

Self-Evaluation Report

Computational Plasticity (SoSe25)

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Phenomenology of Plasticity

1 Difference between elastic and plastic strain

To understand the difference between elastic and plastic strain, we can start by visualizing a simple stress-strain curve.

2 Microscopic origin of plastic deformation

Continuum Plasticity

3 Equivalent stress and yield function

4 Different yield criteria

5 Evolution of yield locus with plastic strain

6 Associated flow rule

Crystal Plasticity

7 Orowan law

8 Resolved shear stress

9 Finite strain formulation

10 Crystal plasticity flow rule

According to [?], the theory of plasticity provides a framework for understanding material behavior beyond elastic limits.

References