

CURRICULUM VITAE



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Education

1. Doctor of Engineering, 2008, Shizuoka University, Japan
2. Master of Engineering, 2005, Tokyo University of Agriculture and Technology, Japan
3. Bachelor of Engineering, 2000, University of the Ryukyus, Japan

Areas of Interest

1. Image Sensor (Wide dynamic range imaging, Ultraviolet imaging, Infra-red imaging, Fluorescent imaging)
2. Analog-to-digital Converter
3. Sensory Device (Porous silicon, Graphene)
4. Sensor Interface Circuit (Readout Circuit, Analog-to-digital Converter, USB driver, Digital Data Processor)
5. Sensory System (Water flow sensory system)
6. Solar Energy Generation (Sun Tracking Mechanism, Graphene Solar Cell)

Professional Qualification/ Membership/ Affiliation

1. Executive Committee, IEEE CASS & IEEE EDS
2. Member, Institute of Electrical and Electronics Engineers (IEEE)
3. Graduate Member, Board of Engineers Malaysia (BEM)

Appointments

Position	Duration
1. Senior Lecturer, Department of Electrical and Electronic Engineering, Faculty of Engineering, UPM	October 2008 to date
2. Tutor, Department of Electrical and Electronic Engineering, Faculty of Engineering, UPM	May 2002 to October 2008
3. Engineer, ALPS Electric (M) Sdn. Bhd.	April 2000 to May 2002

Publications

Journals (30 recent journals)

1. **Suhaidi Shafie**, Shoji Kawahito, "A Wide Dynamic Range CMOS Image Sensor with Dual Charge Storage and a Multiple Sampling Technique" Technical Report of the Graduate School of Electronic Science and Technology Shizuoka University, Vol. 28, pp.47-51, Shizuoka, Japan, Mar. 2007.
2. Yukihiro Ohta, Park Jong Ho, Keigo Isobe, **Suhaidi bin Shafie**, Mitsuhito Mase, Shoji Kawahito, Yasuo Wakamori, Takashi Mizota, Norihito Sawamura and Masaaki Sasaki, "Wide Dynamic Range Image Synthesis and Contrast Compression Using Multi Capture with Different Exposure Time in One Frame" Technical Report of the Hamamatsu Industrial Research Institute of Shizuoka Prefecture, No. 17, pp. 6-9, Shizuoka, Japan, Aug. 2007.
3. **Suhaidi Shafie**, Shoji Kawahito, and Shinya Itoh, "A Dynamic Range Expansion Technique for CMOS Image Sensors with Dual Charge Storage in a Pixel and Multiple Sampling" Sensors, Vol. 8, pp. 1915 - 1926, Switzerland, Mar. 2008.
4. **Suhaidi Shafie**, Shoji Kawahito, Hyung-June Yoon and Shinya Itoh, "Dynamic Range Expansion Technique Using Dual Charge Storage in a CMOS APS and Multiple Exposures for Reduced Motion Blur"

