



**[KANG ENG SIEW]**  
**[Assistant Professor]**  
**[Department of Electrical and Electronic Engineering**  
**/Faculty of Engineering and Information Technology (FEIT)]**  
**[eskang@sc.edu.my]**



## 1. Academic Qualification

No.	QUALIFICATION	FIELD OF SPECILIZATION	NAME OF AWARDING INSITUTION & COUNTRY	START DATE – END DATE
1.	B.E.E	Electrical & Electronic	Universiti Teknologi Malaysia	2004-2008
2.	PhD	Advanced Nanoelectronics	Universiti Teknologi Malaysia	2008-2013

## 2. PREVIOUS EMPLOYMENT RECORD

No.	START DATE – END DATE	POSITION	JOB NATURE	EMPLOYER / COMPANY
1.	April 2013- current	Lecturer	Academic	Southern University College
2.	July 2013- March 2014	Post-Doctoral	Research	Universiti Teknologi Malaysia
3.	June 2009- June 2011	Teaching Assistant	Academic	Universiti Teknologi Malaysia
4.	May 2007- June 2007	Trainee Engineer	Industrial	Intel Microelectronics



**3. PROFESSIONAL QUALIFICATION / MEMBERSHIP (NATIONAL / INTERNATIONAL)**

No.	TYPE OF QUALIFICATIONS / MEMBERSHIP	GOVERNED BY WHICH BODY / COMPANY / ASSOCIATION / OTHERS	AWARDED YEAR / MEMBERSHIP DURATION
1.	Chartered Engineer	The Institution of Engineering and Technology	2017 / Annual
2.	The Institution of Engineering and Technology (IET)	The Institution of Engineering and Technology	2016 / Annual
3.	Microsoft Certified Educator (MCT)	Microsoft	2016
4.	Graduate Engineer of BEM	Board of Engineers Malaysia	Since 2008

**4. RECOGNITION AWARD (NATIONAL / INTERNATIONAL)**

No.	TYPE OF AWARD RECEIVED	RECEIVED FROM WHICH BODY / COMPANY / ASSOCIATION / OTHERS	RECEIVED YEAR
1.	GOLD METAL Automated Medicine Dispenser Machine	32 <sup>nd</sup> International Invention, Innovation & Technology Exhibition 2021 (ITEX 2021)	2021
2.	GOLD METAL Automated Disinfection Robot	32 <sup>nd</sup> International Invention, Innovation & Technology Exhibition 2021 (ITEX 2021)	2021
3.	GOLD AWARD Automated Medicine Dispenser Machine	International Virtual Expo of Innovation Product and System Design 2021 (IN-VIDE 2021)	2021
4.	GOLD AWARD Brain Computer Interface Drone in 21 <sup>st</sup> Century	Virtual Expo of Innovation Product and System Design 2020 (VIDE 2020)	2020
5.	SILVER METAL	Pertandingan Rekacipta (PEREKA 2020) in Conjunction with Ekspo Kecermelangan Rekacipta UMS (EXCOCIPTA) 2020	2020
6.	Outstanding Research Award	Southern University College	2015



