

## Talk announcement

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# Goal-Oriented Adaptive Space-Time Finite Element Methods for Regularized Parabolic $p$ -Laplace Problems

We consider goal-oriented adaptive space-time finite-element discretizations of the regularized parabolic  $p$ -Laplace problem on completely unstructured simplicial space-time meshes. The adaptivity is driven by the dual-weighted residual (DWR) method since we are interested in an accurate computation of some possibly nonlinear functionals at the solution. Such functionals represent goals in which engineers are often more interested than the solution itself. The DWR method requires the numerical solution of a linear adjoint problem that provides the sensitivities for the mesh refinement. This can be done by means of the same full space-time finite element discretization as used for the primal non-linear problems. The numerical experiments presented demonstrate that this goal-oriented, full space-time finite element solver efficiently provides accurate numerical results for different functionals.