

**Le Tallec, Patrick; Mandel, Jan; Vidrascu, Marina**

**A Neumann-Neumann domain decomposition algorithm for solving plate and shell problems.** (English) [Zbl 0917.73071](#)

SIAM J. Numer. Anal. 35, No. 2, 836-867 (1998).

The authors present a new Neuman-Neumann-type preconditioner for large-scale linear systems arising from plate and shell problems. The advantage of this method is that mesh size is smaller in order to have parallel scalability. Numerical experiments are implemented, and results are encouraging.

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

**MSC:**

- [74S05](#) Finite element methods applied to problems in solid mechanics
- [74K20](#) Plates
- [65N55](#) Multigrid methods; domain decomposition for boundary value problems involving PDEs
- [74K15](#) Membranes
- [65F10](#) Iterative numerical methods for linear systems

Cited in **30** Documents

**Keywords:**

substructuring; coarse problem; balancing; parametric variational principles; preconditioner; large-scale linear systems; parallel scalability

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