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# Multi-sourced Modelling for Strip Breakage using Knowledge Graph Embeddings

Zheyuan Chen<sup>a\*</sup>, Ying Liu<sup>a</sup>, Agustin Valera-Medina<sup>a</sup>, Fiona Robinson<sup>b</sup>

<sup>a</sup> *Institute of Mechanical and Manufacturing Engineering, School of Engineering, Cardiff University, Cardiff, CF24 3AA, UK*

<sup>b</sup> *Department of Engineering, Faculty of Computing, Engineering and Science, University of South Wales, Treforest, Pontypridd, CF37 1DL, UK*

\* Corresponding author *E-mail address:* [chenz57@cardiff.ac.uk](mailto:chenz57@cardiff.ac.uk)

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## Abstract

Strip breakage is an undesired production failure in cold rolling. Typically, conventional studies focused on cause analyses, and existing data-driven approaches only rely on a single data source, resulting in a limited amount of information. Hence, we propose an approach for modelling breakage using multiple data sources. Many breakage-relevant features from multiple sources are identified and used, and these features are integrated using a breakage-centric ontology which is then used to create knowledge graphs. Through ontology construction and knowledge embedding, a real-world study using data from a cold-rolled strip manufacturer was conducted using the proposed approach.

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