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An incremental-secant mean-field homogenization method with second statistical moments for elasto-visco-plastic composite materials

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Highlights

- The incremental-secant Mean-Field Homogenization is extended to viscoplasticity
- Second statistical moment estimations of the van Mises stress are considered
- A new approximation of the second moment estimation is developed
- The homogenization method predicts accurate behaviors of short fiber composites
- Non-monotonic and non-radial loading conditions are considered

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