- The Journal of the Institute of Image Information and Television Engineers Japan, Vol. 62, No. 12, pp. 2037-2044, Dec. 2008
5. Izhal Abdul Halin, Wan Zuha Wan Hasan, and **Suhaidi Shafie**, "Soil Moisture Sensor and Read-out Circuit Topology for Large Array Deployment" *IEICE Electronics Express*, Vol. 6, No. 17, pp. 1234-1239, Sept. 2009.
 6. **Suhaidi Shafie**, Shoji Kawahito, Izhal Abdul Halin and Wan Zuha Wan Hasan, "Non-linearity in Wide Dynamic Range CMOS Image Sensors Utilizing a Partial Charge Transfer Technique" *Sensors*, Vol.9, pp.9452-9467, Switzerland, 2009.
 7. Salsabila Ahmad, Mohd Zainal Abidin Ab Kadir, **Suhaidi Shafie**, "Current perspective of the renewable energy development in Malaysia" *Renewable and Sustainable Energy Reviews*, vol. 15(2), 2011, pp 897-904.
 8. Wan Zuha Wan Hassan, Mohammad Hamiruce Marhaban, **Suhaidi Shafie**, "Fire Fighting Robot" *Journal of Japan Society of Applied Electromagnetic and Mechanics*, Vol. 19, pp250-253.
 9. Izhal Abdul Halin, Ishak Bin Aris, Maryam Isa, **Suhaidi Shafie**, "Selection of amplifier for optimized charge transfer in active pixel CMOS time of flight (TOF) image sensors" *IEICE Electronics Express*, Vol 8, No. 22, 2011, pp1913-1999.
 10. Norhisam Misron, Mohammad Hamiruce Marhaban, Nashiren Farzilah Mailah, **Suhaidi Shafie**, "A Mobile Ferromagnetic Shape Detection Sensor Using a Hall Sensor Array and Magnetic Imaging" *Sensors*, Vol. 11, pp10474-10489
 11. Meftah Salem M. Alfatni , Abd Rashid Mohamed Shariff, Mohd Zaid Abdullah, Mohammad Hamiruce Marhaban, **Suhaidi B. Shafie**, Osama M. Ben Saaed, "Oil Palm Fruit Ripeness Grading System Based on Basic Gray Level Aura Matrix Feature Extraction and Support Vector Machine, K Nearest Neighbourhood and Artificial Neural Network Supervised Machine Learning" *Adv. Sci. Lett.* 19, 2612-2614 (2013)
 12. Salsabila Ahmad, **Suhaidi Shafie**, Mohd Zainal Abidin Ab Kadir, "Power feasibility of a Low Power Consumption Solar Tracker" *Procedia Environmental Sciences* 17 (2013) 494 – 502
 13. De Xing Lioe, **Suhaidi Shafie**, Harikrishnan Ramiah, Nasri Sulaiman and Izhal Abdul Halin, "Low Power Transmitter for Wireless Capsule Endoscope" *Journal of Physics: Conference Series* 423 (2013) 012038 PP 1-6
 14. M.H. Chong, H.Jaafar, W.Z.W.Hasan, **S.Shafie**, M.N.Hamidun, M.M. Isa and A.F. Hawary "An Experiment of Thick Film Force Sensor using MEMS Simulation Software" *International JOURNAL OF THEORETICAL AND APPLIED INFORMATION TECHNOLOGY* (E-ISSN 1817-3195 / ISSN 1992-8645) (2013) Vol. 47 No.3 pp902-910
 15. Alfatni, Meftah Salem M.; Shariff, Abdul Rashid Mohamed; Abdullah, Mohd Zaid; Marhaban, Mohd Hamiruce; **Shafie, Suhaidi B.**; Saaed, Osama M. Ben "Recognition System of Oil Palm Fruit Bunch Types Based on Texture Feature and Image Processing Techniques" *Advanced Science Letters*, Volume 19, Number 12, December 2013 , pp. 3441-3444(4)
 16. Shayestegan, M., Marhaban, M.H., **Shafie, S.**, Abdul Sattar, "Fuzzy Logic Based Robot Navigation in Static Environment with Dead Cycle Obstacles" *International Journal of Robotic and Automation* (2013), vol. 28, no. 4, pp. 1-10.
 17. Salsabila Ahmad, **Suhaidi Shafie**, Mohd Zainal Abidin Ab Kadir, Noor Syafawati Ahmad, "ON the Effectiveness of Time and Date Based Sun Positioning solar Collector in Tropical Climate" *Renewable and Sustainable Energy Reviews* 28 (2013) 635–642.
 18. Amimul Ahsan, Nur Syuhada, Eden Jolhi, Kh. M. Darain, Md. K. Rowshon, Md. Jakariya, Suhaidi Shafie and Abdul H. Ghazali, "Assesment of Distillate Water Quality Parameters Produced by Solar Still for Potable Usage" *Fresenius Environmental Bulletin* (2014), Vol. 23, No. 3a, pp. 859-86.
 19. **S. Shafie** I, F. A. M. Fodzi , L. Q. Tung, D. X. Lioe , I. A. Halin , W. Z. W. Hasan , H. Jaafar, "Development of CMOS Imager Block for Capsule Endoscope", *Journal of Physics: Conference Series*, Accepted
 20. Mohammad Reza Shokrani, Mohd Nizar B Hamidon, Noor Ain Kamsani Fakhrol Zaman Rokhani ,Suhaidi Bin Shafie, "900-MHz RF Power Harvester in 0.18 μ m CMOS for Use in Wireless Sensor Networks" *Scientific World Journal*, Accepted

