

Prof Melinda Hodkiewicz



THE UNIVERSITY OF
**WESTERN
AUSTRALIA**

[Prof Melinda Hodkiewicz](#)

Chief Investigator

[Theme 1](#)

Melinda is the BHP Billiton Research Fellow in Engineering for Remote Operations (ERO) at UWA.

Melinda specialises in Maintenance, Asset Management, Risk, Reliability, & Condition Monitoring. She is a passionate advocate for the value maintainers add and the potential for their observations help in improve reliability and as such Melinda is the Theme Leader for Theme One – Support the Maintainer.

Melinda represents UWA and Theme One on the Strategic Risk and Reporting Board, Operating Committee and PhD Support Panel. Melinda is Co Supervising PhD students Ziyu Zhao, Tyler Bikaun and Chau Nguyen.

Research Repository I

Publications

- [Embedding data science innovations in organizations: a new workflow approach \(...\)](#) — [Dr Keyao Li](#)

Authors: Li, K., Griffin, M.A., Barker, T., Prickett, Z., Hodkiewicz, M.R., Kozman, J., and Chirgwin, P.

2023-11-03

- [A Whole-of-Organisation Approach for Reliability Analytics \(...\)](#) —

Book Chapter

[Prof Melinda Hodkiewicz](#)

Authors: Melinda Hodkiewicz, Tyler Bikaun, Michael Stewart

2023-02-16

- [RelOps-A Whole-of-Organisation Approach for Reliability Analytics \(...\)](#) —

Book Chapter

[Prof Melinda Hodkiewicz](#)

Authors: Melinda Hodkiewicz, Tyler Bikaun, Michael Stewart

2023-02-16

- [Using Context-Free Grammar to Generate Synthetic Technical Short Texts \(...\)](#) —

Conference Publishing

[Tyler Bikaun](#)

Authors: Tyler Bikaun, Michael Stewart, Melinda Hodkiewicz

2022-12-03

- [MWO2KG and Echidna: Constructing and exploring knowledge graphs from maintenance data \(...\)](#) —

Journal Article

[Dr Michael Stewart](#)

Authors: Stewart M, Hodkiewicz M, Liu W, French T

2022-11-05

- [Informative Bayesian Survival Analysis to Handle Heavy Censoring in Lifetime Data \(...\)](#) —

Conference Publishing

[Ryan Leadbetter](#)

Authors: Ryan Leadbetter; Alope Phatak; Adriano Polpo; Melinda Hodkiewicz

2021-12-15

- [Automatic semantic knowledge extraction from electronic forms \(...\)](#) —

Journal Article

[A/Prof Timothy French](#)

Authors: Haolin Wu, Tim French, Wei Liu, Melinda Hodkiewicz

2022-05-23

- [Managing streamed sensor data for mobile equipment prognostics. \(...\) —](#)

Journal Article

[Dr Debora Correa](#)

Authors: Griffiths, T., Corrêa, D., Hodkiewicz, M., & Polpo, A. (2022). Managing streamed sensor data for mobile equipment prognostics. Data-Centric Engineering, 3, E11. doi:10.1017/dce.2022.4

2022-04-07

- [Data-Driven Approach for Labelling Process Plant Event Data \(...\) —](#)

Journal Article

[Dr Debora Correa](#)

Authors: Débora Corrêa, Adriano Polpo, Michael Small, Shreyas Srikanth, Kylie Hollins, Melinda Hodkiewicz

2022-01-24

- [Semi-automated Estimation of Reliability Measures from Maintenance Work Order Records \(...\) —](#)

Conference Publishing

[Tyler Bikaun](#)

Authors: Bikaun, T., & Hodkiewicz, M.

