



CURRICULUM VITAE



CHAN BUN SENG
LECTURER
FACULTY OF ENGINEERING AND INFORMATION
TECHNOLOGY
bschan@sc.edu.my

1. Academic Qualification

No.	QUALIFICATION	FIELD OF SPECILIZATION	NAME OF AWARDING INSITUTION & COUNTRY	START DATE – END DATE
1.	Ph.D	Signal Processing	Universiti Malaysia Sabah	02/2020 – Present
2.	Master of Engineering	Nanoelectronic	Universiti Malaysia Sabah	09/2012 – 09/2015
3.	Bachelor of Engineering (Hons)	Electrical and Electronic Engineering	Universiti Malaysia Sabah	07/2008 – 06/2012
4.	Diploma on Electronic Engineering	Medical Electronic	Politeknik Sultan Salahuddin Abdul Aziz Shah	06/2004 – 06/2007

2. PREVIOUS EMPLOYMENT RECORD

No.	START DATE – END DATE	POSITION	JOB NATURE	EMPLOYER / COMPANY
1.	08/2018 - Present	Lecturer	Education	Southern University College
2.	02/2013 – 06/2018	Tutor/ Lab Demonstrator	Education	Universiti Malaysia Sabah
3.	09/2012 – 09/2015	Research Assistant	Research	Universiti Malaysia Sabah
4.	06/2011 – 08/2011	Trainee	Instrumentation Manufacturing	LKS Sdn Bhd
5.	07/2007 – 06/2008	Technician	Biomedical Industry	Malaysia Healthcare Sdn Bhd
6.	06/2006 – 07/2006	Part-Time Technician	Biomedical Industry	Malaysia Healthcare Sdn Bhd
7.	01/2006 – 05/2006	Trainee	Biomedical Industry	Malaysia Healthcare Sdn Bhd



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3. PROFESSIONAL QUALIFICATION / MEMBERSHIP (NATIONAL / INTERNATIONAL)

No.	TYPE OF QUALIFICATIONS / MEMBERSHIP	GOVERNED BY WHICH BODY / COMPANY / ASSOCIATION / OTHERS	AWARDED YEAR / MEMBERSHIP DURATION
1.	Graduate Engineer	Board of Engineers Malaysia (BEM)	Since 2013
2.	Graduate Member	The Institution of Engineers Malaysia (IEM)	2016 – Present
3.	Member	Institute of Electrical and Electronics Engineers	2013 – Present
4.	Member	International Association of Engineers (IAENG)	2017 – Present
5.	Associate Member	Institute of Research Engineers and Doctors	2018 – Present

4. RECOGNITION AWARD (NATIONAL / INTERNATIONAL)

No.	TYPE OF AWARD RECEIVED	RECEIVED FROM WHICH BODY / COMPANY / ASSOCIATION / OTHERS	RECEIVED YEAR
1.	Gold Award (Automated Disinfection Robot)	32 nd International Invention, Innovation & Technology Exhibition (ITEX), Malaysia	2021
2.	Gold Award (Automated Medicine Dispenser Machine)	32 nd International Invention, Innovation & Technology Exhibition (ITEX), Malaysia	2021
3.	Gold Award (Brain Computer Interface Drone in 21 st Century)	Virtual Expo of Innovation Product and System Design (VIDE) 2020	2020
4.	Silver (Brain Computer Interface Drone in 21 st Century)	Expo Kecemerlangan RekaCipta UMS (EXCOCIPTA) 2020	2020
5.	Bronze Award (Intelligent Agility Test System for Fitness Assessment (i-Agile))	Malaysia Technology Expo 2016	2016
6.	Bronze Award (Portable Real – Time Electromyography Test System for Clinical Rehabilitation Assessment (Myo-EMT))	Malaysia Technology Expo 2016	2016
7.	Gold Award (Real – Time Electromyogram Controller for Clinical Rehabilitation (MYOREHAB))	Pertandingan RekaCipta UMS 2015	2015



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8.	Bronze Award (Dual Channel EMG Signal for Multi Directional Maneuver System)	BiInnovation Awards 2014	2014
9.	Bronze Award (Real – Time Myogram Controller for Nominal Appliance Switching)	BiInnovation Awards 2014	2014
10.	Gold Award (Myogram ON/OFF Controller)	Pertandingan RekaCipta UMS 2013	2013
11.	Gold Award (Electromyogram Signal for Cart Control)	Pertandingan RekaCipta UMS 2013	2013

