

# A Bibliography of Publications of Barry Francis Smith

Barry Francis Smith

Tel: ?n/a?  
FAX: ?n/a?

E-mail: bsmith@mcs.anl.gov (Internet)

25 November 2011  
Version 1.07

## Abstract

This bibliography records publications of Barry Francis Smith. [CS93, GS92, Smi91, Smi92b, WS90]. **elasticity** [Smi92b]. **Elliptic** [DSW94, DS89, Smi91]. **Experiences** [GS92]. **Extensible** [GS94].

## Title word cross-reference

### algorithm

[DS89, Smi91, Smi92a, Smi93, WS90].  
**Algorithms** [DSW94, DSW93]. **Analysis** [DSW94, DSW93]. **analyze** [DS89].  
**antisymmetries** [DS89].

**basis** [WS90]. **boundary** [DS89].

**case** [DS89]. **Coarse** [CSZ94].

**data** [GS93]. **data-structure-neutral** [GS93]. **Decomposition** [CS93, GS92, Smi91, Smi92b, WS90]. **design** [GS93]. **Dimensions** [DSW94, GS92, DSW93, Smi91, Smi92a, Smi93]. **Domain**

[CS93, GS92, Smi91, Smi92b, WS90].

**Grids** [CS93, CSZ94].

**hierarchical** [WS90].

**implementation** [Smi93]. **interaction** [DHH<sup>+</sup>88]. **Iterative** [DSW94, DSW93, GS93, Smi92a, Smi93].

**Libraries** [GS94, GS93]. **linear** [GS93].

**machines** [DHH<sup>+</sup>88]. **matching** [CSZ94].  
**Meshes** [CSZ94]. **Methods** [CSZ94, GS92].  
**Multigrid** [CS93, DS89].

**neutral** [GS93]. **Non** [CSZ94].  
**Non-matching** [CSZ94]. **Numerical** [GS94]. **numerics** [DHH<sup>+</sup>88].

- optimal** [Smi92b]. **Overlapping** [CSZ94, GS92].
- parallel** [DS89, Smi93]. **Portable** [GS94]. **preconditioner** [Smi92b]. **problem** [DS89]. **Problems** [DSW94, DSW93, Smi91, Smi92a, Smi92b, Smi93].
- Scalable** [GS94]. **Schwarz** [CSZ94, DSW93, DSW94, GS92]. **solution** [GS93]. **sparse** [GS93]. **structure** [GS93].
- Substructuring** [DSW94, DSW93, Smi92a, Smi93].
- symmetries** [DS89]. **systems** [GS93].
- Three** [DSW94, GS92, DSW93, Smi91, Smi92a, Smi93].
- Unstructured** [CS93, CSZ94]. **Using** [DS89, CSZ94, WS90].
- value** [DS89].

## References

**Chan:1993:MDD**

- [CS93] Tony F. Chan and Barry F. Smith. Multigrid and domain decomposition on unstructured grids. Technical Report 93-42, UCLA, Dept. of Mathematics, 1993. To appear in the Proceedings of 1993 International Conference on Domain Decomposition.

**Chan:1994:OSM**

- [CSZ94] Tony F. Chan, Barry F. Smith, and Jun Zou. Overlapping Schwarz methods on unstructured meshes using non-matching coarse grids. Technical Report 94-8, UCLA, Dept. of Mathematics, 1994.

**Douglas:1988:INM**

- [DHH<sup>+</sup>88] Craig C. Douglas, Michael E. Henderson, Susumu Horiguchi, Willard L. Miranker, Barry F. Smith, and Andrew Winkler. The interaction of numerics and machines. *Informations-technik*, 30: 83–98, 1988.

**Douglas:1989:USA**

- [DS89] Craig C. Douglas and Barry F. Smith. Using symmetries and antisymmetries to analyze a parallel multigrid algorithm: the elliptic boundary value problem case. *SIAM Journal on Numerical Analysis*, 26(6):1439–1461, December 1989. CODEN SJNAAM. ISSN 0036-1429 (print), 1095-7170 (electronic).

**Dryja:1993:SAI**

- [DSW93] Maksymilian Dryja, Barry F. Smith, and Olof B. Widlund. Schwarz analysis of iterative substructuring algorithms for problems in three dimensions. Technical Report MCS-P250-0791, Argonne National Laboratory, Argonne, IL, USA, 1993. Published in [DSW94].

**Dryja:1994:SAI**

- [DSW94] Maksymilian Dryja, Barry F. Smith, and Olof B. Widlund. Schwarz analysis of iterative substructuring algorithms for elliptic problems in three dimensions. *SIAM Journal on Numerical Analysis*, 31(6):1662–1694, December 1994. CODEN SJNAAM. ISSN 0036-1429 (print), 1095-7170 (electronic).

- Gropp:1992:EDD**
- [GS92] William D. Gropp and Barry F. Smith. Experiences with domain decomposition in three dimensions: Overlapping Schwarz methods. In *Domain Decomposition Methods in Science and Engineering*, pages 323–333. Amer. Math. Soc., Providence, RI, USA, 1992. ISBN 0-8218-5158-6.
- Gropp:1993:DDS**
- [GS93] William D. Gropp and Barry F. Smith. The design of data-structure-neutral libraries for the iterative solution of sparse linear systems. Technical Report MCS-P356-0393, Argonne National Laboratory, Argonne, IL, USA, 1993.
- Gropp:1994:SEP**
- [GS94] William D. Gropp and Barry F. Smith. Scalable, extensible, and portable numerical libraries. In *Proceedings of Scalable Parallel Libraries Conference*, pages 87–93. IEEE, 1109 Spring Street, Suite 300, Silver Spring, MD 20910, USA, 1994.
- Smith:1991:DDA**
- [Smi91] Barry F. Smith. A domain decomposition algorithm for elliptic problems in three dimensions. *Num. Math.*, 60:219–234, 1991.
- Smith:1992:ISA**
- [Smi92a] Barry F. Smith. An iterative substructuring algorithm for problems in three dimensions. In Tony F. Chan, David E. Keyes, Gérard A. Meurant, Jeffrey S. Scroggs, and Robert G. Voigt, editors, *Fifth International Symposium on Domain Decomposition Methods for Partial Differential Equations*, pages 91–98 (of xiii + 623). SIAM, Philadelphia, PA, USA, 1992. ISBN 0-89871-288-2. LCCN QA402.2 .I57 1991.
- Smith:1992:ODD**
- [Smi92b] Barry F. Smith. An optimal domain decomposition preconditioner for elasticity problems. *SIAM J. Sci. Stat. Comput.*, 13:364–378, 1992.
- Smith:1993:PII**
- [Smi93] Barry F. Smith. A parallel implementation of an iterative substructuring algorithm for problems in three dimensions. *SIAM J. Sci. Stat. Comput.*, 14:406–423, 1993.
- Widlund:1990:DDA**
- [WS90] Olof B. Widlund and Barry F. Smith. A domain decomposition algorithm using a hierarchical basis. *SIAM J. Sci. Stat. Comput.*, 11:1212–1220, 1990.