Conference Proceedings (30 recent Conference Proceedings)

1. Shoji Kawahito, Jong Ho Park, Keigo Isobe, **Suhaidi Shafie**, Tetsuya Iida and Takashi Mizota, "A CMOS Image Sensor Integrating Column-Parallel Cyclic ADCs with On-Chip Digital Error-Correction Circuits", *Proc. of International Solid-State Circuit Conference 2008*, 51, pp. 56-57, 2.7, San Francisco, California, USA, Feb. 2008.

2. **Suhaidi Shafie** and Shoji Kawahito, "A Wide Dynamic Range CMOS Image Sensor with Dual Charge Storage in a Pixel and a Multiple Sampling Technique", Proc. of SPIE IS&T 2008, Vol. 6816-5, pp. 1-9, San Jose, California, USA, Jan. 2008.
3. **Suhaidi Shafie** and Shoji Kawahito, "A Wide Dynamic Range CMOS Image Sensor with Dual Charge Storage in a Pixel and a Multiple Sampling Technique", Proc. of The 6th International Conference on Global Research and Education, pp. 1046-1055, YA7-63B, Hamamatsu, Japan, Sept. 2007.
4. **Suhaidi Shafie**, S. Kawahito, "A Wide Dynamic Range CMOS Image Sensor with Gated Charge Storage and a Multiple Sampling Technique", Proc. of IEEE Sensors 2006, pp. 404-407, A4L-B4, Daegu, South Korea, Oct. 2006.
5. J-H. Park, S. Kawahito, K. Isobe, **S. Suhaidi**, T. Iida and T. Mizota, "A CMOS Image Sensor Integrating 14b Column Parallel Cyclic ADCs with On-Chip Digital Error Correction Circuits", Institute of Television Engineer of Japan Technical Report Vol. 32, No. 19, pp. 27 - 30, IST2008-14, Tokyo, Mar. 2008.
6. **Suhaidi Shafie**, Shinya Ito and Shoji Kawahito, "Dynamic Range Expansion Technique of CMOS Image Sensor with Dual Charge Storage in a Pixel and Multiples Exposures for Reduced Motion Blur", Institute of Television Engineer of Japan Technical Report Vol. 31, No. 60, pp. 5 - 8, IST2007-101, Tokyo University of Science, Dec. 2007.
7. **Suhaidi Shafie** and Shoji Kawahito, "A Wide Dynamic Range CMOS Image Sensor with Dual Charge Storage in a pixel and a Multiple Sampling Technique", Institute of Television Engineer of Japan Technical Report Vol. 31, No. 3, pp. 13 - 16, IST2007-4, Tokyo University of Science, Jan 2007.
8. **Suhaidi Shafie**, Akira Kojima, Bernard Gelloz, Nobuyoshi Koshida, "Photoconduction effects in nanocrystalline silicon with a tailored band-gap profile," Proc. of Applied Physics Conference, Vol. 52, No. 3, pp. 1638, 31a-YH-III, Saitama (Mar, 2005)
9. Mohd. Husriff Hilmi Mohd. Khalid, Wan Zuha Wan Hasan, **Suhaidi Shafie**, Izhal Abdul Halin, "Addressable Soil Moisture Sensor Array for Microirrigation Systems," Proc. of IEEE Student Conference on Research and Development, C-16, Malaysia (Nov, 2009)
10. Amad-ud-Din, Izhal Abdul Halin and **Suhaidi B. Shafie**, "A Review on Solid State Time of Flight TOF Range Image Sensors," Proc. of IEEE Student Conference on Research and Development, C-13, Malaysia (Nov, 2009)
11. Lioe De Xing, **Suhaidi Shafie**, Izhal Abdul Halin and S. S. Jamuar, "Design of Front End of a RF Receiver," Proc. of IEEE Student Conference on Research and Development, F-11, Malaysia (Nov, 2009)
12. Izhal Abdul Halin, **Suhaidi Shafie**, Wan Zuha Wn Hassan, "Photo Charge Transfer Efficiency of CMOS Amplifiers for Time of Flight (TOF) Range Imaging", World Engineering Congress 2010, Conference on Electrical and Electronic Technology, pp294-299
13. Lioe De Xing, **Suhaidi Shafie**, "Review of Capsule Endoscopes" Asia Pacific Symposium on Applied Electromagnetics and Mechanics (APSAEM2010), pp581-585
14. Mohd Hanif Mohamad Zaini, **Suhaidi Shafie**, Mohammad Hamiruce Marhaban, Wan Zuha Wn Hassan, "PID Controller Implementation with Rotary Encoder" Asia Pacific Symposium on Applied Electromagnetics and Mechanics (APSAEM2010), pp596-600
15. Wan Zuha Wn Hassan, Mohammad Hamiruce Marhaban, **Suhaidi Shafie**, "Semi-auto Mobile Robot Using Interface Free Controller(IFC) for Robocon 2010" Asia Pacific Symposium on Applied Electromagnetics and Mechanics (APSAEM2010), pp601-604
16. Wan Zuha Wn Hassan, Mohammad Hamiruce Marhaban, **Suhaidi Shafie**, "Fire Fighting Robot" Asia Pacific Symposium on Applied Electromagnetics and Mechanics (APSAEM2010), pp605-609

