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Academic Qualification

1. PhD (Mechanical Engineering), UMP- Ongoing
2. M.Sc. (Mechanical & Materials), UKM (2007- 2009).
3. B.Eng. (Hons) Engineering (Mechanical & Materials), UKM, (2002-2006).

Brief Profile

Currently, Che ku Eddy Nizwan bin Che Ku Husin is a lecturer at Faculty of Mechanical Engineering in Universiti Malaysia Pahang. He graduated from University Kebangsaan Malaysia with a Bachelor of Engineering (Mechanical) in 2006. After his first degree, he furthers his study in Master of Science (Mechanical & Materials Engineering) at UKM. His research area is on structural vibration, signal analysis and condition monitoring.

Working Experiences / Appointment

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| 1. November 2009 ~ Current | Lecturer – Universiti Malaysia Pahang (UMP) |
| 2. October 2008 ~ November 2009 | Tutor – Universiti Malaysia Pahang (UMP) |
| 3. January 2007 ~September 2008 | Research Asst. – Universiti Kebangsaan Malaysia (UKM) |

Research Interest

Dynamics and Modal Analysis, Condition Monitoring, Signal Analysis.

Research Project / Grant

Project title	Development of Spectrum Deviation Filter Algorithm for Harmonics Elimination In Modal Testing
Vote Project	RDU1703318
Duration	5 October 2017-4 October 2019
Project title	Development of A New Technique to Increase The Sensitivity in Crack Identification for Automotive Component : Vibrations Based Analysis.
Vote Project	RDU120322
Duration	1June2012-31May2014
Project title	Development of High Frequency Acoustic Sensor System for Internal Surface Pipe Roughness Monitoring.
Vote Project	RDU 090369
Duration	1May2009-30April2011
Project title	Development of Online Machining Condition Monitoring System: An Acoustic Emission Approached.
Vote Project	RDU 100323
Duration	1May2010-30April2011

Professional Qualification / Membership / Affiliation / Experience

1. The Malaysian Society for Non-Destructive Testing (MSNT)

Industrial Related Project

Year	Description	Works Scopes
2014	An Investigation of Gas Lift Reciprocating Compressor and its Piping at South Angsi Alfa (SAA) Platform, Talisman Malaysia Limited, Kota Bahru, Kelantan, Malaysia	Measurement vibration level
2014	Piping Vibration Investigation for Kinabalu Platform (KDNPA) Talisman Malaysia Limited, Sarawak, Malaysia	Measurement vibration level
2014	Vibration Analysis on Olefins Quench Water Cooler Fan at Olefins Plant, Petronas Chemical Olefins Glycol Derivative (PCOGD), Paka, Terengganu.	Modal Analysis, Operational Deflection Shape (ODS)
2016	Vibration Analysis on Base-Structure of Root Blower PE-2-K-430A and PE-2-K-430B at Petronas Chemical Polyethylene Plant, Kertih, Terengganu,	Operational Deflection Shape (ODS), Finite Element Analysis (FEA), Structure Modification

