

伸縮できる円筒折り紙構造のバネ性能

環境構造工学講座 06629 柴田勝也

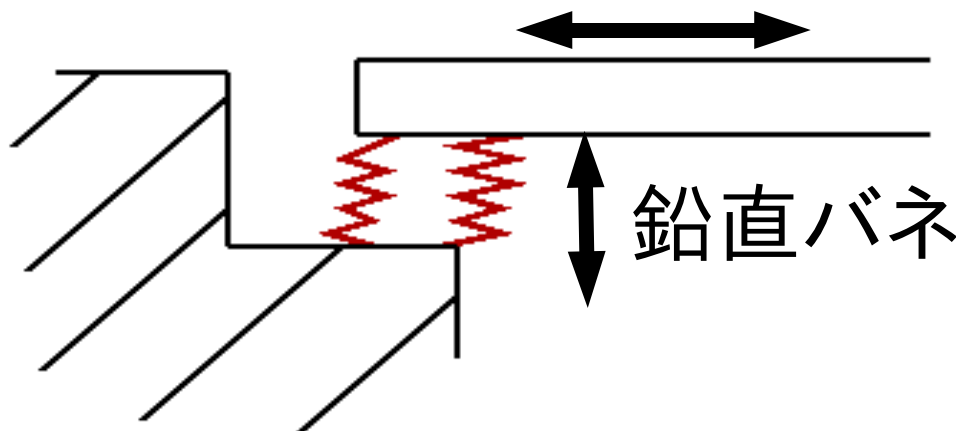
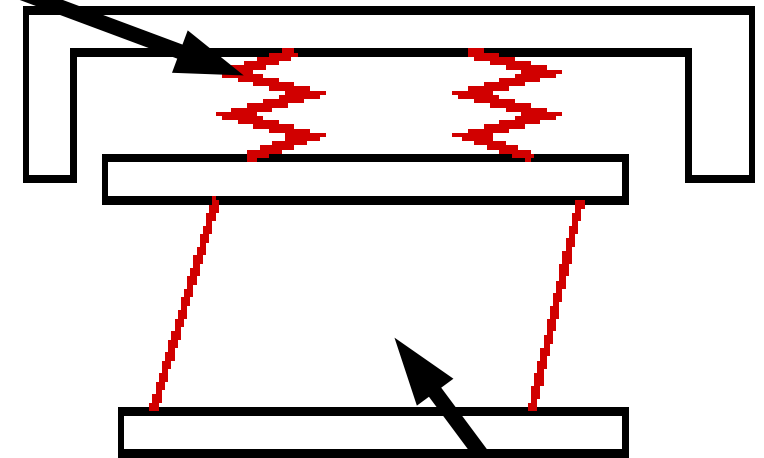
折り紙構造・・・高強度、折り畳める、バネ性能