5. CONSULTANCY SERVICES / COMMUNITY SERVICES

No.	ORGANIZATION / EVENT / PROJECT	DATE / DURATION	VENUE / COMPANY	ROLE / POSITION
1.	Lightup Borneo-Installation of Pico Hydro Generator in Long Pasia	01/2016 – 12/2016	Long Pasia, Sabah	Graduate Intern

6. CONFERENCES AND TRAININGS

No.	TITLE OF THE CONFERENCES / TRAINING	DATE	TRAINING VENUE	ORGANIZE BY SPEAKER / TRAINER
1.	Winning FRGS Research Proposal	08 January 2022	Webinar	Prof. Dr. Mohd. Shahir Shamsir Omar
2.	19 th IEEE Student Conference on Research and Development (SCOREd 2021)	23-25 November 2021	Virtual (Webex)	UMS
3.	3 rd IEEE International Conference on Artificial Intelligence in Engineering and Technology (IICAJET 2021)	13-15 September 2021	Virtual (Webex)	UMS
4.	Awareness on Outcome-Based Education (OBE)	21/04/2021	Webinar	Prof. Dr. Hishamuddin Jamaluddin and Dr. Pong Hon Keat
5.	Pedagogy	08/10/2020	Southern University College	Ms. Marsha Lavania
6.	DEE Induction Course (OBE, SOP, and Forms)	06/10/2020	Southern University College	Prof. Dr. Hishamuddin Jamaluddin, Dr. Kang Eng Siew



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7.	Company Emergency Response Team (CERTs)	09-10/07/2020	Southern University College	Lim Kim Leng
8.	Outcome Based Education Training	18/06/2020	Southern University College	Assoc. Prof. Dr. Sim Hiew Moi
9.	Webinar on EAC Standard	17/06/2020	Webinar	Associate Directors of EAC
10.	Webinar on ETAC Standard	16/06/2020	Webinar	Associate Directors of ETAC
11.	Introduction to Data Science Training	20-21/09/2019	Southern University College	Dr. Lau Cher Han
12.	EAC-ETAC Roadshows	03/09/2019	Berjaya Waterfront Hotel, Johor	Associate Directors of EAC and ETAC
13.	EAC Student Learning Time (SLT) Workshop	02/05/2019	Bilik Latihan Jabatan Akreditasi, Lembaga Jurutera Malaysia, PJ	Associate Directors of EAC
14.	ETAC Training for IHL	23-25/04/2019	Bilik Latihan Jabatan Akreditasi, Lembaga Jurutera Malaysia, PJ	Associate Directors of ETAC
15.	2017 International Conference on Electrical Electronics Communication and Control Engineering (ICEECC2017)	05-06/12/2017	UTM, KL	UTM
16.	2016 IEEE Arduino Workshop (UMS) - Instructor	02/05/2016	Universiti Malaysia Sabah	UMS
17.	Third International Conference of Artificial Intelligence, Modelling and Simulation 2015 (AIMS2015)	02-04/12/2015	Le Meridien Kota Kinabalu	UMS
18.	The 10 th Asian Control Conference (ASCC2015)	31/05 – 03/06/2015	Sutera Harbour Resort, Kota Kinabalu	UTM
19.	27 th Regional Conference on Solid State Science and Technology	20-22/12/2013	Kota Kinabalu	UMS
20.	2013 IEEE Student Conference on Research & Development (SCOREd)	16-17/12/2013	Palm Garden Hotel, Putrajaya	IEEE UKM
21.	First International Conference of Artificial Intelligence, Modelling and Simulation 2013 (AIMS2013)	03-05/12/2013	Le Meridien Kota Kinabalu	UMS



