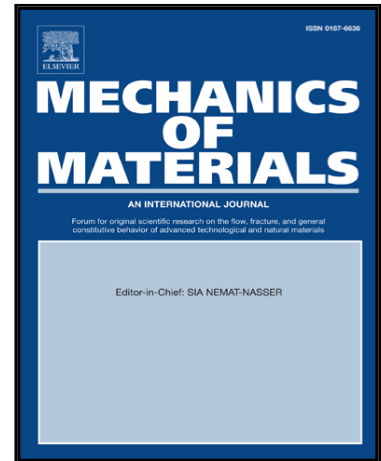


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On the homogenization of hexagonal honeycombs under axial and shear loading. Part I: analytical formulation for free skin effect

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Highlights

- a general parameterization procedure of a hexagonal honeycomb is proposed
- all nine effective elastic properties are obtained analytically by using two new proposed models
- homogenization of honeycombs enables efficient finite element analyses
- the numerical results obtained for the effective elastic constants are compared to the ones given by the analytical models

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