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Updated 2018-01-10

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## Hussan Al-Chalabi – Curriculum Vitae

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## 1. Personal Information

### 1.1. Contact Information

Name: Hussan Saed Hamodi Al-Chalabi  
Date of Birth: 28/05/1972  
Place of Birth: Iraq, Mosul  
Marital Status: Married  
Gender: Male  
Address: Forskarvägen 31A, 97753 Luleå  
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### 1.2. Qualifications

- PhD, Division of Operation and Maintenance Engineering, Department of Civil, Environmental and Natural Resources Engineering, Luleå University of Technology, Sweden, December 2014.
- M.Sc., Mechanical Engineering Department, College of Engineering, University of Mosul, June 2008.
- B.Sc., Mechanical Engineering Department, College of Engineering, University of Mosul, June 1994.

### 1.3. Current Employment

I obtained my B.Sc. in Mechanical Engineering from Mosul University, Iraq in 1994. I obtained my M.Sc. in Mechanical Engineering, thermal power from Mosul University, Iraq in 2008. After working for 2 years in Mosul University as a faculty member, I joined the postgraduate program of Luleå University of Technology, Luleå, Sweden and I obtained a PhD degree in field of Reliability and Maintenance of mining equipment during 2014. I joined Luleå University as a Postdoctoral Researcher since 2015 for two years. I am working as a Senior Researcher in the Division of Operation and Maintenance Engineering, Luleå University of Technology, Sweden since March 2017.

### 1.4. Work experience

I have conducted a PhD research for four years on operation and maintenance, including mechanized drilling rigs from a production perspective. My PhD project financed by Atlas Copco Rock Drills AB. I have conducted research in the field of RAMS (Reliability, Availability, Maintainability and Safety) analysis of underground mobile mining equipment. Special focus has been on studying the downtime of L2C drilling rigs, which manufactured by Atlas Copco Rock Drills AB and used by Boliden AB. I suggested some design modifications, which are useful to reduce the downtime of the drilling rigs. In addition, I did a Life-cycle cost (LCC) analysis to estimate the economic replacement time (ERT) of the

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L2C drilling rigs by considering different factors affecting the ERT of these rigs. I validated my ERT models by implementing them on assets used by the Swedish Transport Administration (Trafikverket). My project financed by Trafikverket named “LCC-metodik och koppling till Maximo” conducted within one year 2016.

Another area that is included in my research is data collection and data management, which are key elements in the performance analysis and maintenance modeling which has been made.

My interests are mainly in Operation and Maintenance, Replacement models, optimization aspects, Reliability Engineering and LCC analysis. My publications include Twelve articles in international journals and conferences. I have skills in Microsoft Excel 2010, Minitab 16, MATLAB 2014, Table Curve 2D V5.01 and Easy Fit software's.

### 1.5. Previous Employment in Academia

Duration	Description
<b>01/03/2017 –</b>	Senior researcher - Division of Operation and Maintenance Engineering, Department of Civil, Environmental and Natural Resources Engineering, Luleå University of Technology, Sweden.
<b>01/02/2015 – 31/01/2017</b>	Postdoctoral Researcher - Division of Operation and Maintenance Engineering, Department of Civil, Environmental and Natural Resources Engineering, Luleå University of Technology, Sweden.
<b>08/10/2010 – 12/12/2014</b>	PhD Student - Division of Operation, Maintenance and Acoustics, Department of Civil, Environmental and Natural Resources Engineering, Luleå University of Technology, Sweden.
<b>08/10/2008 – 30/09/2010</b>	Assistant Lecturer – Mechanical Engineering Department, College of Engineering, University of Mosul. <i>Courses:</i> Internal combustion engines.
<b>01/10/2005 – 10/06/2008</b>	Post graduate student (M.Sc.) at Mechanical Engineering Department, College of Engineering, University of Mosul.
<b>01/08/2002 – 30/09/2005</b>	Mechanical Engineer, Mechanical Engineering Department, University of Mosul. <i>Duties:</i> Student supervision in thermal power laboratory. Giving experiments and practices in the thermal power laboratory.
<b>10/1999 –07/2001</b>	Lecturer, Mechanical Division, Omar Almokhtar Institute, Libya. <i>Duties:</i> Teaching mathematics, mechanics of material.
<b>12/1998 – 07/1999</b>	Engineer, Mechanical Engineering Department, Bright Star University of Technology, Libya. <i>Duties:</i> Student supervision in thermal power laboratory. Giving experiments and practices in the thermal power laboratory.

### 2. Publications

#### 2.1. Monographs

[M1] **Hussan Al-Chalabi**, “Reliability and Life Cycle Cost Modelling of Mining Drilling Rigs”, Ph.D. Dissertation, Division of Operation and Maintenance Engineering, Department of Civil, Environmental and Natural Resources Engineering, Luleå University of Technology, Sweden, November 2014.

[http://pure.ltu.se/portal/files/100474998/Hussan\\_Hamodi.pdf](http://pure.ltu.se/portal/files/100474998/Hussan_Hamodi.pdf)

[M2] **Hussan Al-Chalabi**, “Performance of the Internal Combustion Engines Working by Carburetor System with Adding Ethanol Substance to the Leaded Gasoline”, Master thesis, Mechanical Engineering Department, College of Engineering, University of Mosul, 10 June 2008.

#### 2.2. Peer--Reviewed Publications in International Journals

[J9] Hadi Hoseinie, **Hussan Al-Chalabi**, Behzad Ghodrati, Jan Lundberg, “Comparison between Simulation and Analytical Methods in Reliability Data Analysis; Case Study on Face Drilling Rigs”, **submitted**.

