

## CURRICULUM VITAE



### Dr. Muhamad Saufi Mohd Kassim

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### Education

1. PhD. Agricultural Engineering, 2013, University Putra Malaysia.
2. M.S. Agricultural Engineering, 2004, University Putra Malaysia.
3. B. S. Agricultural Engineering, 1998, University Putra Malaysia.

### Areas of Interest

1. Agricultural Robotic, Agricultural Mechanization and Automation

### Professional Qualification/ Membership/ Affiliation

1. Executive Treasurer, Malaysian Society of Agricultural Engineers (MSAE), 2013-present
2. Graduate Member, Malaysia Society of Agricultural Engineers (MSAE), 2002-2013
3. Professional Member, Malaysia Society of Agricultural Engineers (MSAE), 2014

### Appointments

Position	Duration
<b>Senior Lecturer</b>	
1. Department of Biological and Agricultural Engineering Faculty of Engineering, UPM	March 2014 – Present;
<b>Research Officer</b>	
2. Smart Farming Technology Research Center Faculty of Engineering, UPM	October 2010 to February 2012
<b>Science Officer</b>	
2. Smart Farming Technology Laboratory Institute of Advanced Technology, UPM	October 2006 to September 2010
3. Intelligent Systems and Robotic Laboratory Institute of Advanced Technology, UPM Equipments under supervision:	February 2002 – October 2006
<b>Graduate Research Asistant</b>	
4. Graduate Research Assistant IRPA Project"Design and Development of Computer Control Bio-Production Robot for Smart Farming"Faculty of Engineering, UPM	November 1999 – January 2002



## Research Assistant

5. IRPA Project” Design and Development of Agriculture Robot for Plantation Crops” May 1998 – October 1999  
Faculty of Engineering, UPM

## Publications

### Journals (6 recent journals)

Abdulkadir, T. D., Ismail, W. I. W., **Kasim, M. S. M.**, & Bejo, S. K. (2016). SUITABILITY OF CAPSULE AS A PADDY COATING MATERIAL FOR THE SYSTEM OF RICE INTENSIFICATION (SRI). *Jurnal Teknologi*, 78(1-2).

**MUHAMAD SAUFI MOHD KASSIM** AND WAN ISHAK WAN ISMAIL (2014). Oil Palm Fruit Classifications by using Near Infrared Images. *Research Journal of Applied Sciences, Engineering and Technology* 7(11): 2200-2207, 2014 ISSN: 2040-7459 (**ISI CIJ**)

**MUHAMAD SAUFI MOHD KASSIM**, WAN ISHAK WAN ISMAIL, ABDUL RAHMAN RAMLI AND SITI KHAIRUNNIZA BEJO.(2012). Oil palm fresh fruit bunches (FFB) growth determination system to support harvesting operation. *Journal of Food, Agriculture & Environment* Vol.10 (2) : 620-625.2012 (**IF 0.4**)

W. I. W. ISMAIL, R. M. HUDZARI, **M. K. M. SAUFI** AND L. T. FUNG (2012). Computer-controlled system for autonomous tractor in agricultural application. *Journal of Food, Agriculture & Environment* Vol.10 (2): 350-356. 2012 (**IF 0.4**)

W.I. WAN ISHAK AND **M.K. MUHAMAD SAUFI** (2010), Development of Autonomous Travelling Device for Oil Palm FFB (Fresh Fruit Bunches) Harvester. *Journal of Agricultural Science and Technology*. ISSN 1939-1250. USA, Oct 2010, Volume 4, Number 5 (Serial No.30). pp 68-77. 2010. (**Non CIJ**)

NG, S., YUSOF, J. M., **SAUFI, M.**, **KASSIM, M.**, RAHMAN, K. A., & ISMAIL, N. (2009, February). IV-FMC: An automated vision based part modeling and reconstruction system for flexible manufacturing cells. In *Robotics and Biomimetics, 2008. ROBIO 2008. IEEE International Conference on* (pp. 1383-1387). IEEE