水平バネ

鉛直バネ

機能分離型支承



水平バネ

1.はじめに

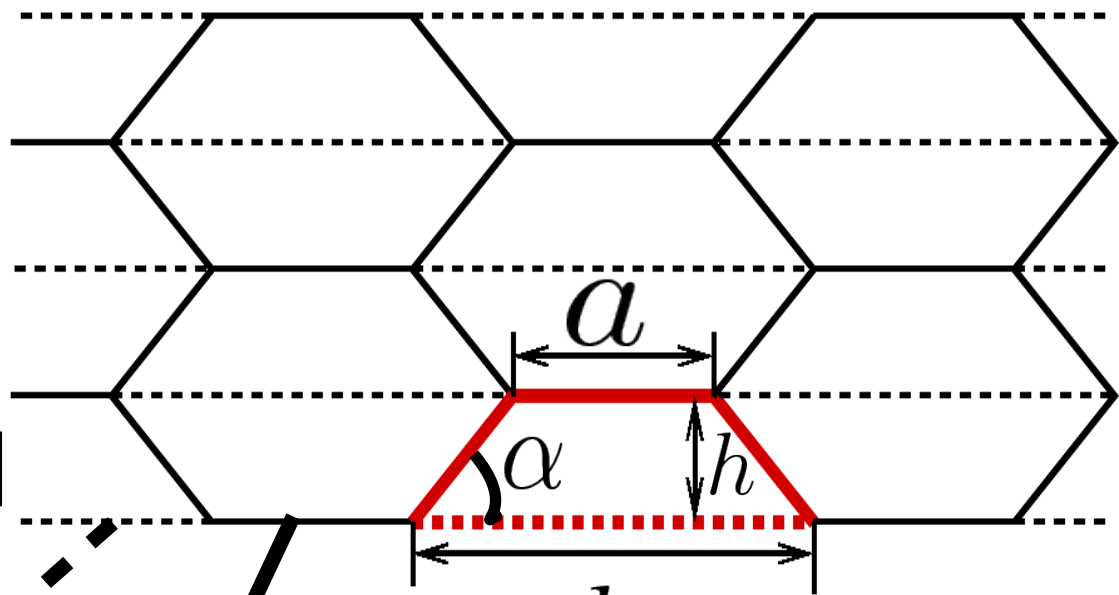
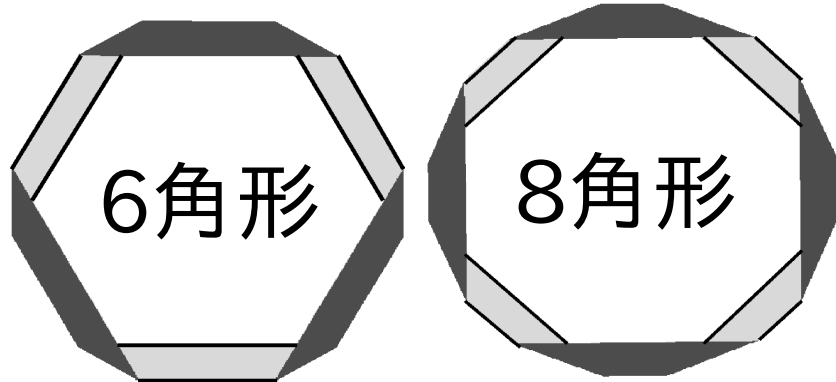
2.折り目

3.解析モデル

4.バネ定数

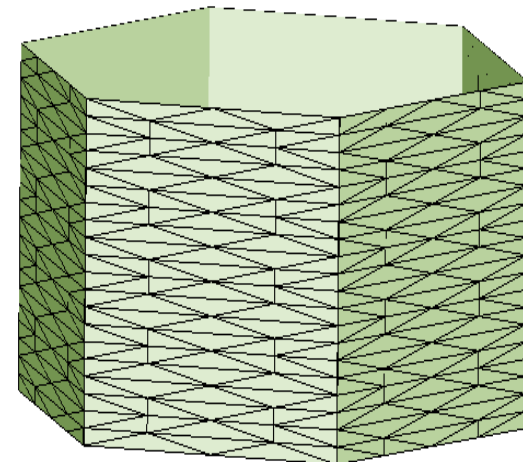
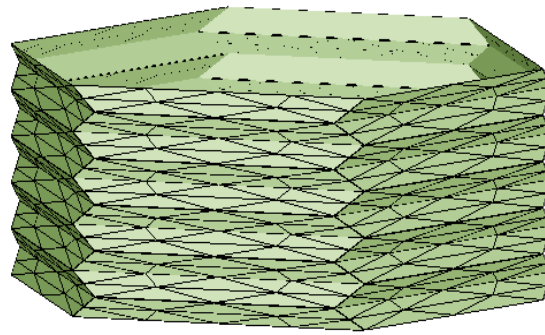
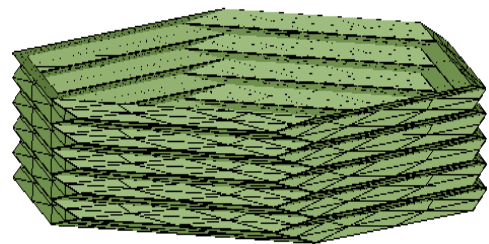
5.まとめ