17. Lioe De Xing, **Suhaidi Shafie**, Harikrishnan Ramiah, “Low Power BPSK Modulator for the Application of Capsule Endoscope” International Conference on Modeling, Simulation and Applied Optimization 2011(IMSASO2011), pp1-4
18. Tung Li Qian, **Suhaidi Shafie**, M. Iqbal Saripan, “A Local Tone Mapping Operator for High Dynamic Range Images” International Conference on Modeling, Simulation and Applied Optimization 2011(IMSASO2011), pp1-6
19. **Suhaidi Shafie**, Lim Chee Weh, Izhal Abdul Halin, Maryam Isa, Wan Zuha Wn Hassan, “Design and Development of LED Driver for Low Power Traffic Signage” Regional Symposium on Engineering and Technology 2011, pp349-354
20. Tung Li Qian, **Suhaidi Shafie**, M. Iqbal Saripan, “A New Technique to Reproduced High-Dynamic- Range Images for Low-Dynamic-Range Display” 2011 IEEE International Conference on Signal and Image Processing Applications (ICSIPA2011), pp399-403
21. Lioe De Xing, **Suhaidi Shafie**, Harikrishnan Ramiah, “Low Power Modulator for the Application of Capsule Endoscope” RSM2011 Proc., 2011, Kota Kinabalu, Malaysia, pp247-250
22. Wan Zuha Wn Hassan, Izhal Abdul Halin, **Suhaidi Shafie**, Masuri Othman, “An efficient diagnosis march-based algorithm for coupling faults in SRAM” RSM2011 Proc., 2011, Kota Kinabalu, Malaysia, pp274-277
23. Rasoul Garmabdari, **Suhaidi Shafie** and Maryam Mohd Isa, “Sensory System for the Electronic Water Meter”, ICCAS2012 Proc., 2012, Kuala Lumpur, Malaysia, pp 223-226
24. Lioe De Xing, **Suhaidi Shafie**, Harikrishnan Ramiah, Nasri Sulaiman,” Front End of Low Power Transmitter for Wireless Capsule Endoscope”, ICCAS2012 Proc., 2012, Kuala Lumpur, Malaysia, pp 223-226
25. Salsabila Ahmad, **Suhaidi Shafie**, Mohd Zainal Abidin ab kadir, “A High Power Generation, Low Power Consumption Solar Tracker” IEEE PECon Proc., 2012, Kota Kinabalu, Malaysia, pp452-455
26. Rasoul Garmabdari, Suhaidi Shafie, Maryam Mohd Isa and Alireza Garmabdari, “Measurement Technique for Bidirectional Four Sensor Rotary Encoder”, 2013 IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA2013), Accepted for presentation
27. Rasoul Garmabdari, Suhaidi Shafie, Maryam Mohd Isa and Alireza Garmabdari, “Measurement Technique for Bidirectional Four Sensor Rotary Encoder”, 2013 IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA2013), Accepted for presentation
28. Mohammad Kazem Chamran, Suhaidi Shafie, “Non-invasive Approach for Domestic Pipeline Monitoring and Corrosion Detection”, 2013 IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA2013), Accepted for presentation
29. Rasoul Garmabdari, **Suhaidi Shafie**, Alireza Garmabdari, Haslina Jaafar, “Labview Based Monitoring Algorithm for Rotary Encoder”, International Symposium on Applied Engineering and Science 2013 (SAES2013), Paper ID 024
30. Mohammad Kazem Chamran and Suhaidi Shafie, “Green Charger by Conservation of Momentum”, International Symposium on Applied Engineering and Science 2013 (SAES2013), Paper ID 076
31. Haslina Jaafar, M. Hidayat Zabidi, Lam Phooi Shan, Azura Che Soh and **Suhaidi Shafie**, “Smart Guidance Parking System Using Modified Dijkstra Algorithm” International Symposium on Applied Engineering and Science 2013 (SAES2013), Paper ID 099



