

## CURRICULUM VITAE



### **ASSOC. PROF. DR. SITI ANOM AHMAD**

*PEng, CEng, MIET, SMIEEE, MIEM, MySET, Ph.D, M.Sc, B.Eng (Hons)*

Associate Professor  
Department of Electrical and Electronic Engineering,  
Faculty of Engineering  
Universiti Putra Malaysia  
Tel : 03-8946 4369 Fax : 03-89466327

Deputy Director  
Malaysian Research Institute on Ageing (MyAgeing™)  
Universiti Putra Malaysia  
Tel : 03-8947 2751 Fax : 03-89472738

Email : sanom@upm.edu.my

### Education

1. PhD in Electronics, 2009, University of Southampton, UK.
2. MSc in Microelectronics System Design, 2004, University of Southampton, UK
3. BEng. Electronics/Computer Engineering, 1999, Universiti Putra Malaysia.

### Areas of Interest

1. Biomedical Engineering
2. Control System Design
3. Artificial Intelligence
4. Signal Processing
5. Pattern recognition
6. Gerontechnology

### Professional Qualification/ Membership/ Affiliation

1. Professional Engineer (PENG), Board of Engineers Malaysia (BEM)
2. Senior Member, Institute of Electrical and Electronic Engineer (IEEE)
3. Member, IEEE Engineering Medical and Biological Society (EMBS),
4. Chartered Engineering, Institute of Engineering and Technology (IET), UK
5. Member, Institute of Engineering and Technology (IET), UK
6. Graduate Member, Institute of Engineers Malaysia (IEM)
7. Member, Malaysian Society for Engineering and Technology (MySET)
8. Registered with Board of Engineers Malaysia (BEM)

### Appointments

Position	Duration
1. Deputy Director Malaysian research Institute on Ageing (MyAgeing™), UPM	Mac 2017 - Present
2. Academic Coordinator I Department of Electrical and Electronic Engineering, Faculty of Engineering, UPM	Jan 2016 – Feb 2017
3. Head of Master Program with Thesis (Control & Automation) , Department of Electrical and Electronic Engineering, Faculty of Engineering, UPM	Apr 2014 – Mac 2015
4. Coordinator, Instrumentation Laboratory, Department of Electrical and Electronic Engineering, Faculty of Engineering, UPM	2010 - 2012
5. Teaching Assistant, Fac. of Engineering, Science and Mathematics, University of Southampton, UK	October 2006– May 2009