**5. CONFERENCES AND PIECES OF TRAINING**

No.	TITLE OF THE CONFERENCES / TRAINING	DATE	TRAINING VENUE	ORGANIZE BY SPEAKER / TRAINER
1.	<b>Workshop</b> Professional Interview “Outcome Based Competent Assessment (OBCA) Workshop: Route to become MIEM and Professional Engineer”	November 2021	Online	IEM Malaysia, Southern Branch
2.	<b>Training</b> Awareness on Outcome-Based Education (OBE) and Accreditation Process	April 2021	Southern University College	Prof. Dr. Hishamuddin & Dr. Pong Hon Keat
3.	<b>Workshop</b> LINUX Workshop	March 2021	Southern University College	Dr. Ong Teong Joo
4.	<b>Conference</b> Gold award Virtual Expo of Innovation Product and System Design 2020 – ViDE 2020	December 2020	Universiti Malaysia Perlis	Universiti Malaysia Perlis (UniMAP)
5.	<b>Conference</b> Silver award PEREKA 2020	December 2020	Universiti Malaysia Sabah	Universiti Malaysia Sabah
6.	<b>Training</b> Internal OBE Training	16 <sup>th</sup> July 2020	Southern University College	Prof. Hishamuddin
7.	<b>Training</b> Company Emergency Responses Team Training	9 <sup>th</sup> -10 <sup>th</sup> July 2020	Southern University College	Lim Kim Leng (Ampro Solutions)
8.	<b>Training</b> Outcome Based Education	18 <sup>th</sup> June 2020	Southern University College	Assoc. Prof Sim Hiew Moi
9.	<b>Training</b> Webinar on EAC Standard	17 <sup>th</sup> June 2020	EAC	Ir. Prof. Dr. Law Chung Lim Ir. Assoc. Prof. Dr. Hasril Hasini Ir. Dr. Liew Chia Pao
10.	<b>Training</b> Webinar on ETAC Standard	16 <sup>th</sup> June 2020	ETAC	Assoc. Prof. Dr. Ahmad Yasir Ir. Assoc. Prof. Dr. Che Maznah Mr. Noor Azizan
11.	<b>Training</b> Introduction to Data Science	20 <sup>th</sup> -21 <sup>st</sup> September	Southern University	Dr. Lau Cher Han (UCAN)



	Training	2019	College	Technologist Sdn. Bhd. )
12.	<b>Training</b> Postgraduate Supervision Good Practices - "Mentoring vs Supervision"	2 <sup>nd</sup> August 2018	Southern University College	Dr. Teh Geok Bee
13.	<b>Training</b> Turnitin workshop	16 <sup>th</sup> July 2018	Southern University College	Mr. Mazlan
14.	<b>Training</b> Complex Engineering Problem Solving and Complex Engineering Activities Workshop	10 <sup>th</sup> April 2018	Southern University College	Ir. Liew Chia Pao.
15.	<b>Training</b> One Day Workshop on Gap Analysis of the Engineering Accreditation Council Manual	3 <sup>rd</sup> April 2018	Wisma IEM , Petaling Jaya	Ir. Dr. Siti Hawa Hamzah & Ir. Liew Chia Pao.
16.	<b>Training</b> The Essential of Fire Awareness	29 <sup>th</sup> Dec 2017	Southern University College	Lim Kim Leng (Ampro Solutions)
17.	<b>Training</b> Accreditation Criteria in 2012 EAC Manual Workshop	20 <sup>th</sup> -21 <sup>st</sup> July 2017	Southern University College	
18.	<b>Training</b> Seminar on Learning Outcomes (Rubrics and Lesson Plan)	17 <sup>th</sup> May 2017	Southern University College	
19.	<b>Training</b> Teaching Workshop "Perspectives in Learning" and "Instructional Method"	29 <sup>th</sup> -30 <sup>th</sup> March, 2017	Southern University College	
20.	<b>Conduct Workshop</b> Photo Resistor and LEDs	26 <sup>th</sup> August 2016	Southern University College	
21.	<b>Conduct Workshop</b> Pulse Sensor Workshop	27 <sup>th</sup> August 2016	Southern University College	
22.	<b>Conferences</b> 2 <sup>nd</sup> International Workshop on Big Data Analytics (IWBD2016)	23 <sup>th</sup> -24 <sup>th</sup> August 2016	Jen Hotel, Puteri Harbour	
23.	<b>Training</b> Microsoft Certified Educator (MCE)	6 <sup>th</sup> -7 <sup>th</sup> April 2016	Southern University College	
24.	<b>Training</b> Arduino Workshop	30 <sup>th</sup> Dec 2015	Southern University College	