折り目パターン



谷折り

山折り



初期高さ0

初期高さ0.4

初期高さ0.8

初期高さ1

1.はじめに

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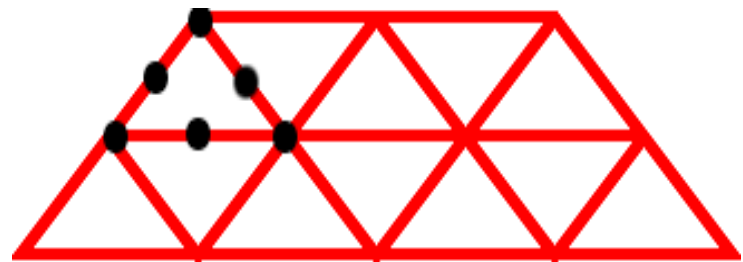
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5.まとめ

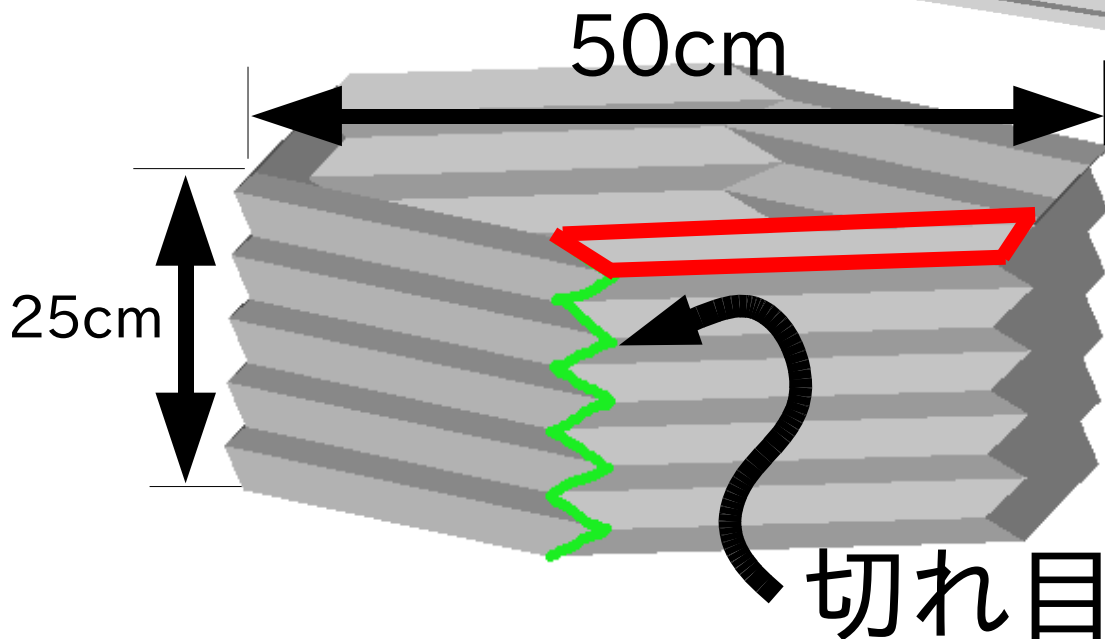
解析モデル

FEM解析・・・Calculix

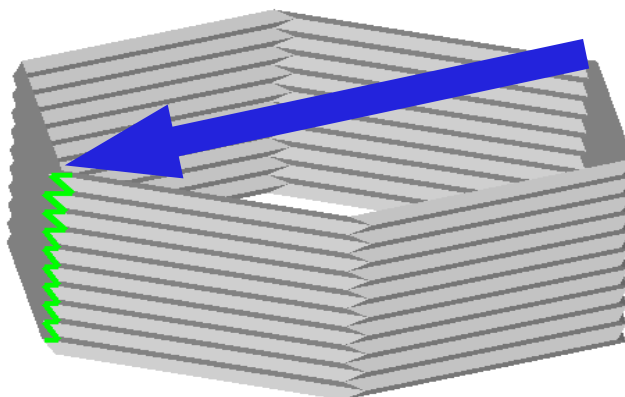
要素分割



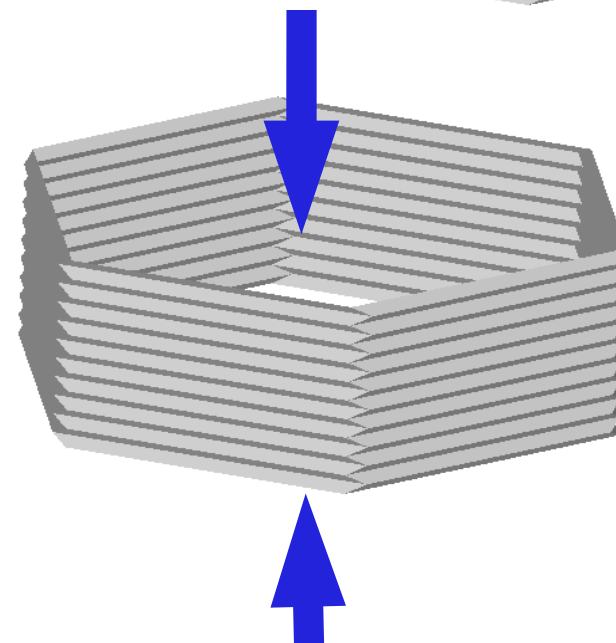
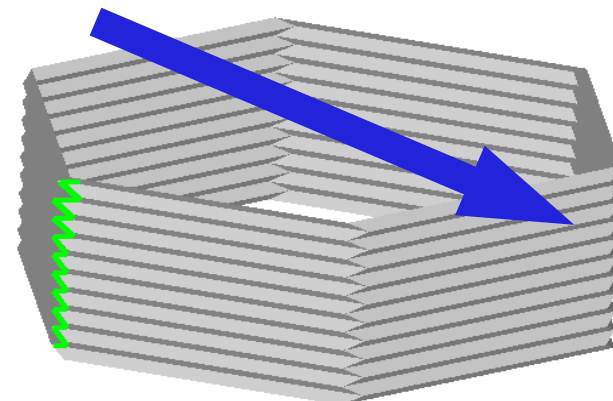
寸法



