

RESEARCHER'S BACKGROUND	
Name	Ir. Dr. Mohd Ridzuan Ahmad
Faculty	Faculty of Electrical Engineering
Research Interest	Nanobiotechnology, Cell Engineering, Single Cell Analysis, Nanorobotics, Bio-Manipulation, Nanodevices, Nanosensors and Multi-Agent Robotics
Research Entity	Research Group Leader of Micro-Nano Systems Engineering
UTM Administrative Post (if any)	<ol style="list-style-type: none"> 1. Manager of UTM Robocon Team 2. Head of Micro-Nano Mechatronics Lab 3. Coordinator for Off-Campus Program
Professional Post (if any)	<p>International</p> <ol style="list-style-type: none"> 1. Chartered Engineer (CEng) of Engineering Council, UK (no. 626991, November 2015) 2. Senior Member of IEEE (no. 80652564, September 2015) 3. Member of IET (no. 1100302292, August 2014) 4. Member of Golden Key International Honor Society (no. 1281253, September 2001) 5. Member of American Nano Society (no. 112421, December 2012) 6. Member of Robotics Society of Japan , RSJ (no. 11757, April 2007) <p>National</p> <ol style="list-style-type: none"> 1. Professional Engineer (PEng) of Board of Engineers Malaysia, BEM (no. C116945, 18 September 2015) 2. Corporate Member of Institution of Engineers Malaysia, IEM (no. 49575, March 2015)

RESEARCH PROFILE	
Publication	<ul style="list-style-type: none"> • Book = 3 • Chapter = 15 • Article = 27 (including 11 in Scopus) • Review = 3 • Conference Paper = 49 (including 42 in Scopus)
Citation	354
H-index	11
Intellectual property rights	<p>Including 18 copyrights and 3 Industrial Designs</p> <p>Patent</p> <ol style="list-style-type: none"> 1. PI 2010 005401: Cell Viability Determination Method 2. PI 2010 005099 (MY-152663-A): Method and Apparatus to Measure Single Cell Adhesion Force Inside ESEM 3. PI 2011 000386: Application of Buckling Nanoneedle for Characterizing Single Cells Mechanics 4. PI 2013 002540: A Novel Rigid Nanoneedle for Single Cell Surgery and Drug Delivery Application 5. PI 2015 002661: A Microfluidic System for Measuring Mass of Miniature Object (Method) 6. PI 2015 002662: A Microfluidic System for Measuring Mass of Miniature Object (Product) 7. PI 2015 002858: A Vibrating Nanoneedle System for Single Cell Cutting and a Method Thereof

RESEARCH SUPERVISION	
Completed	<ul style="list-style-type: none"> • PhD: 1 • MSc: 9
Current	<ul style="list-style-type: none"> • Post-Doctoral: 1 • PhD: 3

