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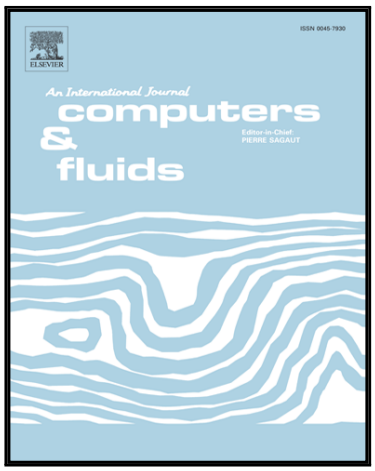

Implementation of an iterative algorithm for the coupled heat transfer in case of high-speed flow around a body

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Highlights

- For high velocity vehicle, flow model is steady, body heat transfer model is unsteady
- Boundary condition convergency depends on the fluid and solid heat conductivity ratio
- In fluid domain Dirichlet BC should be set up and Neumann BC in solid one
- 1D and 3D simulations with FEM and FD methods confirm analysis conclusion

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