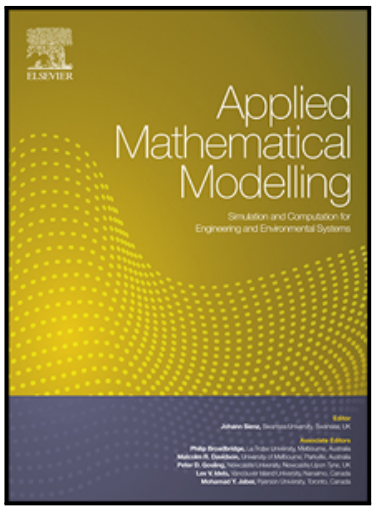

The closed form solutions for axisymmetric modeling of thermal stress due to repetitive pulse laser heating

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Highlights

- Novel closed form solutions for axisymmetric modeling of thermal stress induced by repetitive pulse laser heating are obtained.
- Thermal stress distributions for different radial and axial locations of material are modeled and analyzed.
- Mechanisms of energy gain and stress generation for different laser irradiation regions are analyzed.
- Effects of duty cycles on thermal stress distributions are investigated.