### Conference and Seminars (16 recent Conference Proceedings)

**MUHAMAD SAUFI MOHD KASSIM**, WAN ISHAK WAN ISMAIL, ABDUL RAHMAN RAMLI AND SITI KHAIRUNNIZA BEJO.(2014). Image Clustering Technique in Oil Palm Fresh Fruit Bunch (FFB)Growth Modeling. 2nd International Conference on Agricultural and Food Engineering, CAFEi2014. Kuala Lumpur. Agriculture and Agricultural Science Procedia 2 ( 2014 ) 337 – 344

WAN ISHAK WAN ISMAIL, **MUHAMAD SAUFI M.K.** AND M HUDZARI (2013). Camera Color Vision for Crop Ripeness Model. 2013 Society for Engineering in Agriculture Conference. Western Australia.22-25 September.

RAMIN SHAMSHIRI, WAN ISHAK WAN ISMAIL AND **MUHAMAD SAUFI M.K** (2012), Design and Simulation of Control System for A Field Survey Mobile Robot Platform.International Conference on Agricultural and Food Engineering for Life (Cafei 2012) IOI Putrajaya. 26-28 November 2012.

**MUHAMAD SAUFI M.K** AND WAN ISHAK WAN ISMAIL (2009), Multispectral Imaging to Determine Oil Palm FFB Maturity Stages: A Review'.International Advanced Technology Congress ATCi 2009. Putra World Trade Center

WAN ISHAK WAN ISMAIL AND **MUHAMAD SAUFI M.K.** (2009) 'Development of Autonomous Travelling Device for Oil Palm FFB Harvester'International Advanced Technology Congress ATCi 2009. Putra World Trade Center

**MUHAMAD SAUFI MOHD KASSIM**, W.I. WAN ISHAK, AND KHAIRUDDIN A.R. (2007). Hydraulic Robot Arm for Agriculture Operation. World Engineering Congress 2007 (WEC 07). 5-9 August 2007. Penang

**MUHAMAD SAUFI MOHD KASSIM** , WAN ISHAK WAN ISMAIL, AND MOHD HUDZARI RAZALI(2007).



Computer Control Electrohydraulic Steering for Automated Tractor, international Conference on Control, Instrumentation and Mechatronic Engineering (CIM 07) , Persada Johor international Convention Center Johor Baharu , Johor.28-29 May 2007

WAN ISHAK W I, **MUHAMAD SAUFI MOHD KASSIM**, ZAKARIA ISMAIL, KHAIRUDDIN ABDUL RAHMAN (2006).Sistem Cerdik Penyemburan Racun Rumpai Automatik. Kelompok Pertanian Persis. Bulletin 'UPM Penjana Ilmu Pertanian Berteknologi Tinggi.' Sempena MAHA 2006 (21-26 Nov 2006) ms 26 dan ms52.

WAN ISHAK WAN ISMAIL, **MUHAMAD SAUFI MOHD KASSIM** (2005). Enhanced Graphical User Interface (GUI) For Autonomous Agricultural Vehicle. International Advanced Technology Congress 2003. ITMA, UPM. 6-8 December 2005.

*NAPSAH ISMAIL, KHAIRUDDIN ABDUL RAHMAN, MUHAMMAD SAUFI MOHD KASSIM, TANG SAI HONG, JURAINA MD YUSOF & RAZALI SAMIN,(2005) Vision-based 3D Part recognition System for Flexible Manufacturing Cell, Proceedings of the Conference on Intelligent Systems and Robotics (CISAR2005), International Advanced Technology Congress, 6-8 December 2005, Putrajaya, (ISBN 983-42758-1)*

**MUHAMAD SAUFI MOHD. KASSIM**, WAN ISHAK WAN ISMAIL, A. RASHID, AND SAMSUL BAHRI (2003). Unmanned Tractor for Agricultural Purposes. Poster Paper. Agricultural and Food Engineering Conference: Enhancing Skills and Practices of Agricultural and Food Engineering. 15-16 October 2003. Renaissance Palm Garden Hotel, Putra Jaya.

**MUHAMAD SAUFI MOHD. KASSIM** and WAN ISHAK WAN ISMAIL (2003). Using Visual Basic (VB) for Unmanned Tractor Navigation. Advanced Technology Congress. Putrajaya, UPM. 20-21<sup>st</sup> May 2003.