2021-06-21

- [Detecting Asset Cascading Failures Using Complex Network Analysis \(...\) —](#)

Journal Article

[Dr Ayham Zaitouny](#)

Authors: Jaymin Moffatt; Ayham Zaitouny; Melinda Hodkiewicz; Michael Small

2021-08-27

- [Rethinking maintenance terminology for an industry 4.0 future \(...\) —](#)

Journal Article

[Prof Melinda Hodkiewicz](#)

Authors: Melinda Hodkiewicz, Sarah Lukens, Michael P. Brundage, Thurston Sexton

2021-03-21

- [Using job characteristics to inform interface design for industrial maintenance procedures \(...\) —](#)

Conference Publishing

[Prof Mark Griffin](#)

Authors: Woods, C., Griffin, M. A., French, T., & Hodkiewicz, M. (2021)

2021-05-06

- [Parameter extraction with reservoir computing: Nonlinear time series analysis and application to industrial maintenance \(...\) —](#)

Journal Article

[Braden Thorne](#)

Authors: Thorne, B., Jüngling, T., Small, M., & Hodkiewicz, M. (2021).

2021-03-01

- [An ontology for reasoning over engineering textual data stored in FMEA spreadsheet tables \(...\)](#) —

Journal Article

[Prof Melinda Hodkiewicz](#)

Authors: Melinda Hodkiewicz, Johan W. Klüwerb, Caitlin Woodsc, Thomas Smokerc, Emily Low

2021-05-27

- [Variable Selection for Conveyor-Belt Mean Wear Rate Prediction \(...\)](#) —

Journal Article

[Prof Melinda Hodkiewicz](#)

Authors: Joanna Z Sikorska*, Callum Webb, Nazim Khan and Melinda Hodkiewicz

2021-02-26

- [Pipeline for machine reading of unstructured maintenance work order records \(...\)](#) —

Conference Publishing

[A/Prof Wei Liu](#)

Authors: Yiyang Gao, Caitlin Woods, Tim French, Melinda Hodkiewicz

2020-11-01

- [Interpretable Survival Models for Predictive Maintenance \(...\)](#) —

Conference Publishing

[A/Prof Adriano Polpo](#)

Authors: Paul Castle, Janet Ham, Melinda Hodkiewicz, Adriano Polpo

2020-11-01

- [Template Libraries for Industrial Asset Maintenance: A methodology for scalable and maintainable ontologies \(...\)](#) —

Conference Publishing

[Prof Melinda Hodkiewicz](#)

Authors: Lupp, D.L., Hodkiewicz, M., and Skjæveland, M.G.

2020-11-02

- [DRAT: Data risk assessment Tool for University-Industry collaborations \(...\)](#) —

Journal Article

[Prof Melinda Hodkiewicz](#)

Authors: Sikorska, J., Bradley, S., Hodkiewicz, M. and Fraser, R.

2020-12-11

- [Technical Language Processing: Unlocking Maintenance Knowledge \(...\)](#) —

Journal Article

[Prof Melinda Hodkiewicz](#)

Authors: Michael P. Brundage, Thurston Sexton, Melinda Hodkiewicz, Alden Dima, Sarah Lukens

2020-12-11

- [Maintenance in an Industry 4.0 and COVID world - the case for Remote Operations \(...\)](#) —

Conference Publishing

[Prof Melinda Hodkiewicz](#)

Authors: None

2020-11-01

- [Sensing system for low cost condition monitoring of remote assets \(...\)](#) —

Conference Publishing

[Prof Melinda Hodkiewicz](#)

Authors: Aiden J.Ziegelaar, Ben C.Travaglione, Melinda R. Hodkiewicz

2020-12-18

- [Digitalization and reasoning over engineering textual data stored in spreadsheet tables \(...\)](#) —

Conference Publishing

[Prof Melinda Hodkiewicz](#)

Authors: Melinda Hodkiewicz, Johan W. Klüwer, Caitlin Woods, Thomas Smoker, Tim French

2020-12-18

- [Data-driven reliability analysis of Boeing 787 Dreamliner - ScienceDirect \(...\)](#) —

Journal Article

[Prof Melinda Hodkiewicz](#)

Authors: G Pandian, M Pecht, E Zio, M Hodkiewicz

2020-03-12

- [Framework for Validation of Permanently Installed MEMS-Based Acquisition Devices Using Soft Sensor Models \(...\)](#) —

Journal Article

[Prof Melinda Hodkiewicz](#)