7. RESEARCH AND PUBLICATION

Journal Publications

- [1] **Bunseng Chan**, Ismail Saad, Nurmin Bolong, Eng Siew Kang, 2021. Design of Portable Electromyography (EMG) System for Clinical Rehabilitation, *Transactions on Science and Technology*, vol.8 (3-3), pp. 519-526.
- [1] **Bunseng Chan**, King Hann Lim, Lenin Gopal, Alpha Agape Gopalai, Darwin Gouwanda, 2018. Stereo Vision Human Motion Detection and Tracking in Uncontrolled Environment, *Telecommunication, Computing, Electronics and Control*, 16 (3), pp. 955-964. (<http://dx.doi.org/10.12928/telkomnika.v16i3.9033>)
- [2] Saad I., HM Zuhir, AHS Bacho, **CB Seng**, AM Khairul, B. Ghosh, N Bolong, 2017. Enhanced Reliability of Vertical Strained Impact Ionization MOSFET Incorporating Dielectric Pocket for Ultra-Sensitive Biosensor Applications, *Advanced Science Letters*, 23 (11), pp. 11247 - 11251. (<https://doi.org/10.1166/asl.2017.10260>)
- [3] Saad I., B Syazana, **CB Seng**, HM Zuhir, N Bolong., 2017. Vertical Strained Impact Ionization MOSFET (VESIMOS) Technology Approach for Based Biosensor Applications Using Its Behavioral Model, *Advanced Science Letters*, 23 (11), pp. 11242 - 11246. (<https://doi.org/10.1166/asl.2017.10259>)
- [4] Saad I., Bais H., **Bunseng C.**, Mohd Zuhir H., Nurmin B., 2016. Clinical Rehabilitation Application Using Non-Invasive Electromyography (EMG) Technique, *IJSSST V17*, 17(34)
- [5] Saad I., Andee Hazwani B., Mohd Zuhir H., **Bunseng C.**, Nurmin B., 2016. Avalanche Characteristic of Vertical Impact Ionization MOSFET (IMOS) Equivalent Circuit Model, *IJSSST V17*, 17 (34)
- [6] Saad I., **Bun Seng C.**, Mohd Zuhir H., Nurmin B., Khairul A.M., Bablu Ghosh, Ismail R. Hashim U., 2015. Breakdown Voltage Reduction Analysis with Adopting Dual Channel Vertical Strained SiGe Impact Ionization MOSFET (VESIMOS), *IJSSST V15*, 15(2).
- [7] Saad I., Mohd Zuhir H., **Bun Seng C.**, Nurmin B., Khairul A.M., Bablu Ghosh, Ismail R. Hashim U., 2015. Doping Concentrations Analysis on the Performance of Vertical Strained – SiGe Impact Ionization MOSFET Incorporating Dielectric Pocket (VESIMOS – DP), *IJSSST V15*, 15(2).
- [8] Saad I., Divya P., Mohd Zuhir H., **Bun Seng C.**, Nurmin B., 2015. In – Depth Design and Simulation Analysis of Vertical Strained Impact Ionization MOSFET (VESIMOS), *IJSSST V15*, 15(2).
- [9] Saad I, **Bun Seng C.**, Mohd Zuhir H., Nurmin B., Khairul A.M., Bablu Ghosh, 2015. Effect of the Ge Mole Fraction on the Electrical Characteristics of Single and Dual Channel Vertical Strained SiGe Impact Ionization MOSFET (VESIMOS), *Advanced Materials Research, AMR V1107*, pp. 496 - 501. (<https://doi.org/10.4028/www.scientific.net/AMR.1107.496>)
- [10] **B.S Chan**, C.L Sia, Farrah Wong, Renee Chin, Jamal A. Dargham, Yang Soo Siang, 2013. Analysis of Surface Electromyography for On-Off Control, *Advanced Materials Research, AMR V701*, pp. 435 – 439. (<https://doi.org/10.4028/www.scientific.net/AMR.701.435>)

Proceeding Publications

- [1] **Bunseng Chan**, Charlie. Soh, KE. Siew, HS. Kheong, LW. Jer, I. Saad, N. Bolong, 2021. High-k Gate Dielectric Nano-FET Leakage Current Analysis, *2021 IEEE 19th Student Conference on Research and Development (SCORED)*, pp. 130-134.
- [2] **Bunseng Chan**, I Saad, N. Bolong, KE. Siew, 2021. A Review of Surface EMG in Clinical Rehabilitation Care Systems Design, *2021 IEEE 19th Student Conference on Research and Development (SCORED)*, pp. 371-376.
- [3] **Bunseng Chan**, I. Saad, N. Bolong, KE. Siew, 2021. Preliminary Design of Portable Electromyography (EMG) System for Clinical Signal Acquisition, *2021 IEEE International Conference on Artificial Intelligence in Engineering and Technology*.