[J8] **Hussan Al-Chalabi** “Life cycle cost analysis of the ventilation system in Stockholm's road tunnels”, Journal of Quality in Maintenance Engineering, ISSN 1355-2511, E-ISSN 1758-7832, 2018

[J7] **Hussan Al-Chalabi**, Jan Lundberg, Adam Jonsson, “Economic lifetime of a drilling machine: a case study on mining industry”, 2015, International Journal of Strategic Engineering Asset Management. 2, 2, p. 177-189 13 p.  
<http://www.inderscience.com/offer.php?id=70624>

[J6] **Hussan Al-Chalabi**, Jan Lundberg, Majid Al-Gburi, Alireza Ahmadi, Behzad Ghodrati, “Model for economic replacement time of mining production rigs including redundant rig costs”, 2015, Journal of Quality in Maintenance Engineering. 21, 2, p. 207-226 19 p.  
<http://www.emeraldinsight.com/doi/pdfplus/10.1108/JQME-07-2014-0041>

[J5] **Hussan Al-Chalabi**, Jan Lundberg, Adam Jonsson, Alireza Ahmadi, “Case Study: Model for economic lifetime of drilling machines in the Swedish mining industry”, 2015, Engineering Economist. 60, 2, p. 138-154, 17 p.  
<http://www.tandfonline.com/doi/pdf/10.1080/0013791X.2014.952466>

[J4] **Hussan Al-Chalabi**, Jan Lundberg, Andy Wijaya, Behzad Ghodrati, “Downtime analysis of drilling machines and suggestions for improvements”, 2014, Journal of Quality in Maintenance Engineering. 20, 4, p. 306–332, 27 p.  
<http://www.emeraldinsight.com/doi/pdfplus/10.1108/JQME-11-2012-0038>

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- [J3] **Hussan Al-Chalabi**, Farzaneh Ahmadzadeh, Jan Lundberg, Behzad Ghodrati, “Economic lifetime prediction of a mining drilling machine using an artificial neural network”, 2014, International Journal of Mining, Reclamation and Environment. 28, 5, p. 311-322, 12 p.  
<http://www.tandfonline.com/doi/pdf/10.1080/17480930.2014.942519>
- [J2] A. R. A. Habbo, Raad A. Khalil, **Hussan Al-Chalabi**, “Effect of Magnetizing the Fuel on the Performance of an S.I. Engine”, 2011, Al-Rafidain Engineering. 19, 6, p. 84-90, 07 p. <http://www.iasj.net/iasj?func=fulltext&ald=26611>
- [J1] A.R Habbo, **Hussan Al-Chalabi**, “The Effect Of Adding Ethanol To leaded Gasoline on The Performance of Spark Ignition Engine”, 2010, Al-Rafidain Engineering. 18, 4, p. 33-43, 11 p.  
<http://www.iasj.net/iasj?func=fulltext&ald=31631>

### 2.3. Peer--Reviewed Publications in International Conferences

- [C6] Yamur K. Al-Douri, **Hamodi. H**, “Data imputing using genetic algorithms (GA) A case study of cost data for tunnel fans”, 26th International symposium on mine planning and equipment selection (MPES 2017)  
pp. 207 + 210, 29 - 31 Aug. 2017
- [C5] **Hamodi. H**, Aljumaili. M, “Data Quality of Maintenance Data: A Case Study in MAXIMO CMMS”, Proceedings of MPMM 2016, 6th International Conference on Maintenance Performance Measurement and Management, 28 November 2016, Luleå, Sweden, s. 105-110, Luleå tekniska universitet, 2017
- [C4] Behzad Ghodrati, **Hussan Al-Chalabi**, “Environmental friendly manufacturing and support: Issues and challenges”, International conference on Environmental Engineering and Pollution Technology : 01/10/2015 - 03/10/2015  
Thailand.
- [C3] **Hussan Al-Chalabi**, Hadi Hoseinie, Jan Lundberg, “Monte Carlo reliability simulation of underground mining drilling rig”, Proceedings of International Conference on Reliability, Safety and Hazard and Advances in Reliability, Maintenance and Safety: 1- 4 June 2015 Luleå, Sweden: (ICRESH-ARMS Conference 2015).  
<http://www.calce.umd.edu/symposiums/icresh-arms.htm>
- [C2] **Hussan Al-Chalabi**, Jan Lundberg, “Replacement team of mining drilling rigs”, 4 Sep 2014 Proceedings of Maintenance Performance Measurement and Management: 4th - 5th September 2014 Coimbra, Portugal: (MPMM 2014). 6 p.  
[http://dx.doi.org/10.14195/978-972-8954-42-0\\_17](http://dx.doi.org/10.14195/978-972-8954-42-0_17)
- [C1] **Hussan Al-Chalabi**, Jan Lundberg, Adam Jonsson, “Economic lifetime of a drilling machine: a case study on mining industry”, 12 Sep 2013 MPMM 2013

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(Maintenance Performance Measurement and Management). Monto, S., Pirttilä, M. & Kärrri, T. (eds.). Lappeenranta, Finland: MPMM 2013, p. 138-147, 10 p.  
<http://swepub.kb.se/bib/swepub:oai:pure.atira.dk:publications/04128c92-657f-4d30-a614-7b81dded6aa4?tab2=abs&language=en>

### 3. Other Scientific Qualifications

- Member of Swedish Association of University Teachers (SULF), No. (10046075).
- Member of Iraqi Engineers Association, No. (75427).