



CURRICULUM VITAE

MOHD HAFIS SULAIMAN, PhD, PEng. Ir.

Department of Mechanical and Manufacturing Engineering
Faculty of Engineering
Universiti Putra Malaysia
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Education

1. Ph.D. Mechanical Engineering, 2017, Technical University of Denmark.
2. M.Eng. Mechanical Engineering, 2011, Universiti Teknologi Malaysia.
3. B.Eng. (Hons.) Mechanical Engineering, 2009, Universiti Teknologi Malaysia.

Areas of Interest

1. Tribology (Lubrication, Coating).
2. Metal Forming (Stamping, Forging, Tool and Die Design).

Professional Qualification/Membership/Affiliation

1. Executive Member, Malaysian Tribology Society (MYTRIBOS)
2. Professional Engineer Ir., Board of Engineers Malaysia (BEM).
3. Chartered Engineer CEng., Institution of Mechanical Engineer (IMechE).
4. Panel, Engineering Technology Accreditation Council (ETAC), BEM

Appointments

| Position | Duration |
|--|--------------|
| Universiti Putra Malaysia | |
| 1. Senior Lecturer | 2021 to date |
| International Islamic University Malaysia | |
| 1. Assistant Professor | 2019 – 2021 |
| Universiti Malaysia Perlis | |
| 1. Senior Lecturer | 2017 – 2019 |
| 2. Lecturer | 2010 – 2017 |
| Technical University of Denmark | |
| 1. Research Assistant | 2014 – 2017 |
| Fuji Electric (M) Sdn Bhd | |
| 1. R&D Engineer (Industrial Attachment) | 2014 |
| Shimano Components (M) Sdn Bhd | |
| 1. Quality Engineer | 2010 |
| Yongnam Engineering Sdn Bhd | |
| 1. Production Engineer | 2009 |

Administrative Works

| Position | Date Appointed |
|---|----------------------|
| 1. Program Accreditation and Quality Assurance Coordinator (PAQA), Department of Manufacturing and Materials Engineering, Kulliyah of Engineering, International Islamic University Malaysia. | Feb 2020 – Sept 2021 |
| 2. Curriculum Review Committee, Department of Manufacturing and Materials Engineering, Kulliyah of Engineering, International Islamic University Malaysia. | Oct 2019 – Feb 2021 |
| 3. Final Year Project Coordinator, Department of Mechanical Engineering, School of Mechatronic Engineering, Universiti Malaysia Perlis. | Dec 2010 – Sept 2014 |