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- [4] **Bunseng Chan**, KH. Lim, L. Gopal, AA. Gopalai, WC. Chia, WJ Chew, 2018. Marker-less Stereo-Vision Human Motion Tracking using Hybrid Filter in Unconstrained Environment. *2018 IEEE Region 10 Conference*, pp. 1818-1823.
- [5] Saad I., Andee Hazwani B., **Bun Seng C.**, Mohd Zuhir H., Bolong N., 2016. Enhancing Equivalent Circuit Model of Dual Channel Vertical Strained Impact Ionization MOSFET (DC-VESIMOS) for Biosensor Applications, *IEEE International Conference on Semiconductor Electronics (ICSE 2016)*, pp. 93 – 96.
- [6] Saad I., Andee Hazwani B., Mohd Zuhir H., **Bunseng C.**, Bolong N., 2016, Equivalent Circuit Model Implementation of Dual Channel Vertical Strained Impact Ionization MOSFET (DC-VESIMOS) in Biosensor Applications, *Micro and Nano Technologies, Modelling and Simulation 2016 (MNTMSim2016)*.
- [7] Saad I., Bais H., **Bun Seng C.**, Mohd Zuhir H., Bolong N., 2015. Electromyogram (EMG) Signal Processing Analysis for Clinical Rehabilitation Application. *Third International Conference of Artificial Intelligence, Modelling and Simulation 2015 (AIMS2015)*.
- [8] Saad I., Andee Hazwani B., Mohd Zuhir H., **Bun Seng C.**, Bolong N., 2015. Equivalent Circuit Model Analysis of Vertical Impact Ionization MOSFET (IMOS). *Third International Conference of Artificial Intelligence, Modelling and Simulation 2015 (AIMS2015)*.
- [9] Farrah Wong, Sia Chiew Lian, **Chan Bun Seng**, Lim Pei Yi, Renee Chin, Kenneth Teo, Ali Chekima, Khairul Anuar Mohamad, 2015. Model Cart Control Using EMG Signal, *IEEE 10th Asian Control Conference (ASCC2015)*, pp. 1882 – 1885.
- [10] Saad I., **Bun Seng C.**, Mohd Zuhir H., Andee Hazwani B., N. Bolong., 2015. Physics – Based Modelling of Vertical Strained Impact Ionization MOSFET (VESIMOS), *IEEE Regional Symposium on Micro and Nano Electronics (IEEE-RSM2015)*.
- [11] Saad I., Andee Hazwani B., Mohd Zuhir H., **Bun Seng C.**, N. Bolong., 2015. The Vertical Strained Impact Ionization MOSFET (VESIMOS) for Ultra-Sensitive Biosensor Application, *IEEE Regional Symposium on Micro and Nano Electronics (IEEE-RSM2015)*
- [12] Saad I., Mohd Zuhir H., **Bun Seng C.**, Khairul A.M., Bablu Ghosh, Nurmin B., Ismail R., 2014. Characterization of Vertical Strained SiGe Impact Ionization MOSFET for Ultra – Sensitive Biosensor Application, *2014 IEEE International Conference on Semiconductor Electronics (IEEE-ICSE2014)*, pp. 154 – 157.
- [13] Saad I., Mohd Zuhir H., **Bun Seng C.**, Abu Bakar A.R., Nurmin B., Khairul A.M., Bablu Ghosh, Ismail R., 2014. Impact of Strained SiGe on the Performance of Vertical Strained SiGe Impact Ionization MOSFET Incorporating Dielectric Pocket (VESIMOS – DP), *2014 International Conference on Information Science, Electronics and Electrical Engineering (ISEEE 2014)*, pp. 1877 – 1881.
- [14] Saad I., **Bun Seng C.**, Mohd Zuhir H., Nurmin B., Khairul A.M., Bablu Ghosh, 2013. Effect of the Ge Mole Fraction on the Electrical Characteristics of Single and Dual Channel Vertical Strained SiGe Impact Ionization MOSFET (VESIMOS), *27th Regional Conference of Solid State Science and Technology (RCSST2013)*.
- [15] Saad I., **Bun Seng C.**, Mohd Zuhir H., Nurmin B., Khairul A.M., Bablu Ghosh, Ismail R., 2013. Performance Analysis of Single and Dual Channel Vertical Strained SiGe Impact Ionization MOSFET (VESIMOS), *IEEE Student Conference on Research & Development (IEEE-SCOREd2013)*.
- [16] Saad I., **Bun Seng C.**, Mohd Zuhir H., Nurmin B., Khairul A.M., Bablu Ghosh, Ismail R., 2013. Mitigating Breakdown Voltage with Dual Channel Vertical Strained SiGe Impact Ionization MOSFET (VESIMOS), *IEEE First International Conference on Artificial Intelligence, Modelling and Simulation (IEEE-AIMS2013)*, pp. 423– 427.
- [17] Saad I. Mohd Zuhir H., **Bun Seng C.**, Khairul A.M., Bablu Ghosh, Nurmin B., Ismail R., 2013. Effects of S/D Doping Concentrations on Vertical Strained SiGe Impact Ionization MOSFET Incorporating Dielectric Pocket (VESIMOS – DP), *IEEE First International Conference on Artificial Intelligence, Modelling and Simulation (IEEE-AIMS2013)*, pp. 428 – 432.
- [18] Saad I., Mohd Zuhir H., **Bun Seng C.**, Abu Bakar A.R., Nurmin B., Khairul A.M., Bablu Ghosh, Ismail R., 2013. Impact of Strained and DP Position on the Performance of Vertical Strained SiGe Impact Ionization MOSFET Incorporating Dielectric Pocket (VESIMOS – DP), *IEEE Region 10 International Conference 2013 (IEEE-TENCON2013)*, pp. 1 – 5.
- [19] Saad I., Mohd Zuhir H., **Bun Seng C.**, Abu Bakar A.R., Nurmin B., Khairul A.M., Bablu Ghosh, Ismail R., 2013. Mobility Enhancement on Vertical Strained SiGe Impact Ionization MOSFET Incorporating Dielectric Pocket (VESIMOS – DP), *IEEE Region 10 International Conference 2013 (IEEE-TENCON2013)*.
- [20] Saad I., Mohd Zuhir H., **Bun Seng C.**, Khairul A.M., Bablu Ghosh, Nurmin B., Ismail R., 2013. Performance