Journals

1. E. F. Shair, S. A. Ahmad, A. R. Abdullah, M. H. Marhaban, S. B. Mohd Tamrin. Selection of Spectrogram's Best Window Size in EMG Signal during Core Lifting Task. *Journal of Telecommunication, Electronic and Computer Engineering*. Vol. 10 (1-16), 81-85, 2018. (Scopus)
2. E. J. Kadim, N. Azis, J. Jasni, S. A. Ahmad, M. A. Talib. Transformers Health Index Assessment Based on Neural-Fuzzy Network. *Energies*. 2018. Accepted (ISI, IF: 2.262)
3. E.F. Shair, S.A. Ahmad, A.R. Abdullah, M.H. Marhaban, S.B. Mohd Tamrin, "Determining Best Window Size for an Improved Gabor Transform in EMG Signal Analysis", *Telecommunication, Computing, Electronics and Control (TELKOMNIKA)*, Vol. 16 (4), 2018.
4. Noor Kamal Al-Qazzaz, Sawal Hamid Bin MD Ali, Siti Anom Ahmad, MD. Shabiul Islam and Javier Escudero. Discrimination of Stroke-Related Mild Cognitive Impairment and Vascular Dementia Using EEG Signal Analysis. *Medical & Biological Engineering & Computing*. Vol. 56(1), 137-157, 2018 [ISI, Q2 1.916]. <https://doi.org/10.1007/s11517-017-1734-7>
5. Hamidreza Mohafez, Siti Anom Ahmad, Maryam Hadizadeh, Sahar Moghimi, Sharifah Roohi Ahmad, Mohammad Hamiruce Marhaban, Mohammad Iqbal Saripan, Sanjiv Rampal. Quantitative Assessment of Wound Healing Using High-Frequency Ultrasound Image Analysis. *Skin Research and Technology*, Vol. 24, 45-53. 2018 (ISI, Q2, 1.776)
6. Nurhazimah Nazmi, Mohd Azizi Abdul Rahman, Shin-ichiroh Yamamoto, Siti Anom Ahmad, Malarvili Balakrishnan, Saiful Amri Mazlan, Hairi Zamzuri. Assessment on stationarity of EMG signals with different windows size during isotonic contractions. *Applied Sciences*. 7, 2017 (1-11). (ISI, IF
7. Khairun Nisa' MINHAD, Jonathan Shi Khai OOi, Sawal Hamid MD ALI, Md Mamun Bin IBNE REAZ, Member, and Siti Anom AHMAD. Low cost wearable sensor for human emotion recognition using skin conductance response. *IEICE Transactions on Information and Systems*. Vol.E100-D, No.12, 3010-3017, Dec. 2017 (ISI, Q4, IF: 0.411)
8. Hamidreza Mohafez, Siti Anom Ahmad, Mohammad Hamiruce Marhaban, Mohammad Iqbal Saripan, Maryam Hadizadeh. High-frequency Ultrasound Imaging in Wound Assessment: Current Perspectives. *Pertanika Journal of Science & Technology*, 25(4). 2017. [Scopus]
9. Noor Al-Qazzaz, Sawal Hamid Md Ali, Siti Anom Ahmad, Islam Md. Shabiul, Javier Escudero. Automatic Artifact Removal in EEG of Normal and Demented Individuals using ICA-WT during Working Memory Tasks. *Sensors*, 17, 1326; 2017. doi:10.3390/s17061326 [ISI, Q1, 2.677]
10. Ahmed M. M. ALmassri, Chikamune Wada, W. Z. Wan Hasan and S. A. Ahmad. Auto Grasping Algorithm of Robot Gripper Based on Pressure Sensor Measurement. *Pertanika Journal of Science & Technology*. Vol. 25(S), 113-122. 2017. (Scopus)
11. Shair, E. F., Ahmad, S. A., Abdullah, A. R., Marhaban, M. H. and Mohd Tamrin, S. B. Impact of Different Lifting Height and Load Mass on Muscle Performance using Periodogram. *Pertanika Journal of Science & Technology*. Vol. 25(S), 1-8. 2017. (Scopus)
12. N. F. Elya Saidon, Chikamune Wada, Siti A. Ahmad, Ribhan Zafira Abdul Rahman, Kiyotaka Eguchi, Yoshiyuki Tomiyama and Farida Izni Abd Rahman. Real-time Human Motion Analysis and Grasping Force using the OptiTrack System and Flexi-force Sensor. *Pertanika Journal of Science & Technology*. Vol. 25(S), 69-77. 2017. (Scopus)
13. Ahmed M.M. ALmassri, Chikamune Wada, W.Z. Wan Hasan, Siti A. Ahmad. Auto-Grasping Algorithm of Robot Gripper Based on Pressure Sensor Measurement. *Pertanika Journal of Science & Technology*. Vol. 25(S), 113 -122. 2017. (Scopus)
14. Jonathan Shi Khai Ooi, Siti Anom Ahmad, Asnor Juraiza Ishak, Khairun Nisa' Minhada, Sawal Hamid Md Ali, Yu Zheng Chong. Grove: An Auxiliary Device for Sympathetic Assessment via EDA Measurement of Neutral, Stress and Anger Emotions during Simulated Driving Conditions. *International Journal of Medical Engineering and Informatics*. 2017 (Scopus)
15. E.F. Shair, S.A. Ahmad, M.H. Marhaban, S.B. Mohd Tamrin, A.R. Abdullah. EMG Processing Based Measures of Fatigue Assessment during Manual Lifting: A Review. *Biomedical Research International*. Article ID 3937254. 2017. <https://www.hindawi.com/journals/bmri/2017/3937254/> (ISI, Q3)
16. Haneen J. El-Hamad, Siti Anom Binti Ahmad and Asnor Juraiza Binti Dato' Hj. Ishak. Modelling of High Output Force Dielectric Elastomer Actuator. *International Journal of Mechanical Engineering and Robotics Research*, Vol. 6 (2), 100-103, March 2017.
17. DOI: 10.18178/ijmerr.6.2.100-103. (Scopus)
18. Siti Anom, Ahmad, Nor Hafeezah, Kamarudin, Rosnah, Mohd Yusoff, Mohd Khair Hassan and Siti Zawiah, Md Dawal. Electromyography Analysis during Lifting Tasks: A Pilot Study. *Pertanika J. Sci. & Technol*. 25 (1), 201 – 210, 2017. (Scopus)