Journals

1. **Sulaiman, M. H.**, Raof, N. A., & Dahnel, A. N. (2021). The investigation of PVD coating, cryogenic lubrication and ultrasonic vibration on tool wear and surface integrity in manufacturing processes. *Jurnal Tribologi*, 28, 105-116.
2. Zain, M. Z. M., Abdul-Rani, A. M., Al-Amin, M., Khan, S. F., Razak, M. A. H. A., **Sulaiman, M. H.**, & Unune, D. R. (2021). Automotive Body in White Framing Systems Review. *Jurnal Kejuruteraan*, 33(3), 473-476.
3. Al-Amin, M., Abdul-Rani, A. M., Danish, M., Rubaiee, S., Mahfouz, A. B., Thompson, H. M., ... & **Sulaiman, M. H.** (2021). Investigation of Coatings, Corrosion and Wear Characteristics of Machined Biomaterials through Hydroxyapatite Mixed-EDM Process: A Review. *Materials*, 14(13), 3597.
4. Rohadi, T. T., Ridzuan, M. J. M., Majid, M. A., Khasri, A., & **Sulaiman, M. H.** (2020). Isolation and characterisation of cellulose from cortex, pith and whole of the *Pennisetum purpureum*: Effect of sodium hydroxide concentration. *Journal of Materials Research and Technology*, 9(6), 15057-15071.
5. **Sulaiman, M. H.**, Farahana, R. N., Bienk, K., Nielsen, C. V., & Bay, N. (2019). Effects of DLC/TiAlN-coated die on friction and wear in sheet-metal forming under dry and oil-lubricated conditions: Experimental and numerical studies. *Wear*, 438, 203040.
6. **Sulaiman, M. H.**, Christiansen, P., & Bay, N. (2019). An experimental compression test of lubricants with direct measurement of lubricant pressure build-up. *Jurnal Tribologi*, 20, 51-64.
7. **Sulaiman, M. H.**, Christiansen, P., Bay, N., & Carbon, D. L. (2018). A study of anti-seizure tool coatings of ironing of stainless steel. *Jurnal Tribologi*, 17, 1-14.
8. **Sulaiman, M. H.**, Christiansen, P., & Bay, N. (2017). The influence of tool texture on friction and lubrication in strip reduction testing. *Lubricants*, 5(1), 3.
9. Moghadam, M., **Sulaiman, M. H.**, Christiansen, P., & Bay, N. (2017). Acoustic emission monitoring of the bending under tension test. In *Proceedings of 12th International Conference for Technology of Plasticity (ICTP2017)* in Cambridge England, *Procedia engineering*, 207, 1421-1426.
10. **Sulaiman, M. H.**, Christiansen, P., & Bay, N. (2017). Influence of tool texture on friction and lubrication in strip reduction. In *Proceedings of 12th International Conference for Technology of Plasticity (ICTP2017)* in Cambridge England, *Procedia Engineering*, 207, 2263-2268.
11. **Hafis, S. M.**, Ridzuan, M. J. M., Mohamed, A. R., Farahana, R. N., & Syahrullail, S. (2014). An experimental investigation of palm pressed fibre waste as lubricant in strip drawing. *Jurnal Teknologi*, 66(3).
12. **Hafis, S. M.**, Ridzuan, M. J. M., Alina Rahayu, M., Farahana, R. N. (2013). Properties of palm press fibre for metal forming lubricant applications, *Proceedings of Malaysian International Tribology Conference 2013*. Published in *Procedia Engineering*, 68:130-137.
13. **Hafis, S. M.**, Ridzuan, M. J. M., Farahana, R. N., Ayob, A., & Syahrullail, S. (2013). Paraffinic mineral oil lubrication for cold forward extrusion: Effect of lubricant quantity and friction. *Tribology International*, 60, 111-115.

Conference Proceedings

1. **M.H. Sulaiman**, M. J. M. Ridzuan (2021), The influence of engineered tool surfaces in ironing, *Proceedings of the 3rd Malaysian International Tribology Conference*, 5-7 July 2021.
2. **M.H. Sulaiman**, S. Kamaruddin (2021), Friction and wear behaviours of hard-coated/uncoated bearing steels under nano-additive oil lubrication, *Proceedings of the 3rd Malaysian International Tribology Conference*, 5-7 July 2021.
3. **M.H. Sulaiman** (April 29th, 2021), Friction and lubrication in manufacturing processes, Workshop on Lubrication in Automotive Industries, organized by Design Division, Department of Mechanical Engineering, SRM Institute of Science and Technology (Key Speaker).
4. **M.H. Sulaiman** (August 27th, 2020), Environmental-friendly lubrication for manufacturing processes, Online webinar on tribology as a basis in condition based monitoring, organized by industrial players: QES (Asia-Pacific) Sdn Bhd and Lubetrain Resources Sdn Bhd (Key Speaker).
5. **M.H. Sulaiman** (September 3rd, 2020), A study on tribological performance in manufacturing: Towards environmental-friendly tribosystems, *International Conference on Sustainable Materials (ICOSM) 2020* in Malaysia (Invited Speaker).
6. Azzmer, S., Jaafar, H., Tajul, L., **Sulaiman, M. H.**, & Zailani, Z. A. (2020, May). Crack Detection on Sheared-Edge of Ultra-High Strength Steel Sheet by Using Acid Immersion. In *IOP Conference Series: Materials Science and Engineering* (Vol. 864, No. 1, p. 012176). IOP Publishing.
7. **Sulaiman, M. H.**, Kamel, M. U., Farahana, R. N., & Wahab, J. A. (2019, November). Design and characterization of textured surfaces for metal forming applications. In *IOP Conference Series: Materials Science and Engineering* (Vol. 670, No. 1, p. 012056). IOP Publishing.

