>
1200	B8-10	<p><b>Differentiate Characteristic EEG Tobacco Smoking and Non-smoking</b></p> <p>Lim Chee Chin, Asmiedah Muhamad Zazid, Chong Yen Fook, Vikneswaran Vijejan, Saidatul Ardeenawatie Awang</p>
1215	B8-11	<p><b>Internet of Things (IoT) Fall Detection using Wearable Sensor</b></p> <p>Lim Chee Chin, Loh Mei Yee, Chong Yen Fook, Shafriza Nisha Basah, Maslia Binti Dali</p>