x 軸
切れ目に沿って



y 軸
切れ目に直角



1.はじめに

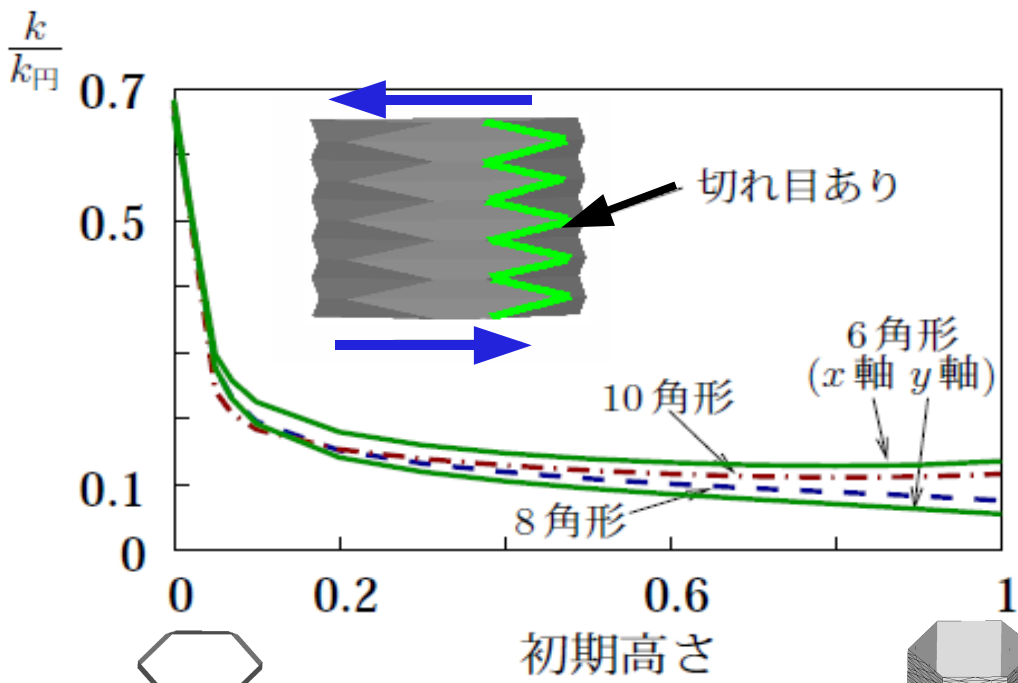
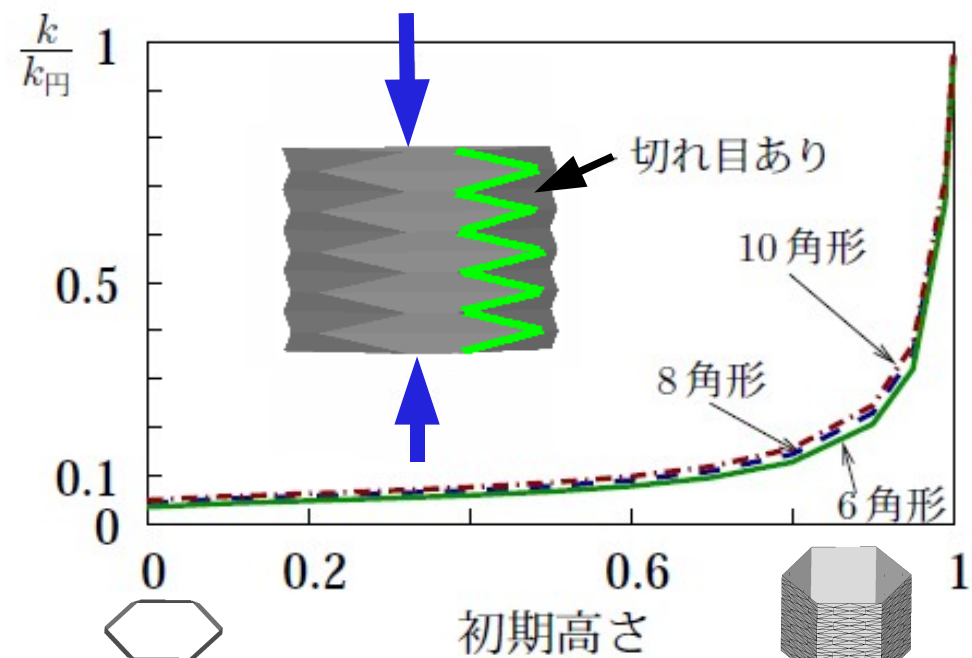
