

# Prof Melinda Hodkiewicz



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

- [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

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



Prof Melinda Hodkiewicz

Chief Investigator

**Theme 1**

2023-07-21

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



Prof Melinda Hodkiewicz

Chief Investigator

**Theme 1**

2023-04-21

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



Prof Melinda Hodkiewicz

Chief Investigator

**Theme 1**

2023-03-01

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



Prof Melinda Hodkiewicz

Chief Investigator

**Theme 1**

2023-02-07

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



Prof Melinda Hodkiewicz

Chief Investigator

**Theme 1**

2023-01-30

- [Ontologies meet NLP \(...\)](#) —



Prof Melinda Hodkiewicz

Chief Investigator

**Theme 1**

2022-11-10

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





[Prof Melinda Hodkiewicz](#)

Chief Investigator

### **Theme 1**

2022-10-26

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



[Prof Melinda Hodkiewicz](#)

Chief Investigator

### **Theme 1**

2022-09-07

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





Prof Melinda Hodkiewicz

Chief Investigator

**Theme 1**

2021-12-12

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



Prof Melinda Hodkiewicz

Chief Investigator

**Theme 1**

2021-12-15

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



Prof Melinda Hodkiewicz

Chief Investigator

**Theme 1**

2021-11-04

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



Prof Melinda Hodkiewicz

Chief Investigator

**Theme 1**

2023-02-14

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



Prof Melinda Hodkiewicz

Chief Investigator

### Theme 1

2021-10-26

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



Prof Melinda Hodkiewicz

Chief Investigator

### Theme 1

2021-05-12

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



[Prof Melinda Hodkiewicz](#)

Chief Investigator

**Theme 1**

2021-04-16

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



[Prof Melinda Hodkiewicz](#)

Chief Investigator

**Theme 1**

2020-11-05

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



[Prof Melinda Hodkiewicz](#)

Chief Investigator

**Theme 1**

2020-06-16

- [ISWC 2019 \(...\)](#) —



[Prof Melinda Hodkiewicz](#)

Chief Investigator

**Theme 1**

2019-10-26

- [WA Mining Conference \(...\)](#) —





Prof Melinda Hodkiewicz

Chief Investigator

**Theme 1**

2019-10-15

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



Prof Melinda Hodkiewicz

Chief Investigator

**Theme 1**

2019-03-25

- [Mini-symposium Ontologies for Infra and Building Sector16th April 2019, Delft \(...\)](#) —



**Prof Melinda Hodkiewicz**

Chief Investigator

**Theme 1**

2019-04-16

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



**Prof Melinda Hodkiewicz**

Chief Investigator

**Theme 1**

2019-06-24

- [TBA \(...\)](#) —





**Prof Melinda Hodkiewicz**

Chief Investigator

**Theme 1**

2019-06-19

---

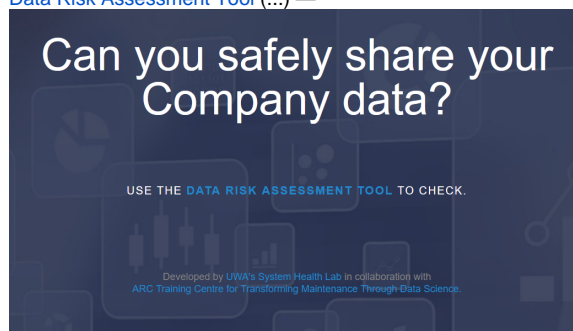
## Awards and Prizes

- [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](#)