19. Hossein Ghapanchizadeh, Siti A Ahmad, Asnor Juraiza Ishak, Maged S. Al-quraishi. *Review of Surface Electrode Placement for Recording Electromyography Signals. Biomedical Research-India, Vol. 28(2), 2017. (IF: 0.226, Q4).*
20. Jonathan Shi Khai Ooi, Siti Anom Ahmad, Hafiz Rashidi Harun, Yu Zheng Chong, Sawal Hamid Md Ali. A conceptual emotion recognition framework: Stress and anger analysis for car accidents. *International Journal of Vehicle Safety. Vol.9 (3), 181-195. 2017. (Scopus).*
21. Abdulrahman A. S. Al-Shanoon, Siti Anom Ahmad, and Mohd. Khair B. Hassan. Gripping an Object Based on Inspection of Slip Events for a Robotic Hand Model. *Adv. Sci. Lett. 23 (6), 5133–5137. 2017. (Scopus)*
22. Jong-Heng Yapp, Raja Kamil, Rozi M., Norhafizah Mohtaruddin, Logman M.Y., Ezamin A.R., Siti Anom Ahmad, Zuki Abu Bakar. Trends of Reactive Hyperaemia Responses to Repetitive Loading on Skin Tissue of Rats – Implication of Pressure Ulcer Prevention. *Journal of Tissue Viability. Vol. 26, 196-201, 2017. (ISI, IF: 1.656, Q1)*
23. Hamidreza Mohafez, Siti Anom Ahmad, Sharifah Ahmad Roohi and Maryam Hadizadeh. Wound Healing Assessment Using Digital Photography: A Review. *Journal of Biomedical Engineering and Medical Imaging. Vol. 3(15), 2016. (Scopus)*
24. Nurhazimah Nazmi, Mohd Azizi Abdul Rahman, Shin-Ichiroh Yamamoto, Siti Anom Ahmad, Hairi Zamzuri and Saiful Amri Mazlan. A Review of Classification Techniques of EMG Signals during Isotonic and Isometric Contractions. *Sensors. Vol. 16, 1304, 2016. (IF: 2.033, Q1 )*
25. E.F. Shair, A.R. Abdullah, T.N.S. Tengku Zawawi, S.A. Ahmad, S. Mohamad Saleh. Auto-Segmentation Analysis of EMG Signal for Lifting Muscle Contraction Activities. *Journal of Telecommunication, Electronic and Computer Engineering. Vol. 8(7), 17 – 22, 2016. (Scopus)*
26. Maged S. AL-Quraishi, Asnor J. Ishak, Siti A. Ahmad, Mohd K. Hasan, Muhammad Al-Qurishi and Hossein Ghapanchizadeh. Classification of Ankle Joint Movements Based On Surface Electromyography Signals for Rehabilitation Robot Applications. *Medical & Biological Engineering & Computing, 2016. DOI 10.1007/s11517-016-1551-4. (IF: 1.797, Q3).*
27. Hossein Ghapanchizadeh, Siti A. Ahmad and Asnor Juraiza Ishak. Effect of Surface Electromyography Electrode Position during Wrist Extension and Flexion Based on Time and Frequency Domain Analyses. *International Journal of Control Theory and Application. Vol. 9(5), 559-566, 2016. (Scopus)*
28. Aravind C.V., Norhisam Mison, Charles Sarimuthu and Siti Anom. Review on the Grand Challenges for Engineering: A Framework for the Future. *International Journal of Control Theory and Application. Vol. 9(5), 339-344, 2016. (Scopus)*
29. Noor Kamal Al-Qazzaz, Sawal Hamid Bin Mohd Ali, Siti Anom Ahmad, Mohd Shabiul Islam and Javier Escudero. Selection of Mother Wavelet Functions for Multi-Channel EEG Signal Analysis during a Working Memory Task. *Sensors. 15, 29015-29035. 2015. (IF:2.245, Q1)*
30. Abdulrahman Abdulkareem S. Al-Shanoon, Siti Anom Ahmad and Mohd. Khair B. Hassan. A Susceptibility Study on Piezoresistive Sensor in a Pliable And Rigid Robotic Claws Model. *ARPN Journal of Engineering and Applied Science. Vol. 10(19), Oct 2015. (SCOPUS)*
31. Noor Aishah Atiqah Zulkifli, Sawal Hamid Md Ali, Siti Anom Ahmad, Md Shabiul Islam. Review on Support Vector Machine (SVM) Classifier for Human Emotion Pattern Recognition from EEG Signals. *Asian Journal of Information Technology, Vol. 14, 135-146. 2015 (SCOPUS).*
32. H. Jahani Fariman, Siti A. Ahmad, M. Hamiruce Marhaban, M. Alijan Ghasab, Paul H. Chappell. Hand movement classification for myoelectric control system using adaptive resonance theory. *Australasian Physical & Engineering Sciences in Medicine, 2015. DOI 10.1007/s13246-015-0399-5 (IF: 0.848, Q4)*
33. U.K. Mohamad Yusof, A. Che Soh, N. F. M. Radzi, A. J. Ishak, M. K. Hasan, S. A. Ahmad. Selection of Feature Analysis Electronic Nose Signals Based on Gas Sensor and Herbal Phytochemical. *Australian Journal of Basic and Applied Science, Vol. 9(5), 360-367, March 2015. (SCOPUS)*
34. Hessam Jahani Fariman, Siti A. Ahmad, M. Hamiruce Marhaban, M. Ali Jan Ghasab, Paul H. Chappell. Simple and Computationally Efficient Movement Classification Approach for EMG-controlled Prosthetic Hand: ANFIS vs. Artificial Neural Network. *Intelligent Automation and Soft Computing, Vol. 21, Issue 4, 559-573, 2015. <http://dx.doi.org/10.1080/10798587.2015.1008735>. (IF: 0.218, Q4)*
35. Ahmed Almassri, W. Z. Wan Hasan, Siti Anom Ahmad, A.J Ishak, Chikamune Wada, D. N. Talib and A.M Ghazali. Pressure Sensor: State of Art, Design and Application for Robotic Hand. *Journal of Sensors, Vol. 2015. <http://dx.doi.org/10.1155/2015/846487> (IF: 1.182, Q3)*
36. Muhmmmed Hussain Riadh, Siti Anom Ahmad, Mohd Hamiruce Marhaban, Azura Che Soh. Infrared Heating in Food Drying; an Overview. *Drying Technology, Vol. 33 (8), 322-335, 2015. DOI: 10.1080/07373937.2014.951124 (IF: 1.770, Q1).*

