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On the importance of inlet boundary conditions for aerothermal predictions of turbine stages with Large Eddy Simulation

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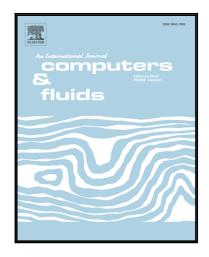
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#### ACCEPTED MANUSCRIPT

### Highlights

- $\bullet$  Integrated combustor and turbine stage computation is performed with LES
- Comparisons with turbine stage only LES are performed
- A parametric study on turbulence injection is made on stage only LES
- Synthetic turbulence injection is not adequate to well represent the integrated LES

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