8. Romzi, N. H., Tajul, L., Jaafar, H., **Sulaiman, M. H.**, & Ridzuan, M. J. M. (2019, November). Study on deformation characteristics of tailored blanks having thickness distribution by successive forging process. In IOP Conference Series: Materials Science and Engineering (Vol. 670, No. 1, p. 012064). IOP Publishing.
9. **Sulaiman, M. H.**, Farahana, R. N., Mustaffa, M. N., & Bienk, K. (2019, November). Tribological properties of DLC coating under lubricated and dry friction condition. In IOP Conference Series: Materials Science and Engineering (Vol. 670, No. 1, p. 012052). IOP Publishing.
10. Azzmer, S., Jaafar, H., Tajul, L., **Sulaiman, M. H.**, & Hamedon, Z. (2019, July). Separation behaviour and crack in trimming of ultra-high strength steel sheet having curved shape. In AIP Conference Proceedings (Vol. 2129, No. 1, p. 020049). AIP Publishing LLC.
11. **Sulaiman, M. H.**, Christiansen, P., & Bay, N. (2018, September). Measurement of compressibility by means of pressure-bulk modulus relationship for low-to-high viscosity oils. In Proceedings of Asia International Conference on Tribology 2018 (Vol. 2018, pp. 409-410). Malaysian Tribology Society.
12. Üstünyagiz, E., **Sulaiman, M. H.**, Christiansen, P., Nielsen, C. V., & Bay, N. (2018). A study on DLC tool coating for deep drawing and ironing of stainless steel. In Key Engineering Materials (Vol. 767, pp. 181-188). Trans Tech Publications Ltd.
13. **Sulaiman, M. H.**, Christiansen, P., Bay, N. (2018). Development and testing of tailored die surfaces for sheet metal forming. In 8th JSTP International Seminar on Precision Forging in Nagoya, Japan, (ISPF 2018).
14. **Sulaiman, M. H.**, Christiansen, P., & Bay, N. O. (2017, September). A study of DLC coatings for ironing of stainless steel. In 36th IDDRG Conference on Materials Modelling and Testing for Sheet Metal Forming (IDDRG 2017) (Vol. 896).
15. **Hafis, S. M.**, Christiansen, P., Martins, P. A. F., & Bay, N. (2016). Determination of lubricant bulk modulus in metal forming by means of a simple laboratory test and inverse FEM analysis. In 7th International Conference on Tribology in Manufacturing Processes (ICTMP 2016) (pp. 316-323).

Chapter in Books

1. **Sulaiman, M. H.**, Raof, N. A., & Dahnel, A. N. (2021). Tribology of Composite Materials and Coatings in Manufacturing. In Tribological Applications of Composite Materials (pp. 283-308). Springer, Singapore.
2. **Sulaiman, M. H.**, Nordin, N. H., Sukindar, N. A., & Ridzuan, M. J. M. Textured Tool Surfaces for Improved Lubrication and Friction in Sheet Metal Forming. In Green Tribology (pp. 201-222). CRC Press.
3. Nordin, N. H., **Sulaiman, M. H.**, & Zhaoyuan, L. (2021). Nano-Indentation and Indentation Size Effect on Different Phases in Lamellar Structure High Entropy Alloy. Green Tribology: Emerging Technologies and Applications, 173.

| Research Grants/Consultations | | | | |
|-------------------------------|---|----------|-------------|---------------------------|
| No. | Title | Position | Year | Source of Fund |
| 1. | Hybrid eSiC-graphene oxide coating mechanism on Ti-alloy to enhance properties using an additive manufacturing method | Member | 2021 – 2023 | FRGS, MOHE |
| 2. | Corrosive-wear Performance Evaluation of Automotive Component Materials Under Palm Oil Biodiesel Condition | Member | 2021 – 2022 | MYTRIBOS Industrial Grant |
| 3. | Wear and frictional behaviour of fibre/epoxy composites during dry and wet sliding | Member | 2021 - 2022 | MYTRIBOS Industrial Grant |
| 4. | Elucidating mechanical and adhesion properties of carbon-based coatings | Leader* | 2020 - 2022 | RMIC IIUM |
| 5. | Reduction of environmentally hazardous oil consumption in sheet-metal forming using engineered tool surface solutions | Leader* | 2019 -2021 | MTUN Matching Grant |
| 6. | Enhanced Tribological behaviour of Ultra High Molecular Weight Polyethylene by Treated-Dolomite Inclusion | Member | 2019 - 2022 | FRGS, MOHE |
| 7. | Elucidating the synergistic effect of hybrid nano-fillers for thermally conductive and electrically insulating polymeric nanocomposites | Member | 2019 - 2022 | FRGS, MOHE |
| 8. | Warm stamping/forging of motorcycle sprockets | Leader | 2018 - 2019 | Steinbeis Malaysia |

