

CURRICULUM VITAE



Hazreen Haizi bt Harith, Ph.D

Department of Biological & Agricultural Engineering

Faculty of Engineering

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Education

- Ph.D. Medical Engineering, 2014, Queensland University of Technology. Australia
- M.S. Bioengineering, 2008, University California San Diego. USA
- B.S. Biomedical Engineering (Biomechanics), 2005, Rensselaer Polytechnic Institute. USA

Research Interests

- Biomedical Engineering, Biomechanics, Human-Machine Interactions, Motion Analysis, Musculoskeletal Modeling, TRIZ, Emergency Management

Appointments

Position	Duration
1. Program Coordinator, Master in Emergency Response and Planning Faculty of Engineering, UPM	July 2017 – June 2019
2. Senior Lecturer, Department of Biological and Agricultural Engineering, Faculty of Engineering, UPM	September 2014 to date
3. Tutor, Department of Biological and Agricultural Engineering, Faculty of Engineering, UPM	December 2005 – August 2014

Professional Qualification/ Membership/ Affiliation

1. MATRIZ, Level 3 Practitioner Certificate
2. MyTRIZ, Level 3 Practitioner Certificate
3. Associate Researcher, Malaysian Research Institute on Ageing (MyAgeing), UPM
4. Member, Institute of Electrical and Electronics Engineers (IEEE)
5. Member, The Institution of Engineering and Technology (IET)
6. Graduate Engineer, Board of Engineers Malaysia (BEM)
7. Graduate Member, The Institution of Engineers Malaysia (IEM)

Publications

Journal Articles

1. Shokshk, A. A, Mohd Yusuff, R., Ahmad, S. A., Abd Aziz, A. R. & **Harith, H. H.** 2017. The Effect of Load on Whole Body Muscle Activity during Neutral Posture for Malaysian Population. *FEIIC International Journal of Engineering and Technology*, Vol. 14, No. 2, p. 62-67
2. Khairunniza-Bejo, S, Najwa A & **Harith, H.** 2017. The Development of a 3D Model of Oil Palm Fresh Fruit Bunch. *Journal of Engineering and Applied Sciences*, Vol. 12, No. 22, p. 5956-5959
3. **Harith, H.**, Schmutz, B., Malekani, J., Schuetz, M. A., & Yarlagadda, P. K. 2016. Can we safely deform a plate to fit every bone? Population-based fit assessment and finite element deformation of a distal tibial plate. *Medical Engineering & Physics*; Vol. 38, No. 3, p. 280-285 (Q2, IF=1.825)
4. **Harith, H.**, Malekani, J., Schmutz, B., Schuetz, M. & Yarlagadda, P. 2016, A Method for Optimal Fit of Patient-Specific Fracture Fixation Plates, *Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications*; Vol. 230, No. 1, p. 282-290 (Q4, IF=0.672)

5. **Harith, H.**, Malekani, J., Schmutz, B., Schuetz, M. & Yarlagadda, P. 2014, A Novel Iterative Method for Simulating Patient-Specific Optimal Deformation and Fit of Fracture Fixation Plates, *Advanced Materials Research*; Vol. 845, p. 382-386
6. **Harith, H.**, Malekani, J., Schmutz, B., Schuetz, M. & Yarlagadda, P. 2013, Quantitative Fit Analysis of Orthopedic Bone Plates: Methods, Criteria and Approach, *Journal of Biomimetics, Biomaterials and Tissue Engineering*; Vol. 18, No. 2, p. 1-4
7. **Harith, H.**, Schmutz, B., Schuetz, M., Gu, Y. T., & Yarlagadda, P. 2011, Quantitative Fit Assessment of a Precontoured Fracture Fixation Plate: Its Automation and an Investigation on the Borderline Cases, *Advanced Materials Research*; Vol. 339, p. 685-689
8. Temple-Wong, M. M., Keifer, K. M., Leindecker, D. J., **Harith, H. H.** & Sah, R. L. 2008, Effect of dynamic compression and sliding on cartilage wear in vitro, *Trans Orthop Res Soc.*; Vol. 33, p. 735.

