Leveraging Data Analytics by Transforming Relational Database Schema into Big Data

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The growth of data and its efficient handling is becoming more popular trend in recent years bringing new challenges to explore new avenues. Data analytics can be done more efficiently with the availability of distributed architecture of “Not Only SQL” NoSQL databases. ...

Optimizing the Cross Section of Cold-Rolled Steel Beams Using a Genetic Algorithm: Avoiding Local Optima Using Adaptive Mutation Control, Flexible Restriction Handling and Inbreed Avoiding Mating Strategies

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In modern mechanical engineering and steelwork the use of cold-rolled steel sections is a standard method. These sections should be mechanically stable on the one hand and cost efficient on the other hand. To decide what profile suits for a certain case is a constrained optimization problem which is in general non convex, i.e. several local optima exist. ...
The paper presents a modified Tartaglia method. Tartaglia proposed a simple approach to perform an approximate quadrature of the circle. His construction results with the number \(\pi = 3.125\). Using a similar construction as Tartaglia but with different proportions improves the accuracy of his method. ...