37. Noor Al-Qazzaz, Sawal Md Ali, Siti Anom Ahmad, Md Shabiul Islam. Cognitive Impairment and Memory Dysfunction after a Stroke Diagnosis: A Post-Stroke Memory Assessment. *Neuropsychiatric Disease and Treatment*, Vol. 10, 1677-1691, 2014. (IF: 2.154, Q3)
38. Ahmad Akmal Ahmad Nadzri, Mohd Hanif Mohamad Zaini, Siti Anom Ahmad, Mohd Hamiruce Marhaban,, Haslina Jaafar, Sawal Hamid Md Ali. Surface Electromyography Hand Motion Classification Using Time Domain Features and Artificial Neural Network for Real Time Application. *Adv. Sci. Eng. Med*, Vol. 6 (8), 917-920, 2014.
39. Maged S. Saeed, Asnor J. Ishak, Siti A. Ahmad, Mohd K. Hasan. Implementation of Electromyography Detection System for Exoskeleton Robot Applications. *Adv. Sci. Eng. Med*. Vol. 6, 853-857, 2014.
40. Noor Al-Qazzaz, Sawal Md Ali, Siti Anom Ahmad, Kalaivani Chellappan, Shabiul Islam, Javier Escudero. Role of EEG as Biomarker in the Early Detection Classification of Dementia. *The Scientific World Journal*, <http://dx.doi.org/10.1155/2014/906038>, 1-16, June 2014. (IF: 1.219, Q2)
41. Ahmad Akmal bin Ahmad Nazri, Siti Anom Ahmad, Mohd Hamiruce Marhaban, Haslina Jaafar. Characterization of Surface Electromyography Using Time Domain Features for Determining Hand Motion and Stages of Contraction. *Australasian Physician and Engineering Sciences in Medicines*. Vol.37 (1), 1133-1137, 2014. (IF: 0.848, Q4)
42. Fauzani N.Jamaluddin, Siti A. Ahmad, Samsul Bahari Mohd Noor, Wan Zuha Wan Hasan. Low Cost and Wearable Multichannel Surface Electromyography Data Acquisition System Architecture. *Journal of Engineering Science and Technology*, 98 – 106, 2014. (SCOPUS)
43. Noor Al-Qazzaz, Sawal Md Ali, Siti Anom Ahmad, Md Shabiul Islam. Cognitive Assessments for the Early Diagnosis of Dementia after Stroke. *Neuropsychiatric Disease and Treatment*, Vol. 10, 1743-1751, 2014. (IF: 2.154, Q3)
44. Z.Y.Wong, A.J. Ishak, S.A. Ahmad, Y.Z. Chong. Mechanical Analysis of Wearable Lower Limb Exoskeleton for Rehabilitation. *Journal of Engineering Science and Technology*, 107 – 114, 2014. (SCOPUS)
45. Haslina Jaafar, M. Hidayat Zabidi, Azura Che Soh, Thong Peng Hoong, Suhaidi Shafie, Siti Anom Ahmad. Intelligent Guidance Parking System Using Modified Dijkstra's Algorithm. *Journal of Engineering Science and Technology*, 132 – 141, 2014. (SCOPUS)
46. Mohktar MS, Ibrahim F, Mohd Rozi NF, Mohd Yusof J, Ahmad SA, Su Yen K, Omar SZ. A Quantitative Approach to Measure Women's Sexual Function using Electromyography: Preliminary Study on Kegel Exercise. *Medical Science Monitor*, Vol. 19, 1159-1166, 2013. (IF:1.216, Q4)
47. Intan Helina Hasan, Abd Rahman Ramli, Siti Anom Ahmad, Rosiah Osman. P300-based EEG Signal Interpretation System for Robot Navigation Control. *World Applied Sciences Journal*, Vol. 26(5), 566-572, 2013. (SCOPUS)
48. Seyed Mohammad Hussein S, Siti A. Ahmad, Azura Che Soh, Mohd K Hassan, Asnor J Ishak. Introducing New Statistical Shape Based and Texture Feature Extraction Methods in the Plant Species Recognition System. *International Journal of Engineering and Technology*, Vol.10, No. 2, 56 – 61, 2013.
49. Farzaneh Akhavan Mahdavi, Siti Anom Ahmad, Mohd Hamiruce Marhaban, Mohammad-R. Akbarzadeh-T, The Utility of Wavelet Transform in Surface Electromyography Feature Extraction - A Comparative Study of Different Mother Wavelets, *World Academy of Science, Engineering and Technology*, Vol. 74, 46 – 51, 2013. (SCOPUS)
50. Yunusa Ali S., Abdul Rahman Ramli, Siti A. Ahmad, Arash Toudeshki, Ata Jahangir Moshayedi, A New Mathematical Model for Mapping Indoor Environment, *International Journal of Advancement in Mechanical and Aeronautical Engineering*, Vol. 1, No. 1, 36 – 39, 2013.
51. Kaveh Mazloomi, Nasri Sulaiman, Siti Anom Ahmad, Nurul Amziah Md Yunus. Analysis of the Frequency Response of a Water Electrolysis Cell. *Int. J. Electrochem. Science*. Vol. 8, 3731 – 3739. 2013 (IF: 1.5, Q4)
52. Farzaneh Akhavan Mahdavi, Siti Anom Ahmad, Mohd Hamiruce Marhaban, Mohammad-R Akbarzadeh-T. Surface Electromyography Feature Extraction Based on Wavelet Transform. *International Journal of Integrated Engineering*. Vol.4, No.3, 1 – 7, 2012
53. A. Che Soh, S. A. Ahmad, A.J. Ishak, K.N. Abdul Latif, Development of an Adjustable Gripper for Robotic Picking and Placing Operation. *International Journal of Smart Sensing and Intelligent Systems*. Vol. 5, No. 4, Dec. 2012. (SCOPUS)
54. Fatimah Ibrahim, Siti A. Ahmad, Park Jong Woo, Wan Abu Bakar Wan Abas, Biomechanical Response of the Upper Body during Prostration in Salat and Child's Pose Exercise: A Preliminary Study, *J. Phys. Ther. Sci*. Vol. 24, No. 10, 2012. (IF: 0.198, Q4)

