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A Mechanistic Model for Expansion Loss Coefficient in Upward Vertical Annular Flow

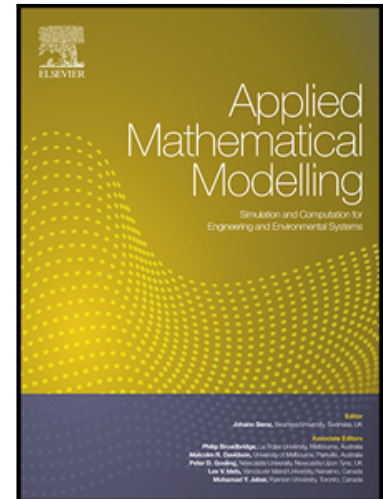
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Highlights

- Differential effect of flow deceleration on gas, droplets and liquid film postulated
- Developed semi-analytical expressions for velocity profile correction factor in pipe flow
- Carried out CFD simulations of gas-droplet flow in a rough-walled pipe expansion
- Effect of droplet deceleration on pressure variation elucidated
- Mechanistic correlation developed for expansion loss coefficient for annular flow

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