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Google scholar : <https://scholar.google.com/citations?user=rAWAtowAAAAJ&hl=en>

## Academic Qualification

1. Ph. D. Mechanical and Aerospace Engineering, Tottori University, Japan, 2014.
2. B. Eng. Mechanical Engineering, Tottori University, Japan, 2007.

## Brief Profile

Dr. Daing Nafiz graduated from Tottori University, Japan with a degree in mechanical engineering before he joined Digital Electronics Corporation (a subsidiary of Schneider Electric SA) in Osaka, Japan as an engineer. He worked in the R&D Division contributing to new products projects and managed products development, liaised with various divisions within the company. Utilizing excellent communication skills, he developed and maintained successful working relationship with both internal and external staff of multiple nationalities. After about 3 years of experience in industry, he pursued his study and graduated from Tottori University, Japan with a Ph. D. in Mechanical and Aerospace Engineering. His field of research is about gear, focusing on hardened gears and thin-rimmed gears. He gained a lot of knowledge about gear through research as well as attending conferences and seminars in and outside of Japan. These long years of studying and working in Japan have enabled him to develop not only specific field of experience, but also valuable and transferable skill set. He is also actively involved in a lot of agro mechanical research and innovation activities mainly for the bee farming industry. He has received many research and contract research from different government agencies as well as international bodies.

## Working Experiences / Appointment

1. April 2014 – Present : Senior Lecturer - Universiti Malaysia Pahang.
2. April 2007 – November 2009 : Engineer – R & D Division, Digital Electronics Corporation, Osaka, Japan.

## Expert Area

Machine Design, Machine Elements, Gear, Polymer Gear, Thin-rimmed Gear, Hardened Gear, Gear Testing, Sustainable Energy, Agriculture Technology

## Research Interest

Machine elements strength enhancement method and most suitable design method, load capability of gear (tooth bending strength and surface strength), development of gear for automotive, aerospace instruments and practical use.

Agriculture Technology mainly in Apiculture and Meliponiculture.

## Research Project / Grant

Project No. / Title	Role	Status / Period
RDU141112 (UMP) : Development of Test Equipment to Study Tooth Bending Strength of Gears	Leader	Completed 05.07.2014 – 04.07.2015

RDU1403132 (UMP) : Development of Test Equipment to Study Tooth Bending Strength of Helical Gears in Automotive Transmission	Leader	Completed 25.11.2014 – 24.11.2016
RDU150336 (UMP) : Computational Method to Estimate Fatigue Life and Durability of Spur Gear by using Stress-Life (SN) and Measurement of Root Stress Data	Leader	On-going 25.06.2015 – 24.06.2017
UIC160704 (PPRN, KPT) : Portable Synthetic Rubber Sludge Waste Dewatering Machine and Solar Dryer [collaboration with Rosza Engineering and Supply Sdn. Bhd.]	Leader	On-going 01.08.2016 – 01.02.2017
RDU160139 (FRGS, KPT) : Tooth Bending Strength of Thin-rimmed Spur Gears with Variable Rim and Web Design	Leader	On-going 01.08.2016 – 31.07.2019
UIC161506 (International Grant) : Study on Coating for Building Exterior, Solar Panel and Automotive Application [collaboration with Eco24 Co. Ltd. Japan]	Leader	On-going 01.09.2016 – 31.08.2018
UIC160708 (PPRN, KPT) : Portable Motorized Honey Extractor [collaboration with Bee Park (Pahang) Sdn. Bhd.]	Leader	On-going 15.12.2016 – 15.06.2017
UIC160907 (UMP) : BEE-QX: Moulded Plastic Type Queen Excluder for Bee Hives [collaboration with Bee Park (Pahang) Sdn. Bhd.]	Leader	On-going 15.01.2017 – 14.01.2018

### Professional Qualification / Membership / Affiliation / Experience

- Japan Society of Mechanical Engineers (2011 – present).
- Kowakai, Faculty of Engineering, Tottori University (2014 – present).
- Board of Engineers, Malaysia (2012 – present).
- Energy Institute, UK. 0064735 (2015 – present).