55. Mohd Khair. H, Aishawarya.K, Ribhan Zafira A.R and Siti Anom.A, Design a PID Controller for a Constant Speed of Combustion Engine, Australian Journal of Basic and Applied Sciences, 5(12): 1586-1593, 2011. (SCOPUS)
56. Siti A. Ahmad, Asnor J. Ishak, Sawal H. Ali and Paul H. Chappell, 'Review of Electromyography Control Systems Based on Pattern Recognition for Prosthesis Control Application', Australian Journal of Basic and Applied Science, 5(8): 1512-1518, 2011. (SCOPUS)
57. Lowe, R., Chappell, P. and Ahmad, S., 'Using Accelerometers to Analyse Slip for Prosthetic Application', Measurement Science and Technology, Vol. 21, 2010. (IF:1.433, Q2)
58. Siti A. Ahmad and Paul H. Chappell, 'Surface EMG Pattern Analysis of the Wrist Muscles at Different Speeds of Contraction' Journal of Medical Engineering and Technology, Vol. 33, Issue 5, 376-385, July 2009. (SCOPUS)

### Conference Proceedings

1. N. K. Al-Qazzaz, S. H. M. Ali, S. A. Ahmad, J. Escudero. Optimal EEG Channel Selection for Vascular Dementia Identification Using Improved Binary Gravitation Search Algorithm. 2nd International Conference for Innovation in Biomedical Engineering and Life Sciences, IFMBE Proceedings, Volume 67, 2018, Penang, Malaysia.
2. Mohamad Aizat Abdul Wahit, Siti A. Ahmad. Design and Development of Low-Cost Exoskeleton Hand Robot Structure. Proceedings of the 2017 IEEE Student Conference on Research and Development, 2017, Putrajaya, Malaysia.
3. N. F. Elya Saidon, Siti Anom Ahmad, Ribhan Zafira Abdul Rahman, Muhammad Aizat Abdul Wahit. Three Fingers Precision Grasping Operation of 3D Printed Multi-fingered Hand. IEEE Region Ten Conference (TENCON17), Nov 17, Penang, Malaysia.
4. N. K. Al-Qazzaz, S. H. M. Ali, S. A. Ahmad, J. Escudero. Stroke-related mild cognitive impairment detection during working memory tasks using EEG signal processing. 2017 Fourth International Conference on Advances in Biomedical Engineering (ICABME). 2017, Beirut, Lebanon.
5. Ahmed M. ALmassri, W.Z.WanHasan, Mostafa B. Abuitbel, S.A. Ahmad, Ahmad H. Sabry. Acquired Data to Measure the Pressure Distribution for Robotic Hand. Proceedings of 2017 IEEE 3rd International Symposium in Robotics and Manufacturing Automation (ROMA2017). Sept 2017, Kuala Lumpur, Malaysia.
6. Fauzani.N Jamaluddin, Siti A.Ahmad, Samsul Bahari Mohd Noor, Wan Zuha Wan Hassan, Azhar. Features Selection for Bayes Classification of Prolonged Fatigue on Rectus Femoris Muscle. Proceedings of IEEE EMBS Conference 2017 (EMBC17), 2506-2509. Jul 2017, Jeju, Korea.
7. Noor Kamal Al-Qazzaz, Sawal Ali, Siti Anom Ahmad, Javier Escudero. Classification enhancement for post-stroke dementia using fuzzy neighborhood preserving analysis with QR-decomposition. Proceedings of IEEE EMBS Conference 2017 (EMBC17), 3174-3177. Jul 2017, Jeju, Korea.
8. Fauzani.N Jamaluddin, Siti A. Ahmad, Samsul Bahari Mohd Noor, Wan Zuha Wan Hassan. Estimation of Wavelet Threshold Value for Surface EMG Baseline Removal. Proc of IEEE EMBS Conference on Biomedical Engineering and Sciences 2016 (IECBES2016), Dec 2016, Kuala Lumpur, Malaysia.
9. Noor Kamal Al-Qazzaz, Sawal Ali, Md. Shabiul Islam, Siti Anom Ahmad, Javier Escudero. EEG Markers for Early Detection and Characterization of Vascular Dementia during Working Memory Tasks. Proc of IEEE EMBS Conference on Biomedical Engineering and Sciences 2016 (IECBES2016), Dec 2016, Kuala Lumpur, Malaysia.
10. Jonathan Shi Kai Ooi, Siti Anom Ahmad, Sawal Hamid Md Ali, Yu Zheng Ching, Guangyi Ai, Hiroaki Wagatsuma. Driver Emotion Recognition Framework Based on Electrodermal Activity Measurements During Simulated Driving Conditions. Proc of IEEE EMBS Conference on Biomedical Engineering and Sciences 2016 (IECBES2016), Dec 2016, Kuala Lumpur, Malaysia.
11. Siti A. Ahmad, Fauzani. N Jamaluddin, Samsul Bahari Mohd Noor, Wan Zuha Wan Hassan, Azhar Yaakob, Yunus Adam. Surface Electromyography: A New Indicator of Fatigue Level. Proc. of ICAEES, Nov. 2016, Putrajaya, Malaysia.
12. Khairun Nisa' Minhad, Sawal Hamid Md Ali, Jonathan Ooi Shi Kai, Siti Anom Ahmad. Human Emotion Classifications for Automotive Driver using Skin Conductance Response Signal. Proc. of ICAEES, Nov. 2016, Putrajaya, Malaysia.