AWARDS & RECOGNITIONS

Awards

1. Champion, ABU Asia-Pacific Robot Contest (Robocon) 2016, 21st August 2016, Bangkok, Thailand. Theme: Clean Energy Recharging the World.
2. Inventor Award, Majlis Anugerah Kecemerlangan dan Penghargaan UTM 2016 (Citra Karisma 2016).
3. Gold Medal, 27th International Invention & Innovation Exhibition (ITEX2016), 12th – 14th May 2016, KLCC, Malaysia. Project: Liquid Biopsy Microfluidic System.
4. Bronze Medal, 14th International Conference and Exposition on Inventions by Institutions of Higher Learning (PECIPTA 2015), 4th - 6th December 2015. Project: A Vibrating Nanoneedle for Single Cell Analysis.
5. Silver Medal, 17th Industrial & Art Technology Exhibition (INATEX), 3rd - 5th November 2015, UTM, Malaysia. Project: Microfluidics System for Detecting Mass of Miniature Object.
6. Best Design Award, Asia-Pacific Robot Contest (ABU ROBOCON)-International Stage, 23 August 2015, Yogyakarta, Indonesia. Theme: Robominton.
7. 1st Place, Standard Platform League Technical Challenge, RoboCup Japan Open 2015, 4 May 2015, Fukui, Japan.
8. 3rd Place, @Home Simulation League, RoboCup Japan Open 2015, 4 May 2015, Fukui, Japan.
9. Best Presenter Award, Kollokium GUP 2011, 30 Mac 2015, Faculty of Bioscience and Medical Engineering, UTM, Malaysia. Project: Development of Nanofork and Line-Array Substrate for Direct and Quantitative Cell Adhesion Force Measurement for Novel Disease Diagnosis Application.
10. 3rd Place, Overall Games, International Intelligent Home Robotics Challenge 2014 (iHR2014), 6th – 7th December 2014, Tokyo, Japan.
11. 3rd Places, Follow Me Games, International Intelligent Home Robotics Challenge 2014 (iHR2014), 6th – 7th December 2014, Tokyo, Japan.
12. Bronze Medal, Novel Research and Innovation Competition 2014, 20th – 22nd August 2014, USM, Pulau Pinang, Malaysia. Project: Oil Spill Detection using Electrode Microfluidic System.
13. Special Jury Prize, UAV Siswa Challenge 2013-2014, 22nd -23rd March 2014, Kuala Lumpur, Malaysia.
14. Quaterfinal, Asia-Pacific Robot Contest (ABU-ROBOCON)-International Stage, 24th August 2014, Pune India. Theme: A Salute to Parenthood.
15. Panasonic Award, Asia-Pacific Robot Contest (ABU-ROBOCON)-International Stage, 18th August 2013, Da Nang, Vietnam. Theme: Green Planet. Robocon UTM Team.
16. Champion, Asia-Pacific Robot Contest (ABU-ROBOCON)-Malaysia Stage, 22nd – 27th May 2013, Nilai Indoor Stadium, Negeri Sembilan, Malaysia. Theme: Green Planet. Robocon UTM Team B.
17. 1st Runner-Up, Asia-Pacific Robot Contest (ABU-ROBOCON)-Malaysia Stage, 22nd – 27th May 2013, Nilai Indoor Stadium, Negeri Sembilan, Malaysia. Theme: Green Planet. UTM Team A.
18. Best Technology Awards, Asia-Pacific Robot Contest (ABU-ROBOCON)-Malaysia Stage, 22nd – 27th May 2013, Nilai Indoor Stadium, Negeri Sembilan, Malaysia. Theme: Green Planet. Robocon UTM Team B.
19. Consolidation Prize, Innovate Malaysia Design Competition 2013, 4th July 2013, Hotel Equatorial, Penang, Malaysia. Project title: Micro Bio-Object Analyzer Using an Electrode-Microfluidics System.
20. Silver Medal, 11th Malaysia Technology Expo and Invention & Innovation Competition (MTE), 15th – 19th February 2012, PWTC, Kuala Lumpur, Malaysia. Project: Novel Rigid Nanoneedle for Single Cell Surgery and Drug Delivery Applications.
21. Silver Medal, Seoul International Invention Fair (SIIF), 1st – 4th December 2011, Seoul, Korea. Project: Novel Method for Real-time Single Cells Viability Detection using Dual Nanoprobe.
22. Bronze Medal, Seoul International Invention Fair (SIIF), 1st – 4th December 2011, Seoul, Korea. Project: Novel Method for Fast Single Cells Stiffness Measurement using Buckling Nanoneedle.
23. Bronze Medal, Seoul International Invention Fair (SIIF), 1st – 4th December 2011, Seoul, Korea. Project: Novel Method for Measuring Single Cells Adhesion Force using Nanofork.
24. Silver Medal, 13th Industrial & Art Technology Exhibition (INATEX), 16th – 18th November 2011, UTM, Malaysia. Project: Novel Rigid Nanoneedle for Single Cell Surgery and Drug Delivery Applications.
25. Gold Medal, Persidangan dan Ekspo Ciptaan Institusi Pengajian Tinggi Antarabangsa (PECIPTA), 13th – 15th September 2011, KLCC, Malaysia. Project: Novel Method for Fast Single Cells Stiffness Measurement using Buckling Nanoneedle.

26. Silver Medal, Persidangan dan Ekspo Ciptaan Institusi Pengajian Tinggi Antarabangsa (PECIPTA), 13th – 15th September 2011, KLCC, Malaysia. Project: Novel Method for Real-time Single Cells Viability Detection using Dual Nanoprobe.

Recognitions

1. Guest Editor, Micromachine Journal, MDPI Publisher, Basel, Switzerland (2015-Present)
2. Editor, Journal ElektriKA, Faculty of Electrical Engineering, Universiti Teknologi Malaysia, (2010-Present)
3. Reviewer:
 - i. IEEE Transactions on Nanotechnology, Microsystem Technologies, Journal of Micro-Nano Mechatronics, Jurnal Teknologi
 - ii. IROS (2011-2015)
 - iii. ICRA (2012-2015)
 - iv. ASCC, CASE 2015
 - v. TENSYSM, ICBEB, IEEE SCoRED 2014
 - vi. AIM 2013
 - vii. TENCON, BioRob, ICIAS, ICSE, IECBES 2012
 - viii. ICARA 2011

CONTRIBUTIONS

1. Active in publishing articles in high impact journals (Q1 and Q2).
2. Active in protecting intellectual properties such as patents, industrial designs and copyrights.
3. Professional membership recognitions such as Professional Engineer (BEM, Malaysia) and Chartered Engineer (Engineering Council, UK).

CONTACT

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