### Management Experience

- Final Year Project Coordinator [2014 – 2015]
- EAC Documentation Coordinator [2014 – 2015]
- EAC/MQA Coordinator [2016]
- Industry Relationship Coordinator [2017 – present]
- Head of Programme (Postgraduate) [2017 – present]

### Teaching Experience

Subject	Programme Level
Dynamics	Diploma
Industrial Design	Diploma
Computer Aided Design	Diploma
Dynamics	Part-time Diploma
Mechanical Vibration	Degree
Dynamics	Degree
Mechanical Design	Degree
Machine Elements	Dual Degree (German degree)
Environment and Regulatory Issues	Master by Coursework ( Part-time)

## Post Graduate Supervision

Year	Name	Title
04.09.2016 - present	Wafiuddin Md. Ghazali	Feasibility Study of Biopolymers in High Load Gearing Applications
04.09.2016 - present	Ismail Ali Abdul Aziz	Effects of Rim and Web Arrangements on Tooth Bending Strength of Thin-rimmed Spur Gear

## List of Publications

(1)	K. Miyachika, B. D. I. Daing Mohamad Nafiz, T. Koide, B. W. N. Imaduddin Helmi, and K. Ando, Effects of Rim and Web Thicknesses on Root Stresses of Thin-Rimmed Helical Gears, Transactions of the Japan Society of Mechanical Engineers, 77-775, C (2011), 597-603. [In Japanese]
(2)	Daing Mohamad Nafiz Bin Daing Idris, Kouitsu Miyachika, Imaduddin Helmi Bin Wan Nordin and Takao Koide, Root Stresses of Thin-Rimmed Helical Gears with Asymmetric Web Arrangement, Proceedings of The 4 <sup>th</sup> International Conference on Manufacturing, Machine Design and Tribology, (2011), 23-24.
(3)	Daing Mohamad Nafiz Bin Daing Idris, Miyachika Kouitsu and Koide Takao, Effects of Rim and Web Thickness on Root Stress and Bending Fatigue Strength of Thin-rimmed Helical Gears with Symmetric Web Arrangement, Proceedings of the 12 <sup>th</sup> JSME Machine Design and Tribology Division Meeting, 12-14, (2012), 107-110. [In Japanese]
(4)	Kouitsu Miyachika, Daing Mohamad Nafiz Bin Daing Idris and Takao Koide, Root Stresses of Thin-rimmed Helical Gears with Web Arrangement, The 2 <sup>nd</sup> IFTOMM Asian Conference on Mechanism and Machine Science, (2012), Paper no. 119 on USB Memory.
(5)	Miyachika Kouitsu and Daing Mohamad Nafiz Bin Daing Idris, Effects of Helix Angle on Root Stresses of Thin-Rimmed Helical Gears (Cases of $\beta_0=10^\circ$ and $\beta_0=20^\circ$ ), Proceedings of the 5 <sup>th</sup> International Conference on Manufacturing, Machine Design and Tribology, (2013), 22.
(6)	Kouitsu Miyachika and Daing Mohamad Nafiz Bin Daing Idris, Effects of Helix Angle on Root Stresses of Thin-Rimmed Helical Gears with Various Web Arrangements, Proceedings of the ASME 2013 International Design Engineering Technical Conferences And Computers and Information in Engineering Conference, (2013), Paper no. DETC2013-12852 on CD-ROM.
(7)	Miyachika Kouitsu, Daing Mohamad Nafiz Bin Daing Idris, Effects of Rim and Web Thickness and Web Structure on Root Stress and Bending Fatigue Strength of Thin-Rimmed Helical Gears with Web Arrangement, Proceedings of the 2013 JSME Meeting, 13-1, (2013) , Paper no. S112013 on CD-ROM. [In Japanese]
(8)	Miyachika Kouitsu, Daing Mohamad Nafiz Bin Daing Idris and Asano Takahiro, Effects of Web Structure and Helix Angle on Root Stress of Thin-Rimmed Helical Gears with Web Arrangement (Helix angle $\beta_0=10, 20$ and $30^\circ$ ), Proceedings of the JSME MPT Symposium (Transmission device), 13-17, (2013), 255-259. [In Japanese]
(9)	K. Miyachika, B. D. I. Daing Mohamad Nafiz, S. Oda, K. Ando, Root Stress and Bending Fatigue Strength of Thin-rimmed Helical Gears with Web Arrangement, Proceedings of The 2013 International Conference on Gears, VDI-Berichte, 2199.1, (2013), 609-620.
(10)	K. Miyachika, B. D. I. Daing Mohamad Nafiz, T. Asano, Root Stress and Bending Fatigue Strength of Thin-rimmed Helical Gears (Helix angle $\beta_0 = 10, 20$ and $30^\circ$ ), International Gear Conference 2014, ISBN: 978-1-78242-194-8, (2014), 836-845.
(11)	Wafiuddin Bin Md Ghazali, Ismail Ali Bin Abdul Aziz, Daing Mohamad Nafiz Bin Daing Idris, Nurazima Binti Ismail and Azizul Helmi Bin Sofian, Design and Analysis of Tooth Impact Test Rig for Spur Gear, IOP Conference Series: Materials Science and Engineering 114, (2016), doi:10.1088/1757-899X/114/1/012058.
(12)	Aishah Safi, Shahrani Anuar, Daing Mohd Nafiz, Firdaus Basrawi, Ahmmad Shukrie, Mohd Nazani, Feasibility of pumped hydro storage for energy production and flood mitigation in Pekan, International Journal of Advanced and Applied Sciences, 3, 5, (2016), 39-43.
(13)	Ismail Ali Abdul Aziz, Daing Mohamad Nafiz Daing Idris and Wafiuddin Md. Ghazali, Investigating Bending Strength of Gear : A Review, MATEC Web of Conferences <b>90</b> , 01037 (2017), doi:10.1051/mateconf/20179001037
(14)	Wafiuddin Md. Ghazali, Daing Mohamad Nafiz Daing Idris, Azizul Helmi Sofian, Januar