Thesis/Dissertation

H. H. Harith, "Clinically-based automatic implant fitting for shape optimization of fracture fixation plates," PhD Thesis, Queensland University of Technology, Australia, 2014

H. H. Harith, "Lubrication properties of post-injury synovial fluid: the relationship between friction, wear and its biochemical contents" Master Dissertation, University of California San Diego, USA, 2008

Research Grants

	Project Title	Amount (RM)	Year	Source of Fund
1.	True-to-live animal model via 3d printing towards dissection technique enhancement	15,000	2017-2019	UPM
2.	The development of an awareness model for women education on the management of flood disaster	19,900	2017-2019	UPM
3.	A biomechanical-based approach to improve energy expenditure in manual oil palm harvesting activity	131,000	2016-2019	FRGS
4.	The development of a powered exoskeleton for harvesting oil palm trees	57,000	2016-2017	UPM
5.	Assessment of oil palm tree productivity using computer vision	63,500	2015-2017	FRGS

Courses Taught

EMM 3013: Statics
 EMM 3104: Dynamics
 EMM 3305: Fluid Mechanics
 EAB 4000: Safety and Health in Agriculture
 EAB 5406: Occupational Safety and Health Evaluation
 EAB 5401: Hazards, Risk & Ethics

Student Supervision

Main Supervisor (PhD & MS)

No.	Name	Title	Status
1.	Siti Sarah Nabila Jusoh	Musculoskeletal Modeling for Oil Palm Harvesting Activity	On-Going (M.S)
2.	Muhammad Fuad Mohd	The Development of an Exoskeleton for Oil Palm Harvesting Activity	On-Going (M.S)
3.	Nor Raihanah Abdull Rahim	Biomechanical Analysis of Manual Oil Palm Harvesting Tasks for Energy Harvesting Applications from Motion	On-Going (Ph.D)

Co-Supervisor (PhD & MS)

No.	Name	Title	Status
1.	Alif Syamim Syazwan Ramli	Biomechanical Analysis Of Lunging Motion In Badminton And Its Effect On Knee Joint Loading For Injury Prevention And Performance Enhancement	On-going (Ph.D)
1.	Asmida Ismail	Autonomous Electric Vehicle Using Hybrid LiDAR	On-going (Ph.D)
2.	Ali Ahmed Shokshk	An Ergonomic-based Model Of Work Efficiency Based On Energy Expenditure And Posture	On-going (Ph.D)
3.	Norhidayah Mohd Ghazali	The Development of An Awareness Model for Women Education on the Management of Flood Disaster	On-going (Ph.D)
4.	Zulfadhli Mustafa Albakri	The Development of a 3D Imaging Model to Determine the Maturity Stages of Oil Palm Bunches	Graduated (M.S)
5.	Nor Dahlia	3D Model of Oil Palm Fresh Fruit Bunch for Mass Estimation	On-going (M.S)

Main Supervisor (Bachelor)

No.	Name	Title	Status
1.	Siti Sarah Nabila Jusoh	Modeling and Simulation of Pole Handling during the Harvesting of Oil Palm Trees with AnyBody Technology Software	Graduated
2.	Ruzaireen Ruzlan	3D weed detection and measurement in oil palm plantation using Kinect V2	Graduated
3.	Tee Kuang Huie	Virtual design of an exoskeleton for oil palm harvesting activities	Graduated
4.	Tharmarajan Thamby Rajah	Kinect™ for outdoor and under-canopy applications	Graduated

Awards/Recognition

No	Type of awards	Title	Award Authority	Level	Year
1	Academic Awards	International Postgraduate Research Scholarship & QUT Postgraduate Research Award	Queensland University of Technology	International	2010-2014
2	Academic Awards	Member, Tau Beta Pi Engineering Honor Society	Tau Beta Pi, RPI Chapter	International	2005