13. Noor Al-Qazzaz, Sawal Ali, Siti Anom Ahmad, Shabiul Islam and Javier Escudero. Entropy-Based Markers of EEG Background Activity of Stroke-Related Mild Cognitive Impairment and Vascular Dementia Patients. 2nd International Conference on Sensors and Electronic Instrumental Advances (SEIA' 2016). 2016, Barcelona, Spain.
14. Nurhazimah Nazmi, Mohd Azizi Abdul Rahman, Yamamoto Shin-Ichiroh and Siti Anom Ahmad. Fuzzy Logic for Walking Patterns Based on Surface Electromyography Signals with Different Membership Functions. 6th International Workshop on Computer Science and Engineering. June 2016, Tokyo, Japan.
15. Abdulrahman Abdulkareem S. Al-Shanoon, Siti Anom Ahmad, Mohd. Khair b. Hassan. Robotic Re-Gripping Mission Based on Implementing a Slip-Detecting Device for Robotic Hand Model. Proceedings of the 2016 IEEE Region 10 Symposium, May 2016, Bali, Indonesia.
16. Jonathan Shi Khai Ooi, Siti Anom Ahmad, Guangyi Ai, Mayu Ichiki, Hiroaki Wagatsuma. Cognitive Workloads Depending on Tasks and its Difficulty Levels Revealed on a Portable Electroencephalogram Device. Advances in Neuroinformatics 2015 (AINI 2015), Tokyo, Japan.
17. Fauzani. N Jamaluddin, Siti A. Ahmad, Samsul Bahari Mohd Noor, Wan Zuha Wan Hassan, Azhar Yaakob, Yunus Adam. Performance of DWT and SWT in Muscle Fatigue Detection. IEEE Student Symposium in Biomedical Engineering and Science, 2015. Shah Alam, Malaysia.
18. Hossein Ghapanchizadeh, Siti A. Ahmad, Asnor Juraiza Ishak. Recommended Surface EMG Electrode Position for Wrist Extension and Flexion. IEEE Student Symposium in Biomedical Engineering and Science, 2015. Shah Alam, Malaysia.
19. Abdulrahman Alshanoon, Siti Anom Ahmad, Mohd Khair Hassan. Investigation of Piezoresistive Sensor for Robotic Gripping Operations. IEEE Student Symposium in Biomedical Engineering and Science, 2015. Shah Alam, Malaysia.
20. Fauzani. N Jamaluddin, Siti A. Ahmad, Samsul Bahari Mohd Noor, Wan Zuha Wan Hassan, Azhar Yaakob, Yunus Adam. Amplitude and Frequency Changes in Surface EMG of Biceps
21. Femoris During Five Days Bruce Protocol Treadmill Test. Proceedings of 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. 2015, Italy.
22. Yunusa Ali S, M. H. Marhaban, Siti A. Ahmad, Abd. Rahman Ramli. Improved SIFT Algorithm for Place Categorization. Proc. of 10th Asian Control Conference, 2015. Kota Kinabalu, Malaysia.
23. Maged S. Al-Quraishi, Asnor J. Ishak, Siti A. Ahmad and Mohd K. Hasan. Impact of Feature Extraction Techniques on Classification Accuracy for EMG based Ankle Joint Movements. Proc. of 10th Asian Control Conference, 2015. Kota Kinabalu, Malaysia.
24. Fauzani. N Jamaluddin, Siti A. Ahmad, Samsul Bahari Mohd Noor, Wan Zuha Wan Hasan. Flexible Bio-Signals Channel Acquisition System for ECG and EMG Application. Proceedings of the 2014 IEEE Student Conference on Research and Development, 2014, Pulau Pinang, Malaysia.
25. Hossein Ghapanchizadeh, Siti A. Ahmad, Asnor Juraiza Ishak. Investigate the Transcendent Adapted of Wavelet Threshold Algorithms for Elbow Movement by Surface EMG Signal. Proceedings of the 2014 IEEE Conference on Biomedical Engineering and Sciences, 2014, Miri, Sarawak.
26. Fauzani. N Jamaluddin, Siti A. Ahmad, Samsul Bahari Mohd Noor, Wan Zuha Wan Hassan. Fatigue Mapping Based on Electromyography and Heart Rate Behavior After Single Treadmill Test. Proceedings of the 2014 IEEE Conference on Biomedical Engineering and Sciences, 2014, Miri, Sarawak.
27. Nor H. Kamarudin, Siti A. Ahmad, Mohd K. Hassan, Rosnah M. Yusoff, Siti Z. Dawal. Muscle Contraction Analysis During Lifting Task. Proceedings of the 2014 IEEE Conference on Biomedical Engineering and Sciences, 2014, Miri, Sarawak.
28. Maged S. Al-Quraishi, Asnor J. Ishak, Siti A. Ahmad, Mohd K. Hasan. Multichannel EMG Data Acquisition System: Design and Temporal Analysis during Human Ankle Joint Movements. Proceedings of the 2014 IEEE Conference on Biomedical Engineering and Sciences, 2014, Miri, Sarawak.
29. Noor Kamal Al-Qazzaz, Sawal Ali, Siti Anom Ahmad, Md. Shabiul Islam, Mohd Izhar Ariff. Selection of Mother Wavelets Thresholding Methods in Denoising Multi-channel EEG Signals