	Parlaungan Siregar and Mohamad Firdaus Basrawi, A Review on Failure Characteristics of Polymer Gear, MATEC Web of Conferences <b>90</b> , 01029 (2017), doi:10.1051/mateconf/20179001029
15	Mohd Hafizil Mat Yasin, Rizalman Mamat, Ahmad Fiti Yusop, Daing Mohamad Nafiz Daing Idris, Taal Yusaf, Muhammad Rasul, Gholamhassan Najafi, Study of a Diesel Engine Performance with Exhaust Gas Recirculation (EGR) System Fuelled with Palm Biodiesel, Energy Procedia, 110, (2017), 26-31.
16	Ali Elghool, Firdaus Basrawi, Thamir Khalil Ibrahim, Khairul Habib, Hassan Ibrahim, Daing Mohamad Nafiz Daing Idris, A Review on Heat Sink for Thermo-electric Power Generation: Classifications and Parameters Affecting Performance, Energy Conversion and Management, 134, (2017), 260-277. ISI Q1, IF:5.589
17	Firdaus Basrawi, Thamir K Ibrahim, Khairul Habib, Takano Yu Yamada, Daing Mohamad Nafiz Daing Idris, Techno-economic Performance of Biogas-Fueled Micro Gas Turbine Cogeneration Systems in Sewage Treatment Plants: Effect of Prime Mover Generation Capacity, Energy, 124 (2017), 238-248, ISI Q1, IF:4.52
18	Firdaus Basrawi, Izwan Ismail, Thamir Khalil Ibrahim, Daing Mohamad Nafiz Daing Idris, Shahrani Anuar, A Study on The Power Generation Potential of Mini Wind Turbine in East Coast of Peninsular Malaysia, AIP Conference Proceedings, 1826, 1, (2017) 20023.
19	Wafiuddin Bin Md Ghazali, Daing Mohamad Nafiz Bin Daing Idris, Azizul Helmi Bin Sofian, Mohamad Firdaus bin Basrawi and Thamir Khalil Ibrahim, Investigation on Wear Characteristic of Biopolymer Gear, IOP Conference Series : Materials Science and Engineering, 257, (2017), 12068.
20	Firdaus Basrawi, Asnul Hadi Ahmad, Daing Mohamad Nafiz Daing Idris, Mohd Rashidi Maarof, MRR Chand and Ahmad Syazwan Ramli, Engineering Economic Analysis of Meliponiculture in Malaysia Considering Current Market Price, MATEC Web Of Conference, 131, (2017), 4005.
21	Ahmad Syazwan Ramli, Firdaus Basrawi, Daing Mohamad Nafiz Daing Idris, Mohd Hazwan bin Yusof, Thamir Khalil Ibrahim, Zulkifli Mustafa, and Shaharin A. Sulaiman, A New Dewatering Technique For Stingless Bees Honey, MATEC Web of Conferences, 131, (2017), 3014.