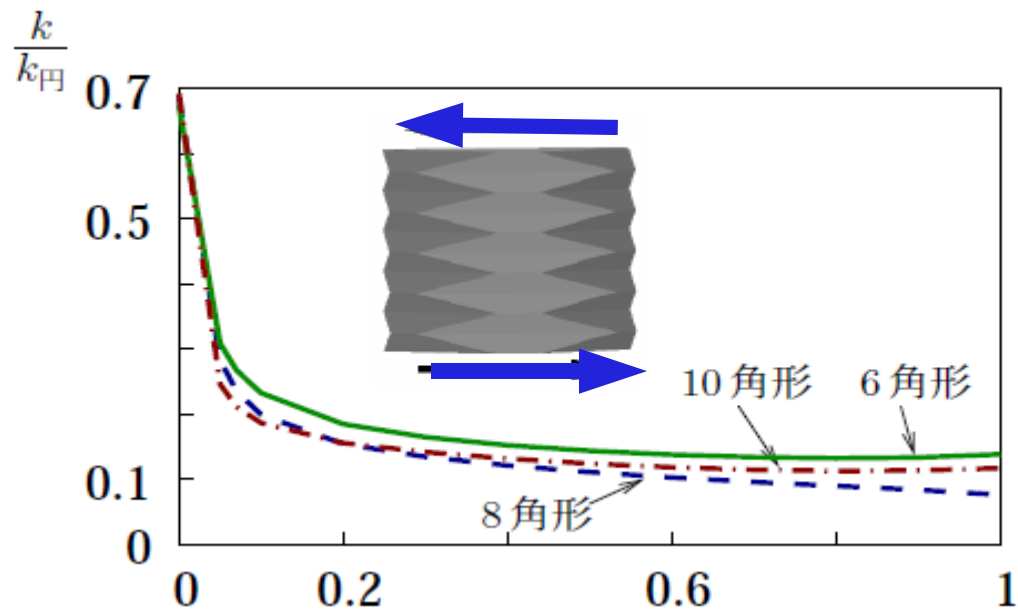
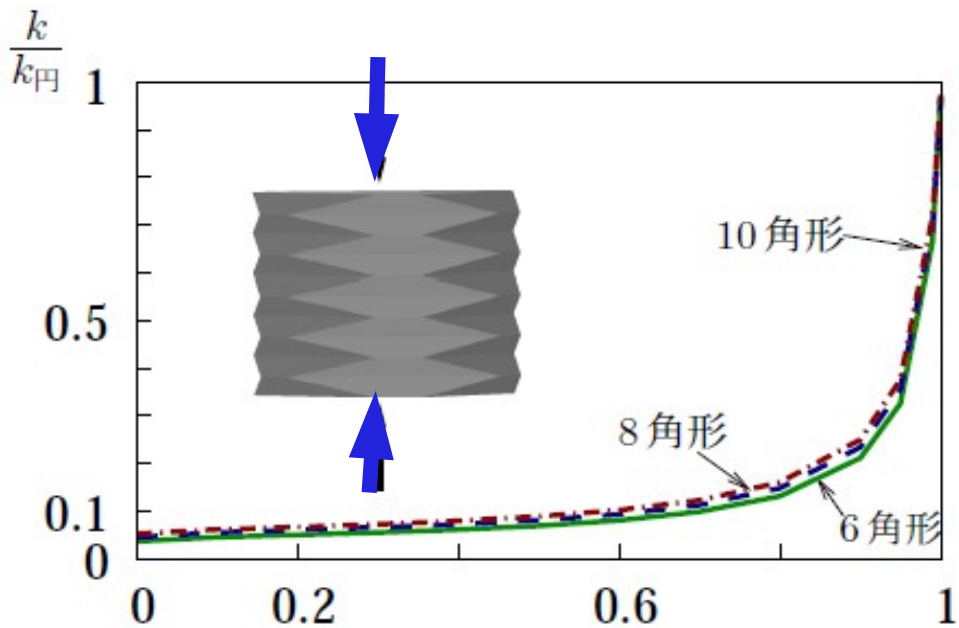
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バネ定数