32. Nima Khoshshirat, Nurul Amziah Md Yunus, Mohd Nizar Hamidon, Suhaidi Shafie, and Nowshad Amin, "Optimization of CIGS Thin Film Solar Cells via Numerical Simulation", International Symposium on Applied Engineering and Science 2013 (SAES2013), Paper ID 074
33. Beh Kean Sheng, Haslina Jaafar, Nurul Amziah Md Yunus, " Design and Simulation of Low Voltage RF MEMS Series Switch array", International Conference on Circuits and Systems (ICCAS2012), Paper ID 1569799129

Books (If any)

Chapter in Books (If any)

Research Grants

No	Project Title	Amount (RM)	Year	Source of Fund
1.	Optimizing the quality of wide dynamic range image utilizing the image information synthesis techniques	30,000	2009-2011	RUGS
2.	Design and Fabrication of a High Data Rates, Low Power Binary Phase Shift Keying Modulator for Capsule Endoscope	266,000	2012-2014	e-Science Fund
3	Investigation and Characterization of Active Solar Power System with Angle Controller utilizing Date and Time-based Approach	76,140	2012-2014	FRGS
4	Design and Development of Imaging Device for Detection of Tuberculosis Infection via Fluorochrome Acid-Fast Stained Tubercle Bacilli Samples	105,000	2013-2015	Putra IPB

Awards/Recognition (Current)

Num	Name of awards	Title	Award Authority	Award Type	Year
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Professional Services/Consultation

No	Year	Title	Authority	Amount
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Student Supervision

PhD (Main Supervisor)

No.	Name	Title	Status
1	Ali Khalifa Abdgalil (GS37590)	<i>Design and development of Graphene based Optical sensor</i>	On Going 2013
2	Masnita Mat Isa (GS38666)	<i>Design and development of Imaging Devices for Detection of TB Infection via Acid-Fast Stained TB Samples</i>	On Going 2014

MS with thesis (Main Supervisor)

No.	Name	Title	Status
1.	Salsabila Ahmad (GS24699)	<i>Design And Implementation Of An Open-Loop Dual-Axis Active Solar Tracking System With Precision Angle Controller</i>	Completed 2012
2.	Tung Li Qian (GS25072)	<i>A Local Mapping Operator for High Dynamic Range Images</i>	Completed 2013
3.	Lioe De Xing (GS25073)	<i>Low Power Modulator for The application of Capsule Endoscope</i>	Completed 2013
4	Rasoul Garmabdari (GS32994)	<i>Water Flow Detection and Measurement Technique based on Four Hall Effect Sensors</i>	On Going
5	Mohammad Kazem Chamran (GS32482)	<i>Corrosion Detection Technique in Pipeline</i>	On Going
6	Mujahid Iqbal (GS35288)	<i>Enhancement Of Tio2 Dye Sensitized Solar Cell</i>	On Going

MS without Thesis (Main Supervisor)

No.	Name	Title	Status
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