25.	<b>Conduct Workshop</b> Pulse Rate Sensor & PCB Fabrication	27 <sup>th</sup> -28 <sup>th</sup> August 2015	Southern University College	
26.	<b>Training</b> Programmable Logic Fundamentals	21 <sup>st</sup> August 2015	Southern University College	
27.	<b>Training</b> Research Methodology Workshop	June 2015	Southern University College	
28.	<b>Conduct Workshop</b> Sharing Our Passions: Teaching and Research Workshop	10 <sup>th</sup> Jun 2015	Southern University College	
29.	<b>Training</b> Workshop on Quality Education and Introduction to Problem Based Learning (PBL)	February 2015	Southern University College	
30.	<b>Training</b> Workshop on Writing Journal Papers	2011	Universiti Teknologi Malaysia	
31.	<b>Training</b> Training Course on Mathematica V7	2010	Universiti Teknologi Malaysia	
32/	<b>Training</b> Workshop on Nanoscience and Nanotechnology: A Gentle Introduction to Next Big Idea	2010	Universiti Teknologi Malaysia	
33.	<b>Conferences</b> 2nd International Conference and Workshops on Basic and Applied Sciences & Regional Annual Fundamental Science Seminar	2 <sup>nd</sup> - 4 <sup>th</sup> June 2009	Johor Bahru,	
34.	<b>Conferences</b> Regional Symposium on Microelectronics,	25 <sup>th</sup> -29 <sup>th</sup> May 2009	Kota Bharu	



## 6. RESEARCH AND PUBLICATION

RESEARCH / PUBLICATION / JOURNALS / BOOKS / OTHER

### Book Chapter:

1. E. S. Kang and R. Ismail (2012). *Advanced Nanoelectronics: Quantum Mechanical Effects in Nanometer Strained Si/Si<sub>1-x</sub>Ge<sub>x</sub> MOSFETs*, Published in December 03, 2012 by CRC Press / Taylor and Francis Group. ISBN 9781439856802
2. Chia Kim Seng, Kang Eng Siew, Eng Pei Chee and Hui Seng Keong, Build A Line Follower Robot, Southern University Press, 2014

### Journals

1. B. S. Chan, S. Ismail, B. Nurmin and **E. S. Kang** (2021). Design of Portable Electromyography (EMG) System for Clinical Rehabilitation, Transaction of Science and Technology, Vol. 7, No. 4.2, 2021
2. **E.S. Kang** and R. Ismail. (2014). Unified Drain Current Model of Armchair Graphene Nanoribbons with Uniaxial Strain and Quantum Effect, *Journal of Nanomaterials*, Vol. 2014, 219719, 2014. (IF= 1.611)
3. **E.S. Kang**, Fatimah Abd. Hamid, R. Ismail. (2014). Future of Nanoscale Strained Si/SiGe Metal Oxide Semiconductor Field Effect Transistor for Performance Metric Evaluation: A Review. *Journal of Nanoelectronics and Optoelectronics*, Vol. 9, 317-326, 2014. (IF= 0.37)
4. **E. S. Kang**, S. Anwar and R. Ismail. (2013). Threshold Voltage Variation of Nanoscale Strained Si / Si<sub>1-x</sub>Ge<sub>x</sub> MOSFETs in the Presence of Punch Through Effect. *Journal of Computational and Theoretical Nanoscience*, Vol. 10, No. 10, pp.2366-2370, October 2013. (IF=0.673)
5. **E. S. Kang**, Sohail Anwar and Razali Ismail. (2013). Energy Quantization on the Current-Voltage Characteristic of Nanoscale Strained Si / Si<sub>1-x</sub>Ge<sub>x</sub> MOSFETs. *International Journal of Modern Physics B*, Vol.27, No. 17, July 2013. (IF=0.358)
6. **E. S. Kang**, S. Anwar and R. Ismail. (2013). Impact of Germanium in Strained Si/Relaxed SiGe on the Carrier Performance in NonDegenerate and Degenerate Regimes. *Journal of Semiconductor*, Vol. 34, No. 6, 062001 June 2013 (Listed Scopus).
7. **E. S. Kang**, S. Anwar and R. Ismail. (2012). Quantum Mechanical Effect on the Threshold Voltage of Nanoscale Dual Channel Strained Si/Strained Si<sub>1-y</sub>Ge<sub>y</sub>/relaxed Si<sub>1-x</sub>Ge<sub>x</sub> PMOSFETs. *Journal of Computational and Theoretical Nanoscience*, Vol. 10, No. 5, pp.1231-1235, May 2013. (IF=0.673)
8. **E. S. Kang**, S. Anwar and R. Ismail. (2012). Quantum Confinement on the Current-Voltage Characteristics of Nanoscale Two-Dimensional MOSFETs. *Jurnal Teknologi*, 2013. (Listed Scopus)
9. **E. S. Kang**, F. A. Hamid and R. Ismail. (2012). Einstein Relation of Two- Dimensional Strained Si/Si<sub>1-x</sub>Ge<sub>x</sub> PMOSFETs in Nondegenerate Regime and Degenerate Regime. *International Journal of Nano Devices*, Vol.1, No. 1, May 2012, pp.12-18.
10. **E. S. Kang**, W. H. Yau, S. Anwar and R. Ismail. (2012). Two-Dimensional Analytical Threshold Voltage Model of Nanoscale Strained Si/Si<sub>1-x</sub> Ge<sub>x</sub> MOSFETs including Quantum Mechanical Effects. *Journal of Computational and Theoretical Nanoscience*, Vol. 9. No. 3, pp. 441-447, March 2012. (IF=0.673)