WAN ISHAK WAN ISMAIL AND **MUHAMAD SAUFI MOHD. KASSIM** (2003), Transforming Agricultural Vehicle to Automatic Guided Vehicle – Advanced Technology Congress 2003. ITMA, UPM. 20-21<sup>st</sup> May 2003

**MUHAMAD SAUFI MOHD. KASSIM**, WAN ISHAK, VICTOR LOH KEEN SEONG (2002), Design and Development of Chain Sawcutter End-Effect from Oil Palm FFB Harvester Robot. 2<sup>nd</sup> World Engineering Congress. Kuching, Sarawak. 22-25 July 2002

WAN ISHAK WAN ISMAIL, **MUHAMAD SAUFI MOHD. KASSIM** (2002), Optical, Mechanical and Biological Properties for the Determination of Fruit Ripeness. 2<sup>nd</sup> World Engineering Congress. Kuching, S.

#### Research Exhibition (4 recent Research Exhibition)

WAN ISHAK WAN ISMAIL, **MUHAMAD SAUFI MOHD KASSIM**, ZAKARIA ISMAIL, MUHAMMAD RAZIF MAHADI, RAMIN SHAMSHIRI, AND HAMED SHOKRIPOUR. (2012), Robot Pemanjat Pokok ( Exhibition Poster). MAHA 2012 23 November- 2 December

WAN ISHAK WAN ISMAIL, **MUHAMAD SAUFI MOHD KASSIM**, ZAKARIA ISMAIL, MUHAMMAD RAZIF MAHADI, RAMIN SHAMSHIRI, MOHD HUDZARI RAZALI AND NADER KAVANDI. (2012). Penggunaan Handphone Untuk Menentukan Kematangan Buah Kelapa Sawit(Exhibition Poster). MAHA 2012 23 November- 2 December

WAN ISHAK WI, M HUDZARI, KHAIRUDDIN RAHMAN, **MUHAMAD SAUFI MOHD KASSIM**, ZAKARIA ISMAIL, M FADHLI, SHARENCE. (2006), Sistem Cerdik Jentera Penyemburan Racun Rumpai. Poster Pameran(Exhibition poster). MAHA 2006 (21-26 Nov 2006)

WAN ISHAK WAN ISMAIL, **MUHAMAD SAUFI MOHD. KASSIM**, LIM YU JIAN (2003). Design and Development of Automated Tractor for Mobile Harvesting Robot. Exhibition Paper. Exhibition of Research and Invention/Pameran Rekabentuk dan Penyelidikan. 8-9 July 2003, UPM.

### Conference and Seminar (5 recent Conference and Seminar)

RAMIN SHAMSHIRI, WAN ISHAK WAN ISMAIL AND **MUHAMAD SAUFI M.K** (2012), Design and Simulation of Control System for A Field Survey Mobile Robot Platform. International Conference on Agricultural and Food Engineering for Life (Cafei 2012) IOI Putrajaya. 26-28 November 2012

**MUHAMAD SAUFI M.K** AND WAN ISHAK WAN ISMAIL (2009), Multispectral Imaging to Determine Oil Palm FFB Maturity Stages: A Review'. International Advanced Technology Congress ATCi 2009. Putra World Trade Center (PWTC), Kuala Lumpur. 3-5 November 2009

**MUHAMAD SAUFI MOHD KASSIM**, WAN ISHAK WAN ISMAIL, A. and MOHD HUDZARI RAZALI (2007). Computer Control Electrohydraulic Steering for Automated Tractor, international Conference on Control, Instrumentation and Mechatronic Engineering (CIM 07) , Persada Johor international Convention Center Johor Baharu , Johor. 28-29 May 2007

**MUHAMAD SAUFI MOHD KASSIM** and WAN ISHAK WAN ISMAIL (2003). Using Visual Basic (VB) for Unmanned Tractor Navigation. Advanced Technology Congress. Putrajaya, UPM. 20-21<sup>st</sup> May 2003

