

## Talk announcement (ZOOM)

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(RICAM)

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15:30, ZOOM

(Meeting-ID: 972 1095 6060, Password: phasefield)

## **Solvers for High-Order Phase-Field Fracture Simulations**

In this talk we are going to compare various solution strategies for phase-field fracture problems. We put additional emphasis on the behavior of the linear when using higher-order finite elements. To this end, we use an available sparse-matrix based AMG solver and compare it with our novel matrix-free GMG strategy. The comparisons are based on several metrics, like memory consumption, computational efficiency, robustness and ease of implementation, among others. If time permits, we will also investigate and improve the behavior of different nonlinear solution strategies.