- during Working Memory Task. Proceedings of the 2014 IEEE Conference on Biomedical Engineering and Sciences, 2014, Miri, Sarawak.
30. Intan Helina Hasan, Abd Rahman Ramli, Siti Anom Ahmad. Utilization of Genetic Algorithm for Optimal EEG Channel Selection in Brain-Computer Interface Application. Proceedings of 4th International Conference on Artificial Intelligence with Applications in Engineering and Technology, 2014, Kota Kinabalu, Sabah.
  31. Fauzani. N Jamaluddin, Siti A. Ahmad, Samsul Bahari Mohd Noor, Wan Zuha Wan Hassan. Future Direction of the Electromyography Based Method to Evaluate Muscle Fatigue. Proceeding of the International Conference on Engineering Technology and Technopreneurship, 2014, Kuala Lumpur, Malaysia.
  32. Nor Hafeezah Kamarudin, Siti Anom Ahmad, Mohd Khair Hassan, Rosnah Mohd Yusoff and Siti Zawiah Md Dawal. Electromyography Analysis during Lifting Tasks:A Pilot Study. Proceeding of the World Research & Innovation Convention on Engineering & Technology 2014, pp130-136, 2014, Putrajaya, Wilayah Persekutuan.
  33. Yunusa Ali S, M. H. Marhaban, Siti A. Ahmad, Komel Hadidi and Abdul Rahman Ramli. Improved SIFT Algorithm for Surveillance. Proceedings of 2014 International Conference on Defence & Security Technology, 2014, Kuala Lumpur, Malaysia.
  34. Ahmed M.ALmassri, W.Z.WanHassan, Mostafa B,Abuitbel, S.A. Ahmad, Ahmad H. Sabry, Real Time Control for Robotic Hand Application Based on Pressure Sensor Measurement. Proceeding of the 2014 IEEE Internation Symposium on Robotic and Manufacturing Automation, 2014, Kuala Lumpur, Malaysia.
  35. M.H.M Sidek, W.Z.W Hasan, M.Z.A.Ab. Kadir, S.Shafie, M.A.M.Radzi, S.A.Ahmad, M.H.Marhaban. GPS Based Portable Dual-Axis Solar Tracking System Using Astronomical Equation. Proceeding of the PECON2014, 2014, Kuching, Sarawak.
  36. Hossein Ghapanchizadeh, Siti A. Ahmad, Asnor Juraiza Ishak. Developing Multichannel Surface EMG Acquisition System by Using Instrument OpAmp INA214. Proceedings of the 2014 IEEE Region 10 Symposium, pp. 262-267, 2014, Kuala Lumpur, Malaysia.
  37. Norhayati Mohd Suaib, Mohammad Hamiruce Marhaban, M. Iqbal Saripan, Siti Anom Ahmad. Performance Evaluation of Feature Detection and Feature Matching for Stereo Visual Odometry Using SIFT and SURF. Proceedings of the IEEE Region 10 Symposium, pp. 204-207, 2014, Kuala Lumpur, Malaysia.
  38. Fauzani N.J., **Siti A. Ahmad**, Samsul Bahari Mohd Noor, Wan Zuha Wan Hasan et al. Two Electrodes System: Performance on ECG, FECG and EMG Detection. Proceedings of the IEEE Student Conference on research and Development, Putrajaya Malaysia, 2014.
  39. Almassri, A.M.M. Hasan, W.Z.W., **Ahmad, S.A.**, Ishak, A.J.A. Sensitivity Study of Piezoresistive Pressure Sensor for Robotic Hand. Proceedings of the 2013 IEEE Regional Symposium on Micro and Nanoelectronics, pp.394-397, Sept 2013, Langkawi, Malaysia.
  40. Nor Hafeezah Kamarudin, **Siti Anom Ahmad**, Mohd Khair Hassan, Rosnah Mohd Yusuff, Siti Zawiah Md. Dawal, A Review of the NIOSH Lifting Equation and Ergonomic Analysis, 2<sup>nd</sup> International Conference on Ergonomics, Sept 2013, Kuala Lumpur, Malaysia
  41. Yunusa Ali S., M. Hamiruce Marhaban, Abd Rahman Ramli, **Siti A Ahmad**, Habibu Rabi, Arash Toudeshki. Map Building for Cluttered Environment. Proc. of the Second Intl. Conf. on Advances in Computer and Information Technology, 2013. pp. 125-129, Malaysia.
  42. Yunusa Ali S., Abd Rahman Ramli, **Siti A Ahmad**, Arash Toudeshki, Ata Jahangir Moshayedi. A New Mathematical Model for Mapping Indoor Environment. Proc. of the Second Intl. Conf. on Advances in Automation and Robotics, 2013, pp. 1-4, Malaysia.
  43. Fatimah Ibrahim, **Siti A. Ahmad**. Investigation of Electromyographic Activity during Salat and Stretching Exercise. Proceedings of the 2012 IEEE EMBS Conference on Biomedical Engineering and Sciences (IECBES2012), Dec 2012, Langkawi, Malaysia.
  44. Haslina Jaafar, Ahmad Fariz, **Siti Anom Ahmad**, Nurul Amziah Yunus. Intelligent Massage Chair Based on Blood Pressure and Heart Rate. Proceedings of the 2012 IEEE EMBS Conference on Biomedical Engineering and Sciences (IECBES2012), Dec 2012, Langkawi, Malaysia.