### List of Consultancy

Project No. / Title	Role	Status / Period
Coating Works on Dome of Masjid Wilayah Kuala Lumpur [joint work with Eco24 Co. Ltd. Japan]	Leader	2016 - present

### List of Project

Project Title	Role	Status of Completion
Awareness about the danger of asbestos and CSI project between UMP, JICA and Eco24 Co. Ltd. Japan	Principal coordinator	2016 - present
UMP ECO24 CSR Project at SK Indera Shahbandar	Project leader	2017

### Awards / Research / Achievements

- INCENTIVE AWARD. Machine Design and Tribology Division, Japan Society of Mechanical Engineers (JSME). JSME and Korean Society of Mechanical Engineers (KSME), International Conference on Machine Design and Tribology, ICMDT 2013, Busan, Korea.
- SILVER MEDAL. Innovative Flood Control Barrier Incorporated with super absorption polymer from disposable diapers, Advanced Innovation and Engineering Exhibition (AINEX) 2015, Zenith Hotel, Kuantan, Pahang.
- BRONZE MEDAL. Mengkuang Leaves Cutter Machine, Creation Innovation Technology Research Exposition (CITREX) 2016, UMP Sports Complex, Kuantan, Pahang.

- EXCELLENCE SERVICE AWARD, awarded by Universiti Malaysia Pahang, 2017.
- BEST INDUSTRIAL PARTNER, RUNNERS UP, Collaboration with Eco24 Co. Ltd. Japan, awarded by Universiti Malaysia Pahang, 2017.

## Other Activities

### Reviewer

- International Journal of Automotive and Mechanical Engineering
- Journal of Mechanical Engineering and Sciences
- International Conference on Mechanical Engineering Research
- International Manufacturing Engineering Conference
- National Conference for Postgraduate Research
- Mechanical Engineering Research Day
- UTP-UMP Symposium on Energy Systems

## List of Course / Conference Attended

- Sep. 2010 : The 3<sup>rd</sup> Joint Symposium on Materials and Mechanical Engineering, between Northeastern University and Tottori University, Shenyang, China.
- Apr. 2011 : The 4<sup>th</sup> International Conference on Manufacturing, Machine Design and Tribology, Gamagori, Aichi, Japan.
- Jun. 2011 : The 2011 Japan Society of Design Engineering (JSDE) Chugoku Division, Hiroshima, Japan.
- Apr. 2012 : The 12<sup>th</sup> JSME Machine Design and Tribology Division Meeting, Matsuyama, Ehime, Japan.
- Nov. 2012 : The 2<sup>nd</sup> IFTOMM ASIAN Conference on Mechanism and Machine Science, Tokyo, Japan
- May 2013 : The 5<sup>th</sup> International Conference on Manufacturing, Machine Design and Tribology, Busan, Korea
- Aug. 2013 : The 2013 JSME Annual Meeting, Okayama, Japan.
- Nov. 2013 : JSME Seminar on Fundamental of Gear Technology, Tokyo, Japan.
- Mar. 2014 : Seminar on Manufacturing Technology (Epsilon Rocket Challenge), Japan Aerospace Exploration Agency (JAXA), Tottori, Japan.
- Jul. 2014 : Bengkel Penulisan dan Penyediaan Jurnal Berimpak Tinggi Siri 1 (2014), Fakulti Kejuruteraan Mekanikal UMP, Zenith Hotel, Kuantan, Pahang.
- Aug. 2014 : Effective Postgraduate Supervision, UMP, Kuantan, Pahang.
- Sept. 2014 : Strategic Organizational Management of Universities, Akedemi Pengajian Tinggi, Bandar Enstek, Nilai, Negeri Sembilan.
- Dec. 2014 : Program Transformasi Minda, UMP, Kuantan, Pahang.
- Dec. 2014 : Outcome Based Education Seminar, UMP, Pekan, Pahang.
- Dec. 2014 : Talk on Eco Challenges and Opportunities for Modern Society and Is The Human Species at Stake, UMP, Kuantan, Pahang.
- Jan. 2015 : Finite Element Method Course, Universiti Putra Malaysia, Serdang, Selangor.
- Jan. 2015 : Bengkel Penulisan Dan Penilaian Kertas Cadangan Geran Penyelidikan UMP, Hotel Vistana, Kuantan, Pahang.
- Feb. 2015 : Research To Business Training, MTUN Showcase, Bangi, Selangor.
- Apr. 2015 : Bengkel Hala Tuju Dan Pelan Strategik Fakulti Kejuruteraan Mekanikal UMP, Century Pines Resort, Cameron Highland, Pahang.
- Apr. 2015 : Learning In The Age Of Experience Seminar, SIRIM, Bukit Jalil, Selangor.
- Apr. 2015 : Chartered Engineer Workshop, UMP, Kuantan, Pahang.
- Apr. 2015 : Program MyUMP, Lanjut Beach Resort, Rompin, Pahang.
- Aug. 2015 : MTDC Commercialisation and IP Valuation Workshop, Hotel Vistana, Kuantan, Pahang.
- Aug. 2015 : 3<sup>rd</sup> International Conference On Mechanical Engineering Research, Zenith Hotel, Kuantan, Pahang.
- Aug. 2015 : 1<sup>st</sup> Advanced Innovation and Engineering Exhibition (AINEX) 2015, Zenith Hotel, Kuantan, Pahang.
- Aug. 2015 : BEM Course (Engineering Management Practices)