1.はじめに

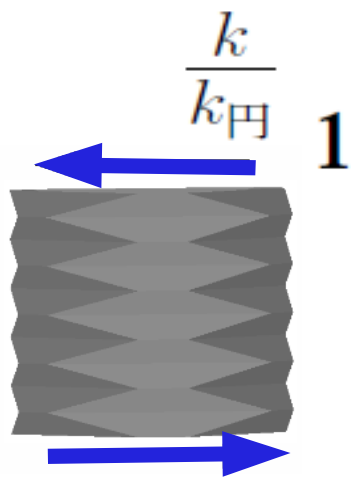
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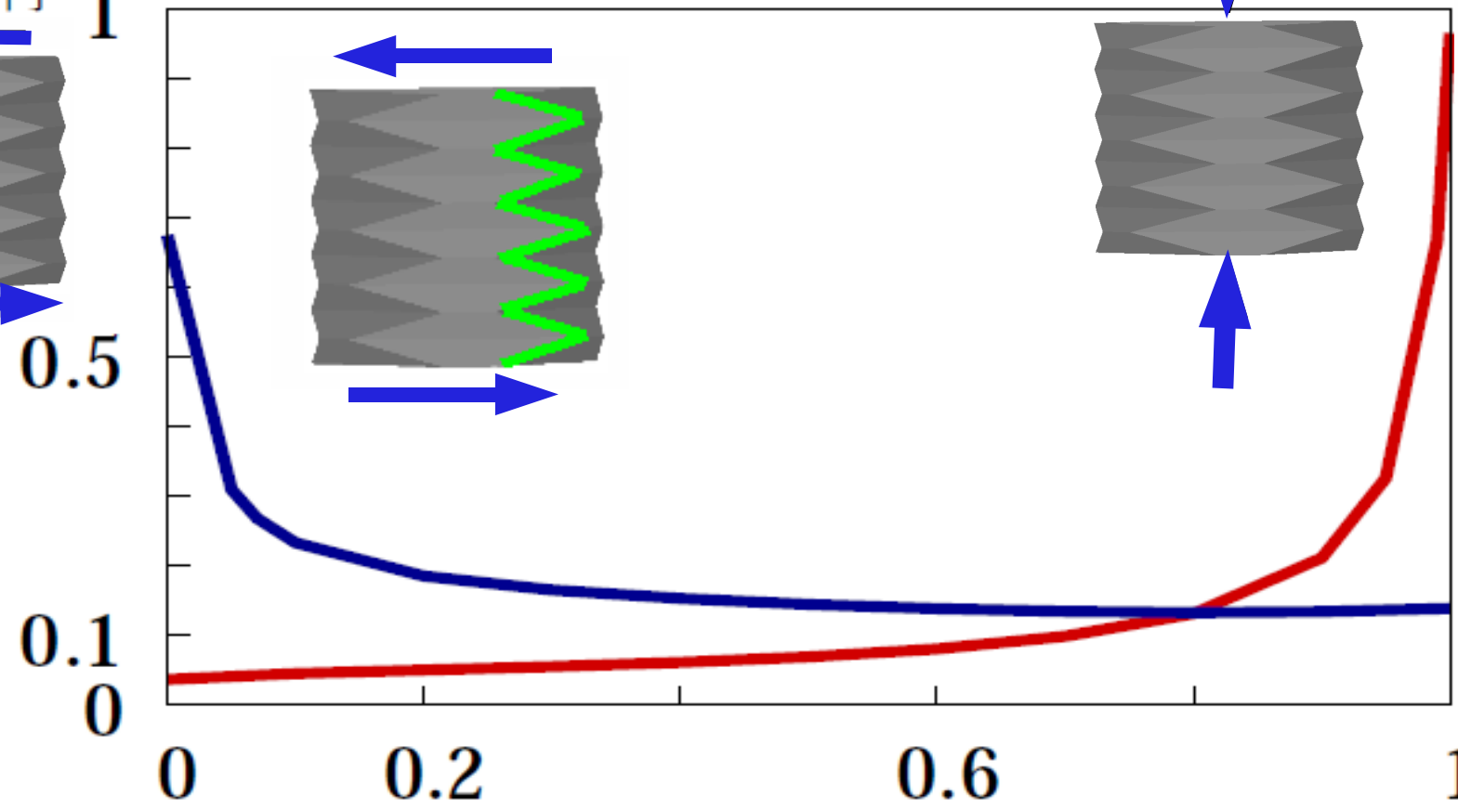
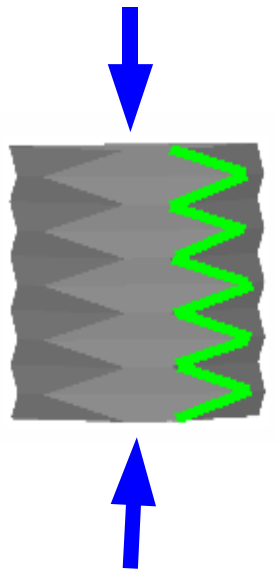
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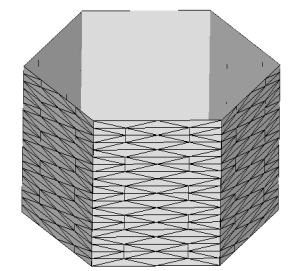