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| 9. Contact mechanisms between workpiece and tailored tool surfaces influencing lubrication and friction in tribologically severe manufacturing processes | Leader | 2018 - 2020 | Taiho Kogyo Tribology Research Foundation (TTRF) |
| 10. Multifunctional surfaces for tribological applications | Leader | 2018 - 2019 | STG UniMAP |
| 11. Elucidation of crack propagation behaviour in trimming of light weight body-in-white part made of ultra-high strength steel sheet | Member | 2018 - 2021 | FRGS, MOHE |
| 12. Oil analysis of palm stearin as bio-lubricant | Member | 2014 - 2017 | FRGS, MOHE |
| 13. Characterization of orthopedic implant self-loosening and anti-loosening screw failure mechanism under mixed-mode loading | Leader* | 2014 - 2016 | FRGS, MOHE |
| 14. Lubricant optimization applied on magnetic hard disk media surface | Leader* | 2013 - 2015 | RAGS, MOHE |
| 15. Fundamental study on microwave assisted-pyrolysis of rice residue in the presence of eco-friendly microwave absorber | Member | 2013 - 2016 | FRGS, MOHE |
| 16. Fundamental study on promineny of Empty Fruit Bunch (EFB) pyrolysis oil functioning as green lubricant in metal forming process | Member | 2012 - 2015 | FRGS, MOHE |
| 17. Fundamental studies of tribological behavior of Palm Pressed Fiber (PPF) oil in cold metal forming process | Leader | 2012 - 2014 | RAGS, MOHE |
| 18. Lubrication film thickness mechanism for hip joint replacement | Leader | 2012 - 2013 | STG UniMAP |
| 19. Development of Vegetable Oils as Lubricant | Member | 2012 - 2013 | STG UniMAP |

| Awards and Recognitions | | | | | |
|-------------------------|--|--|---|--------------------------------|------|
| No | Name of award | Title | Award Authority | Award type | Year |
| 1. | Young Tribologist Best Paper Award | Asia Tribology Conference (AsiaTrib) | Malaysian Tribology Society (MYTRIBOS) | Young Tribologist | 2018 |
| 2. | Travel Grant Award | IFTToMM Young Delegates Assistance | International Federation for the Promotion of Mechanism and Machine Science (IFTToMM) | Travel Grant | 2018 |
| 3. | Research Grant Award | International Research Grant Award | Taiho Kogyo Tribology Research Foundation (TTRF) | Research Grant | 2018 |
| 4. | Steinbeis Subject Matter Experts (SMX) Solutions | Steinbeis Subject Matter Experts (SMX) Solutions | Agensi Inovasi Malaysia (AIM), Steinbeis Malaysia & RK Takasago Chain (M) S/B | Winner | 2018 |
| 5. | Travel Grant Award | ISPF Invited Young Researcher/ Engineer | Japan Society for Technology of Plasticity (JSTP) & Nichidai Corporation | Travel Grant | 2018 |
| 6. | Research Grant Incentive | PhD graduation on time | UniMAP | Research Grant Incentive | 2018 |
| 7. | Travel Grant Award | Otto Mønsted Fund | Otto Mønsted A/S | Travel Grant | 2017 |
| 8. | JSPS Ronpaku program | Ronpaku (*turned down the offer) | Japan Society for the Promotion of Science (JSPS) | Ronpaku | 2014 |
| 9. | Research Publication Incentive | Research ISI-indexed Q1 Publication | UniMAP | Research Publication Incentive | 2013 |
| 10. | Young Tribologist Award | Taiho Kogyo Tribology Research Foundation (TTRF) | Taiho Kogyo Tribology Research Foundation (TTRF) | Young Tribologist | 2013 |