- Sept. 2015 : BEM Course (Code of Ethics)
- Oct. 2015 : Workshop On Developing And Supporting Team-Based Learning Through Cooperative Learning, Wisma IEM, Petaling Jaya, Selangor.
- : BEM Course (Health, Safety and Environment)
- : IME Design Challenge Grand Finale, MAGIC, Cyberjaya, Selangor.
- : UTP-UMP Symposium On Energy Systems 2015, Universiti Teknologi Petronas, Seri Iskandar, Perak.
- Nov. 2015 : BEM's EAC For Institute of Higher Learning, Hotel Bangi-Putrajaya, Selangor.
- : 2<sup>nd</sup> International Manufacturing Engineering Conference, Swiss Garden Hotel, Kuala Lumpur.
- Jan. 2016 : Kursus Pensijilan dan Pentauliahan AutoCAD 2016
- Mar. 2016 : Creation Innovation Technology Research Exposition (CITREX) 2016, UMP Sports Complex, Kuantan, Pahang.
- Aug. 2016 : Automotive Innovation and Green Energy Vehicle (AIGEV) 2016, Malaysia Automotive Institute
- Nov. 2016 : Advanced Materials Conference (AMC) 2016, Bayview Hotel Langkawi, Malaysia
- : Comprehensive Course on How to Write and Publish in High Impact Journal
- Dec. 2016 : Autodesk Inventor Professional Mold Design, Petaling Jaya, Selangor
- Mac 2017 : Program AL 406 Leadership Style and Characteristic, AKEPT
- Mac 2017 : Program Training For Trainers Bagi Kursus Asas Penternakan Lebah Kelulut Berasaskan Inovasi Mustafa Hive Anjuran Pusat Pemindahan Ilmu USM
- Apr. 2017 : Adventure Based Challenge (Team building FKM), Gopeng, Perak
- Apr. 2017 : Mechanical Engineering Research Day 2017, Universiti Teknikal Melaka, Malaysia
- Mei 2017 : Kursus Penternakan Lebah Kelulut Lestari Anjuran Pusat Pemindahan Ilmu USM dengan Kerjasama Honeygold Lab untuk Droness (Persatuan Usahawan Kelulut Kelantan)
- Aug. 2017 : International Conference on Mechanical Engineering Research, Swiss Garden Beach Resort, Kuantan, Malaysia
- Aug. 2017 : Knowledge Co-creation Program organized by Japan International Cooperation Agency (JICA), Tokyo, Japan
- Nov. 2017 : Energy Management & Energy Audit in Building, SEDA Malaysia
- Nov. 2017 : Kursus Teknologi Haif di Pusat Flora Cheras Jabatan Pertanian