水平

鉛直



初期高さ



1.はじめに

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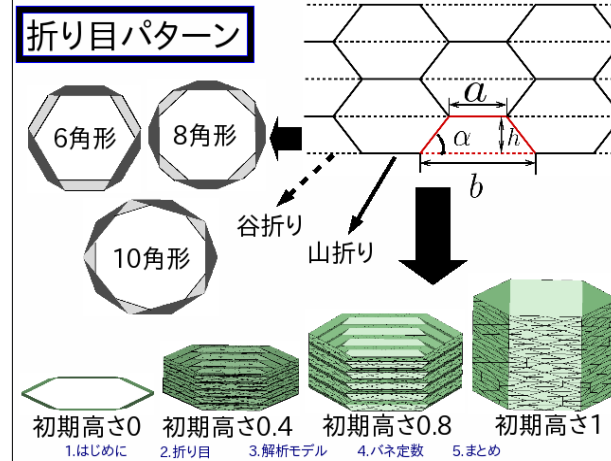
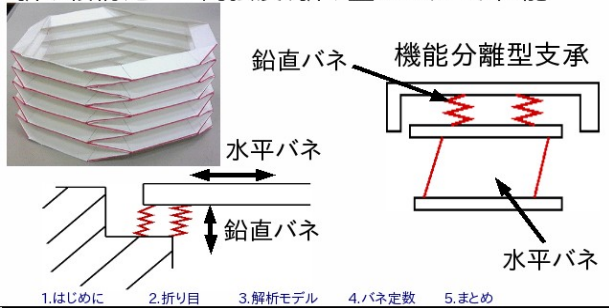
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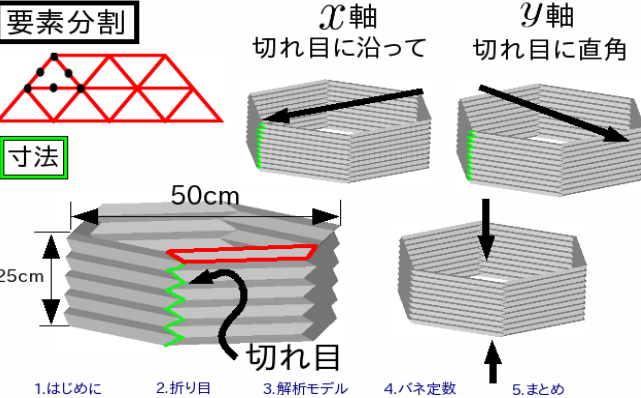
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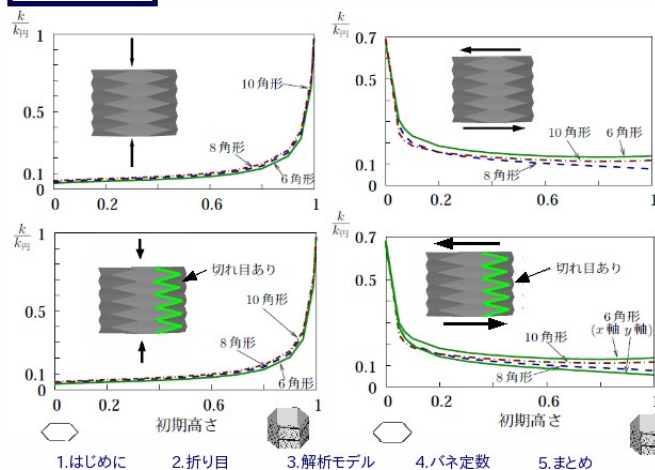
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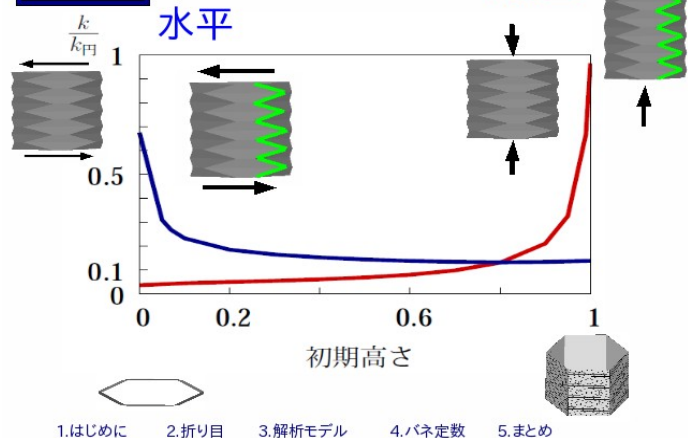
解析モデル FEM解析・・・Calculix



バネ定数



まとめ



3.解析モデル

4.バネ定数

5.まとめ