List of Publications

A) International and National Journal

1. MFM Yusof, **C.K.E. Nizwan**, SA Ong, MQM Ridzuan. 2017. Clustering of frequency spectrums from different bearing fault using principle component analysis. *MATEC Web of Conferences* 90, 01006.
2. **C. K. E. Nizwan**, S. A. Ong, M. F. M. Yusof and M. Z. Baharom. 2013. Source of the Document IOP Conference Series: Materials Science and Engineering. 50 (1), 012026.
3. S. Abdullah, **C. K. E. Nizwan**, M. F. M. Yunoh, M. Z. Nuawi and Z. M. 2013. Nopiah. Fatigue Features Extraction of Road Load Time Data using The S-Transform. *International Journal of Automotive Technology*. 14 (5) , pp. 805-815.
4. M.F.M. Yusof, **C.K.E. Nizwan**, N. Jamaludin, S. Abdullah. Acoustic Emission Behavior during Fatigue Crack of API5LX70 Gas Pipeline Steel. *Applied Mechanics and Materials* Vols. 80-81 (2011) pp 148-152.
5. Z. M. Hafizi, **C.K.E. Nizwan**, M.F.A. Reza & M.A.A. Johari. High Frequency Acoustic Signal Analysis for Internal Surface Pipe Roughness Classification. *Applied Mechanics and Materials* Vol. 83 (2011) pp 249-254.
6. S. Abdullah, N. Ismail, M.Z. Nuawi, **C.K.E. Nizwan** and M.F. Abdullah. Comparative study of the strain signal and the edited strain signal. *Advanced Materials Research* Vols. 264-265 (2011) pp 1592-1597.
7. Abdullah, S., Ariffin, A.K., **Nizwan, C.K.E.**, Abdullah, M.F., Jalar, A., Mod Yunoh, M.F. 2010. Failure Analysis of a Semiconductor Packaging Leadframe Using the Signal Processing Approach. *International Journal of Modern Physics B (IJMPB)* 24(1-2): 175-182.
8. Zulkifli Mohd Nopiah, Muhammad Ihsan Khairir, Shahrum Abdullah, Mohd Noor Baharin & **Che Ku Eddy Nizwan**. 2009. Peak-Valley Segmentation Algorithm for Kurtosis Analysis and Classification of Fatigue Time Series Data. *European Journal of Scientific Research*, ISSN 1450-216X, Vol.29 No.1 (2009), pp.113-125.
9. S. Abdullah, **C. K. E. Nizwan**, M. Z. Nuawi, 2009. A study of fatigue data editing using Short-time Fourier Transform (STFT). *American Journal of Applied Sciences*. 6 (4): 565-575.
10. M.Z. Nuawi, M.J.M. Nor, N. Jamaludin, S. Abdullah, F. Lamin & **C.K.E. Nizwan**. 2008. Development of Integrated Kurtosis-Based Algorithm for Z-Filter Technique. *Journal of Applied Sciences*, 8 (8): 1541-1547.

11. Nuawi M. Z., Lamin F., Nor M. J. M., Jamaluddin N., Abdullah S., **Nizwan C. K. E.** 2007. Integration of I-kaz Coefficient and Taylor Tool Life Curve for Tool Wear Progression Monitoring in Machining Process. *International Journal of Mechanics*. 4(1): 44-50.