**Conferences:**

1. B. S. Chan, S. Ismail, B. Nurmin and **E. S. Kang** (2021). Preriminary Design of Portable Electromyography (EMG) System for Clinical Signal Acquisition. *IEEE International Conference on Artificial Intelligent in Engineering and Technology*.
2. **E. S. Kang**, Kiani M. J, Hedayat S. N. Ahmadi M. T, Hamzah M. A and Razali Ismail.(2012). Analytical Study of the Intrinsic Velocity of Nanoscale Strained Silicon MOSFETs, Including the Effects of Germanium. *Isfahan's Electrical Engineering National Conference*.
3. Y. C. Thien, **E. S. Kang** and Razali Ismail. (2012). Simulation of Nanoscale Dual-channel Strained Si/Si<sub>1-x</sub>Ge<sub>x</sub> Silicon PMOSFET. *10th IEEE International Conference on Semiconductor Electronics*.
4. **E. S. Kang**, Mohammad T. Ahmadi, Wei Hong Yau and Razali Ismail. (2009). Current Characteristic for High Performance Strained Silicon NMOSFETs. *Proceeding of 2009 Regional Symposium on Microelectronics*.
5. **E. S. Kang**, Mohammad T.Ahmadi, Munawar A Riyadi and Razali Ismail. (2009). Numerical Study of Diffusion Current Characteristic for Non-Degenerate N-type Strained Silicon MOSFETs. *Proceedings of International Conference on Basic and Applied Science and Regional Annual Fundamental Science Seminar*.
6. Munawar. A Riyadi, Mohammad T. Ahmadi and Jatmiko E. Suseno, **E. S. Kang**, Ismail Saad, Razali Ismail and V. K. Arora. (2009). *Physics-Based Simulation of Carrier Velocity in 2-Dimensional P-type MOSFET*. *Proceedings of 2009 3rd Asia International Conference on Modelling and Simulation, AMS*, pp. 735 -738

**7. OTHER ADDITIONAL ADMINISTRATIVE RESPONSIBILITIES**

No.	POSITION (APPOINTMENT)	FACULTY / DIVISION / DEPARTMENT	START DATE – END DATE
1.	Deputy Dean	Faculty of Engineering and Information Technology	January 2020-December 2020
2.	Head of Department	Department of Electrical & Electronics Engineering	September 2017-December 2018
3.	Director	School of Foundation Studies	January 2018 - September 2017
4.	Head of Department	Foundation in Science School of Foundation Studies	January 2018 - September 2017