**MUHAMAD SAUFI MOHD KASSIM** WAN ISHAK WAN ISMAIL, VICTOR LOH KEEN SEONG (2002). Design and Development of Chain Sawcutter End-Effect from Oil Palm FFB Harvester Robot. 2nd World Engineering Congress. Kuching, Sarawak. 22-25 July

### Research Grants

#### Project Leader

No	Project Title	Amount (RM)	Year	Source of Fund
1.	Smart Oil Palm Harvesting Prediction Using Rapid Imaging	236,000	2015-2017	Pura IPB Grant
2.	Vision Based Oil Palm Row Recognition for Mobile Harvester	28,000	2012-2014	RUGS (UPM)

#### Co-Researcher

No	Project Title	Amount (RM)	Year	Source of Fund
1.	Development of intelligent Planning and Management System for Oil Palm Plantation	148,200	2014-2015	Pura IPB Grant
2.	Precision Paddy Cultivation Mechanization System	117,000	2013-2015	Putra IBT Grant
3.	Development of Oil Palm Fresh Fruit Bunch (FFB) Growth Model to Support Site Specific Harvesting	68,500	2014-2015	RUGS (UPM)
4.	Oil Palm Plantation Mapping using Machine Vision for Bio-Production Mobile Robot Guidance	157,000	2009-2011	RUGS (UPM)
5.	Design and Development of Master-Slave Communication System for Farm Tractor	50,000	2007-2009	FRGS (MOHE)
6.	Development of Intelligent Vision -Based Parts Recognition for Flexible Manufacturing System	115,400	2004-2006	FRGS (MOHE)

7.	Multifrequency Dielectric Sensing for Palm oil Contamination Detection	115,400	2009-2011	IRPA
8.	Design and development of vision system for Oil Palm Plantation Operation	42,900	2003 - 2005	IRPA
9.	Automated System for Crop Care (Oil Palm)	1,103,000	2003 - 2005	IRPA

### **Co-Researcher : Private Funded Grant**

<b>No</b>	<b>Project Title</b>	<b>Amount (RM)</b>	<b>Year</b>	<b>Source of Fund</b>
1.	Development of a Self-Propel Rotary Cutter For oil Palm Harvesting	190,500	2013-2015	United Mallacca Berhad

### Awards/Recognition

<b>No</b>	<b>Name of awards</b>	<b>Title</b>	<b>Award Authority</b>	<b>Award Type</b>	<b>Year</b>
1.	Bronze Medal	3D object Surface Modelling and Automated Reconstruction from Multiple Range Images	Exhibition of Invention, Research & innovation UPM	National	2007
2.	Service Award	Certificate of Excellent Service	ITMA, UPM	National	2007
3	Bronze Medal	Development of Outdoor system for Cocoa-Pod Harvester	Exhibition of Invention, Research & innovation UPM	National	2006
4	Service Award	Certificate of Excellent Service	ITMA, UPM	National	2005
5	Bronze Medal	Development of Intelligent Vision Based Parts Recognition Systems for Flexible Manufacturing	Exhibition of Invention, Research & innovation UPM	National	2005
6	Service Award	Certificate of Excellent Service	ITMA, UPM	National	2004
7	Service Award	Certificate of Excellent Service	ITMA, UPM	National	2003
8	Silver Medal	Design and Development of automated Tractor for Mobile Harvesting Robot	Exhibition of Invention, Research & innovation UPM	National	2003



9	Silver Medal	Robotic and Automation in Agricultural	Exhibition of Invention, Research & innovation UPM	National	2002
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**Student Supervision**

**Co- Supervisor (PhD students)**

No.	Name	Title	Status
1.	Bala Ibrahim	Development of Paddy Transplanter for System of Riceintensification (SRI)	Graduated

**Co- Supervisor (MSc Students)**

No.	Name	Title	Status
1.	Tukur Daiyabu Abdul Kadir	Development of Paddy Precision Planter for System of Rice Intensification	Graduated

**Main Supervisor (MSc Students)**

No.	Name	Title	Status
1.	Zulfadhli Mustafa Albakri	Development of 3D Imaging Model to Determine the Maturity Stages of Oil Palm Bunches	On-going