B) International and National Conference Papers

1. **C.K.E.Nizwan**, M. F. M. Yusof, M. Z. Baharom & S. A. Ong. 2013. A Wavelet Decomposition Analysis of Vibration Signal for Bearing Fault Detection. International Conference on Mechanical Engineering Research 2013 (ICMER 2013)
2. M. Loman, **C.K.E. Nizwan**, Z.M. Hafizi, M.I. Yusof. 2012. A Novel Technique using the Acoustic Emission Features in Bone Tissues: a Pilot Study. 115-119. 5th WSEAS Int. Conf. on Engineering Mechanics, Structures , Engineering Geology (EMESEG '12)
3. Miminorazeansuhaila Loman, **Che Ku Eddy Nizwan** **Che Ku Husin**, Mohd Imran Yusof and Mohd Fadhlan Yusof. Utilization of the Acoustic Emission Technology in Bone Tissues. 4th International Conference on Noise, Vibration and Comfort (NVC 2012). Kuala Lumpur, Malaysia, 26-28 November 2012
4. **C.K.E.Nizwan**, M. N. Hisyam and N. Ismail. A Time-Frequency Localization Analysis of Vibration Data for Bearing Fault Detection. *Malaysian Technical Universities International Conference on Engineering & Technology* (MUiCET 2011)
5. Z. M. Hafizi, **C.K.E. Nizwan**, M.F.A. Reza & M.A.A. Johari. 2010. High Frequency Acoustic Signal Analysis for Internal Surface Pipe Roughness Classification. *The International Conference on Experimental Mechanics* (ICEN 2010). Kuala Lumpur, Malaysia.
6. M.Z.Hafizi, **C.K.E Nizwan**, D.M. Firdaus. 2010. A Study Of Acoustic Emission Intensity Effect During Fuel Injector Fault. *The 1st National Conference In Mechanical Engineering For Research & Post Graduate Studies* (NCMER 2010). Pahang, Malaysia.
7. Mohd Hafizi Bin Zohari, **Che Ku Eddy Nizwan** **Che ku Husin** & Mohd Hanif Md Saad. 2009. Time Domain Analysis of Acoustic Emission Signal for Internal Surface Roughness Classification. The 10th Asian International Conference on Fluid Machinery. 21st – 23rd October 2009, Kuala Lumpur, Malaysia.
8. Shahrum Abdullah, Mohd Faizal Abdullah, Azman Jalar, Ahmad Kamal Arifin, **Che Ku Eddy Nizwan**, 2009, Failure Analysis of semiconductor packaging Copper Leadframe using Signal Processing Approach, "Int. Conf. on Materials for Advanced Technology 2009 (Mechanical Behavior of Micro-and Nano-Scale Systems)", 28 June -3 July 2009, Singapore.
9. M.S.M.Sani, M.T.Arbain, G.L.Ming, M.H.Zohari, **C.K.E Nizwan** & T.T.Mon, "Stress Analysis and Modal Transient Response of Car Chasis", International Conference on Advance Mechanical Engineering (ICAME09), 22~25Jun, Concorde Hotel, Shah Alam, Selangor, 2009.
10. Zulkifli Mohd Nopiah, Muhammad Ihsan Khairir, Shahrum Abdullah, Mohd Noor Baharin & **Che Ku Eddy Nizwan**. 2008. Peak-Valley Segmentation Algorithm for Fatigue Time Series Data. *Proceedings of the 7th WSEAS International Conference on Computational Intelligence, Man-Machine Systems And Cybernetics*(CIMMACS '08), Cairo, Egypt, 27-31 Dec 2008.pp 698-707.
11. Zulkifli Mohd Nopiah, Mohd Noor Baharin, Shahrum Abdullah, Muhammad Ihsan Khairir & **Che Ku Eddy Nizwan**. 2008. The Abrupt Changes Detection in Fatigue Data Using the Cumulative Sum Method. *Proceedings of the WSEAS International Conferences on Theoretical and Applied Mechanics* (Mechanics), Cairo, Egypt, 27-31 Dec 2008.pp 708-717.
12. **C. K. E. Nizwan**, S. Abdullah, M. Z. Nuawi. 2008. Identification of Fatigue Damage Features in Road Load Data Using the Short-Time Fourier Transform and S-Transform Approach. *2nd Regional Conference on Vehicle Engineering and Technology 2008*.15-16 July 2008.
13. Sahadan S. N., Abdullah S., Nuawi M. Z. & **C. K. E. Nizwan**. 2008. Application of the Newly Developed Statistical Technique to Analysis Fatigue of Strain Loading. *2nd Regional Conference on Vehicle Engineering and Technology 2008*.15-16 July 2008.
14. **C. K. E. Nizwan**, S. Abdullah, M. Z. Nuawi & S.N Sahadan. 2008. Fatigue features extraction in road load time data using the S-Transform. *International Conference on Mechanical and Manufacturing Engineering 2008* (ICME2008). Johor Bahru. 21-23 May 2008.

