

**Carlson, Neil N.; Miller, Keith**

**Design and application of a gradient-weighted moving finite element code. II: In two dimensions.** (English) [Zbl 0911.65088](#)  
*SIAM J. Sci. Comput.* 19, No. 3, 766-798 (1998).

This extension of part I [ibid. 19, No. 3, 728-765 (1998; reviewed above)] is especially suited to problems which develop sharp moving fronts. A number of applications is cited for its implementation.

Reviewer: [P.K.Mahanti \(Ranchi\)](#)

**MSC:**

- [65M60](#) Finite element, Rayleigh-Ritz and Galerkin methods for initial value and initial-boundary value problems involving PDEs
- [35K55](#) Nonlinear parabolic equations
- [35R35](#) Free boundary problems for PDEs
- [65M50](#) Mesh generation, refinement, and adaptive methods for the numerical solution of initial value and initial-boundary value problems involving PDEs

Cited in <b>1</b> Review Cited in <b>28</b> Documents
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**Keywords:**

[gradient-weighted moving finite element code](#); [deforming grids](#); [adaptive grids](#); [nonlinear diffusion](#); [drift-diffusion equations](#); [motion by mean curvature](#)

**Software:**

[NKA](#)

**Full Text:** [DOI](#)