

## **Finite element modelling and simulation of phase transformations in shape memory alloy thin films**

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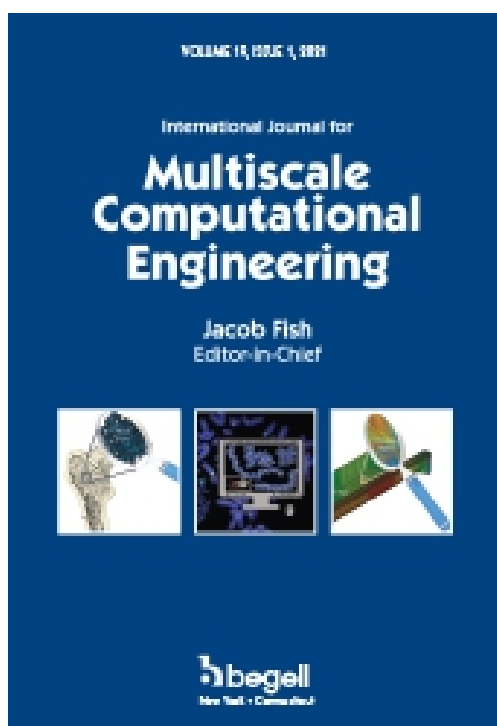
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### **Abstract:**

A unified variational framework and finite element simulations of phase transformation dynamics in a shape memory alloy thin film are reported in this paper. The computational model is based on an approach that combines the lattice-based kinetics involving the order variables and non equilibrium thermodynamics. Algorithmic and computational issues are discussed. Numerical results on phase nucleation under mechanical loading are reported.

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