Comprehensive Editing of a Structural Engineering Manuscript

Overview:

This project involved editing a technical manuscript focused on truss damage identification in large-scale structures. The goal was to improve clarity, consistency, and adherence to academic conventions while maintaining the technical accuracy of the content.

Anonymized Examples of Key Edits

Example 1: Improving Sentence Structure and Clarity

Before:

"This study explored different separation interfaces for truss damage identification using~~based on~~ stiffness separation. This proposed method reduces~~d~~ the overall complexity of damage identification by simplifying large--scale truss structures into manageable substructures. A case study involving the New Yellow River Bridge validated the effectiveness of the ~~proposed~~ approach~~method~~. Different separation scenarios, combined~~along~~ with two optimization methods, demonstrated the accuracy and efficiency of identifying structural damage."

Example 2: Enhancing Readability and Technical Consistency

Before:

"This study used the New Yellow River Bridge, the longest simply supported steel truss railway bridge in china, as a case study to demonstrate the effectiveness of the separation interface for truss members [14]. ~~It is the longest simply supported steel truss railway bridge in China [14],~~ The bridge span~~ning~~ 156 m across the Yellow River near Yumenkou Station on the Huang-Han-Hou (HHH) railway line (Figure 4)."

Example 3: Addressing Consistency in Style

Before:

"In Eq. (1), $\mathbf{Q}_k$ and $\mathbf{Q}_u$ represent the known and unknown loads~~,~~; respectively, while $\mathbf{D}_k$ and $\mathbf{D}_u$ denote~~refer to~~ the corresponding displacements. The formulation for the unknown -displacement $\mathbf{D}_u$ is …"

Example 4: Clarifying Missing Information and Ensuring Completeness

In Eq. (6), A, E, L, and I denote~~represent~~ the cross-sectional area, elastic modulus, ~~and~~ member length, and moment of inertia, respectively.