Authors: A Bartels, E Cripps, A Keating, I Milne, B Travaglione, M Hodkiewicz

2020-07-28

- [Developing and evaluating predictive conveyor belt wear models \(...\)](#) —

Journal Article

[Prof Melinda Hodkiewicz](#)

Authors: Callum Webb, Joanna Sikorska, Ramzan Nazim Khan, Melinda Hodkiewicz

2020-06-18

Presentations

- [AI and Predictive Maintenance \(...\)](#) —



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2024-04-17

- [The Failure Project - Semantic modelling of how processes and things fail \(...\)](#) —



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2024-03-15

- [Failure project briefing Oslo \(...\)](#) —



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2024-02-27

- [Industrial Data Extraction and Use - SIEMENS Technology \(...\)](#) —



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2024-02-21

- [Semantic Arts in US - Industrial Data Extraction and Use \(...\)](#) —



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2024-02-09

- [Failure Project presentation \(...\)](#) —



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2024-02-08

- [IOF Maintenance Working Group tutorial \(...\)](#) —



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2024-02-07

- [Industrial data and the resurrection of ontologies \(...\)](#) —



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2023-07-21

- [NLP meets ontologies for industrial knowledge graphs on maintenance texts \(...\)](#) —



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2023-04-21

- [Industrial Knowledge Graphs for Maintenance applications \(...\)](#) —



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2023-03-01

- [Ontologies meet NLP - with a spare parts perspective \(...\)](#) —



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2023-02-07

- [Ontologies meet NLP NLP-with a spare parts perspective \(...\) —](#)



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2023-01-30

- [Ontologies meet NLP \(...\) —](#)



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2022-11-10

- [Common definitions for mining technology \(...\)](#) —



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2022-10-26

- [Building a Data Fit Organisation \(...\)](#) —



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2022-09-07

- [AI On Maintenance Data - Challenges To Value Delivery. \(...\) —](#)



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2021-12-12

- [ICMIAM AI on maintenance data -challenges to value delivery \(...\) —](#)



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2021-12-15

- [Modular ontologies for maintenance texts \(...\) —](#)



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2021-11-04

- [AI on maintenance data - challenges to value delivery \(...\) —](#)



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2023-02-14

- [Improving how engineers communicate - with computers \(...\)](#) —



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2021-10-26

- [The Ghost in the Machine - Are we heading for a Predictive Analytics driven disaster? \(...\)](#) —



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2021-05-12

- Towards a set of open reference ontologies for reasoning and text interoperability across the manufacturing domain (...) —



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2021-04-16

- Key Note Speaker - Maintenance in an industry 4.0 and COVID-19 world – the case for remote operations (...) —



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2020-11-05

- [APOS Workshop Data Automation \(...\)](#) —



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2020-06-16

- [ISWC 2019 \(...\)](#) —



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2019-10-26

- [WA Mining Conference \(...\)](#) —



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2019-10-15

- [Future of Mining conference Sydney \(...\)](#) —



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2019-03-25

- [Mini-symposium Ontologies for Infra and Building Sector 16th April 2019, Delft \(...\) —](#)



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2019-04-16

- [Breakfast seminar - Sirius Centre and Energy Valley in Oslo \(...\) —](#)



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2019-06-24

- [TBA \(...\) —](#)



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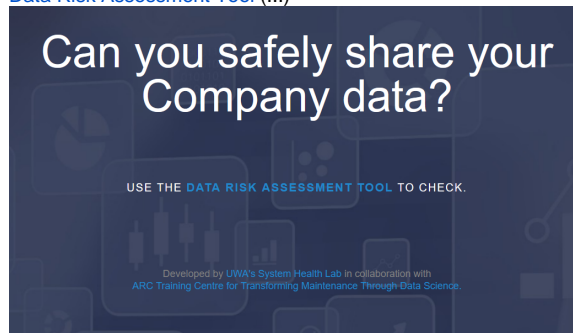
2019-06-19

Awards and Prizes

- [Fellow of the Australian Academy of Technological Sciences and Engineering \(...\)](#)
-

Tools

- [Data Risk Assessment Tool \(...\)](#) —



2020-01-31

Can you safely share your company data?

[Theme 1](#) [Theme 5](#)