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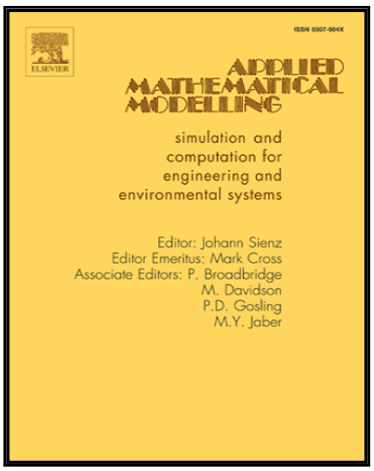

Comparison between exact thermal boundary condition and harmonic mean conductivity condition at the solid-fluid interface for finite thickness shrouded non-isothermal fin array

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Highlights

- Exact thermal boundary case is compared with harmonic mean conductivity case.
- Pressure drop of exact thermal boundary is higher than harmonic mean conductivity.
- Bulk temperature is over predicted as much as 13% in harmonic mean conductivity case.
- In harmonic mean conductivity case, over prediction of heat transfer is limited to 8%.

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