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Analysis of Vertical Strained SiGe Impact Ionization MOSFET Incorporating Dielectric Pocket (VESIMOS – DP), *IEEE 5th International Conference on Computational Intelligent, Modelling and Simulation (IEEE-CIMSiM2013)*, pp. 375 – 380.

- [21]Saad I., **Bun Seng C.**, Mohd Zuhir H., Abu Bakar A.R., Divya P., Nurmin B., Khairul A.M., Bablu Ghosh, 2013. Single and Dual Strained Channel Analysis of Vertical Strained SiGe Impact Ionization MOSFET (VESIMOS), *IEEE Regional Symposium on Micro and Nano Electronics (IEEE-RSM2013)*, pp. 335 - 338.
- [22]Saad I, Mohd Zuhir H., **Bun Seng C.**, Divya P., Abu Bakar A.R., Khairul A.M. Bablu Ghosh, Nurmin B., Ismail R., Hashim U., 2013. Body Doping Analysis of Vertical Strained SiGe Impact Ionization MOSFET Incorporating Dielectric Pocket (VESIMOS – DP), *IEEE Regional Symposium on Micro and Nano Electronics (IEEE-RSM2013)*, pp. 351 – 354.
- [23]**Bun Seng C.**, Mohd Zuhir H., Saad I., 2012. Low Power High Performances Analysis of Impact Ionization MOSFET (IMOS) Device, *Seminar of Science and Technology 2012 (SnT2012)*.
- [24]**Chan Bun Seng**, Farrah Wong, 2012. Model Cart for On – Off Control, *Seminar of Science and Technology 2012 (SnT2012)*.

8. OTHER ADDITIONAL ADMINISTRATIVE RESPONSIBILITIES

No.	POSITION (APPOINTMENT)	FACULTY / DIVISION / DEPARTMENT	START DATE – END DATE
1.	Head of Department	Department of Electrical and Electronics Engineering	01/2020 – Present
2.	Malaysia Research Assessment (MyRA) Representative	Southern University College	01/2021 – Present
3.	Curriculum Review Committee Member	Faculty of Engineering and Information Technology	01/2020 – Present
4.	FEIT Internal Audit Committee	Faculty of Engineering and Information Technology	07/2019 – Present
5.	Member of e-Portfolio Committee	Faculty of Engineering and Information Technology	07/2020 – Present
6.	Printed Circuit Board (PCB) Laboratory Coordinator	Department of Electrical and Electronics Engineering	03/2020 – 12/2021
7.	Electrical and Electronics Engineering Laboratory and Safety Coordinator	Department of Electrical and Electronics Engineering	03/2020 – 12/2021

9. GRANTS

1. Southern University College Research Fund (SUCRF), “Study of Uni-Sensor Photoplethysmography Signal for Non-Invasive Health Monitoring”, **RM20,000**, 07/2021-06/2022.