45. Nur Erniwati farrita, Haslina Jaafar, Mohd Hasimi Mohd Sidek, **Siti Anom Ahmad**. Semi-Automatic Parallel parking System. Proceedings of the 2012 World Research & Innovation Convention on Engineering and Technology, pp. 253 – 258, Dec 2012, Kuala Lumpur, Malaysia.

### Research Grants

No	Project Title	Amount (RM)	Year	Source of Fund
1.	Design of Automated Muscle Performance Monitoring System for Functional Capacity Evaluation (FCE) in Core Lifting Task	123,000	2018-2019	GPB, UPM
2.	Autonomous Electric vehicle Using Hybrid LIDAR and Video Camera Tracking System	24,500	2018-2020	GP-IPS, UPM
3.	Improving Students' Understanding On Fundamental Electrical And Electronics Engineering Through Black Box Approach	10,000	2016-2018	GIPP, UPM
4.	Modeling and Design of High Output Force Dielectric Elastomer Actuator	77,000	2015-2017	FRGS
5.	Development of Force Feedback Electromyographic Control Prosthetic Hand	213,000	2015-2016	Look East Policy
6.	Electromyography Analysis on Muscle Fatigue during Physical Activities	15,000	2014-2016	Putra Grant
7.	Lifting Equation for Malaysia Population	15,000	2013-2015	Putra Grant
8.	Signal Processing Algorithm Development for Ultrasonic Imaging in In-Vivo Skin Characterization	94,000	2012-2014	RUGS UPM
9.	A Leaf Recognition Algorithm for Plant Classification Using Artificial Neural Network	11,000	2012-2014	RUGS UPM
10.	Intelligent Five-Fingered Robotic Hand Design and Development for Prosthetic Application	174,000	2012-2014	eScience Fund
11.	Development of an Electromyographic Control for Prosthetic Hand Application	30,000	2010-2012	RUGS UPM

### Awards/Recognition (Current)

Num	Name of awards	Award Authority	Year
1.	Excellent Service Award	Universiti Putra Malaysia	2017
2.	Excellent Service Award	Universiti Putra Malaysia	2016
3.	Excellent Service Award	Universiti Putra Malaysia	2015
4.	Excellent Service Award	Universiti Putra Malaysia	2014
5.	Excellent Service Award	Universiti Putra Malaysia	2013
6.	Excellent Service Award	Universiti Putra Malaysia	2012
7.	Excellent Teaching Award	Fac. of Engineering, UPM	2011
8.	Excellent Teaching Award	Fac. of Engineering, UPM	2010

### Professional Services/Consultation

No	Year	Title	Authority	Amount
1.	2013	Embedded Electronics Board for DISEGANNI Storage Unit	Nagasteel Sdn Bhd	RM21,175



## Student Supervision

### PhD (Main Supervisor)

No.	Name	Title	Status
1.	Hamidreza Mohafez	Developing Signal Processing Method of Ultrasonic Imaging in In-Vivo Skin Characterization	Graduated
2.	Nurul Fauzani Jamaludin	Surface Electromyography Analysis on Early Stage of Overtraining Syndrome	Graduated
3.	Norhafeezah Kamarudin	Development of Lifting Model for Malaysia Population	Ongoing
4.	Ezreen Farina Shair		Ongoing
5.	Asmida Ismail		Ongoing

### MS with thesis (Main Supervisor)

No.	Name	Title	Status
1.	Farzaneh Akhavan Mahdavi	Characterization Of Surface Electromyographic Signal Of The Upper Arm For Prosthetic Control Application.	Graduated
2.	Muhammed Hussain Abdul Sahab	Development of Smart Chili Infra-Red Drying System	Graduated
3.	Seyed Mohammad Hossein Sefidgar	Leaves Recognition using Genetic Algorithm and Neural Network	Graduated
4.	Hesam Jahani Fariman	A Pattern Recognition-Based Myoelectric Control System Scheme for a Prosthetic Hand	Graduated
5.	Hossein Ghapanchizadeh	Investigation on Surface Electrodes Placement and Pre-processing Techniques for Accurate Electromyographic Signals of the Upper Limb Muscles	Graduated
6.	Ahmad Akmal Mohd Nazri	Surface Electromyography Classification of Hand Motions Using Time Domain Features for Real Time Application	Graduated
7.	Abdulrahman Abdulkareem	Automatic Feedback Control System of Robotic Hand for Grasping Object using Slip Information	Graduated
8.	Haneen Jawad	Development of Dielectric Elastomer for Prosthetic Arm Application	Graduated
9.	Nur Farah Elya Saidon	Modeling of Human Hand	Graduated
10.	Jonathan Ooi Shi Kai	Study of Human Emotion Recognition in Malaysian Drivers	Graduated
11.	Mohamad Aizat Abdul Wahit		Ongoing
12.	Shaikh Muhammad Umair		Ongoing