15. Sahadan S. N., Abdullah S., Nuawi M. Z. & **Nizwan C. K. E.** 2008. Analysis of Daubechies Wavelet for Fatigue Time History using the Parseval's Energy Theorem. *Proceedings of International Conference on Mechanical & Manufacturing Engineering (ICME2008)*, 21– 23 May 2008, Johor Bahru, Malaysia.
16. Abdullah S., Nuawi M. Z., **Nizwan C. K. E.**, Zaharim A. & Nopiah Z. M.. 2008. Fatigue life assessment using signal processing techniques. *Proc.Of The 7th Wseas Int'l Conf. On Signal Proc., Robotics And Automation*, Cambridge, UK, Feb 23-25 2008. pp. 221-225.
17. **C. K. E. Nizwan**, S. Abdullah, M. Z. Nuawi & F. Lamin. 2007. The effectiveness of short-time fourier transform (STFT) to validate fatigue data editing using a SAE random fatigue data, *Proceedings of the Regional Conference on Computational and Experimental Mechanics 2007 (CEM2007)* 27-28 November 2007, Kuala Lumpur, pp. 187-194.
18. **C. K. E. Nizwan**, S. Abdullah, M. Z. Nuawi & F. Lamin. 2007. A study of vibrational fatigue time history using frequency analysis, *Proceedings of the Regional Conference on Advances in Noise Vibration and Comfort (NVC2007)*, 27-28 November 2007, Kuala Lumpur, pp. 440-449.
19. F. Lamin, M. Z. Nuawi, S. Abdullah & **C. K. E. Nizwan**. 2007. Monitoring of tool life using integrated kurtosis –based algorithm for z-filter technique, *Proceedings of the Regional Conference on Advances in Noise Vibration and Comfort (NVC2007)*, 27-28 November 2007, Kuala Lumpur, pp. 29-36.
20. Mohd Zaki Nuawi, Mohd Jailani Mohd Nor, Nordin Jamaluddin, Fauziana Lamin, Shahrum Abdullah & **Che Ku Eddy Nizwan**. 2007. A study of integrated kurtosis-based algorithm for zfilter (i-kaz) method for condition monitoring, *Proceedings of the Regional Conference on Advances in Noise Vibration and Comfort (NVC2007)*, 27-28 November 2007, Kuala Lumpur, pp. 364-371.
21. S. Abdullah, **C. K. E. Nizwan**, M. Z. Nuawi, A. Zaharim & F. Lamin. 2007. The applicability of the short-time Fourier transform (STFT) for fatigue data editing, *Proc. of the 9th WSEAS Int. Conf. on Mathematical and Computational Methods in Science and Engineering*, Trinidad and Tobago, November 5-7, 2007, pp. 318-323.
22. M. Z. Nuawi, F. Lamin, M. J. M. Nor, S. Abdullah & **C. K. E. Nizwan**. 2007. Tool Life Monitoring using Integrated Kurtosis-based Algorithm for Z-filter Technique (I-kaz), World Scientific and Engineering Academy and Society, WSEAS 2007, France.
23. **Che Ku Eddy Nizwan Che Ku Hussin**, Shahrum Abdullah, Mohd Zaki Nuawi & Fauziana Lamin. 2007. Analisis Data Lesu Pelbagai Amplitud Menggunakan Kaedah Penjelmaan Masa-Frekuensi, *Seminar Penyelidikan Siswazah*, SPS 2007, Bangi, August 27-28, pp. 220-225.
24. **C. K. E. Nizwan**, S. Abdullah, M. Z. Nuawi & F. Lamin, 2007, A study of fatigue data editing using frequency spectrum filtering technique, *Proceedings of the World Engineering Congress (WEC) 2007 – Mechanical and Aerospace Engineering*, Penang, Malaysia, 5-9 August 2007, pp. 372-378.
25. F. Lamin, M. Z. Nuawi, S. Abdullah & **C. K. E. Nizwan**. 2007. A Study of a machining signal analysis using an alternative filtering approach, *Proceedings of the World Engineering Congress (WEC) 2007 – Mechanical and Aerospace Engineering*, Penang, Malaysia, 5-9 August 2007, pp. 379-384.