

Dr Edward Cripps - Profile Section

Dr Edward Cripps is a senior lecturer in the Centre for Applied Statistics at UWA who works in the area of complex data modelling. He is a statistician with research interests in Bayesian longitudinal analysis, spatio-temporal models and the integration of physical and probabilistic models. Australian natural resource industries and environmental bodies are experiencing an unparalleled growth in the quantity of available data. Together with the increasing availability of computer-based modelling and simulation, Data Science and its mathematical underpinnings are firmly entrenched in scientific inference and industrial decision making. Ed's research examines model/data mismatch and its impact on inference and decisions, using high quality, rather than high quantity, data to integrate our mathematical abstractions of the world with probabilistic approaches to uncertainty quantification. The increasing need for (a) rigorous data science applications and (b) the development of statistical methodology to address more complex problems has resulted in Ed's collaboration and/or consultation with many industrial and governmental bodies. Most recently, these have included INPEX, Shell Australia, Woodside Energy, Bureau Veritas - France, Lloyd's Register Global Technology Centre, Fugro Australia Marine, Wood Group Kenny Australia, Geosciences Australia, Newcrest Mining, McKinsey & Company, IAG Insurance, ALCOA of Australia, BHP, Roy Hill Holding, CORE Innovation Hub, NSW Natural Resources Commission, NSW Office of Environment and Heritage, Western Australia Biodiversity Science Institute, Bureau of Meteorology, Water NSW, Alan Turing Institute (UK).

Ed is one of the Chief Investigators for the Theme 2 Support the Manager.

His specialities include:

- Complex data modelling.
- Bayesian longitudinal analysis
- spatio-temporal models and the integration of physical and probabilistic models.

Ed is interested in engaging with industry on projects/problems related to any of his specialities.

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He is also interested in being involved in cross discipline projects to test the suitability of Bayesian probabilistic methods for fault detection under different scenarios, comparing the analysis of measured data from industry partners operating equipment.

Ed is Co supervising PhD Student Braden Thorne

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