

# CSci 780: Advanced Software Engineering Papers

## General Research: 2 Papers

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## The Problem: 3 Papers

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- John Schwartz, "[Computer Program That Analyzed Shuttle Was Misused, Engineer Says](#)," *New York Times*, August 25, 2003.

## Whither SE?: 1 Paper

- Fred Brooks, "[No silver bullet: Essence and accidents of software engineering](#)," *IEEE Computer*, 20(4):10-19, April 1987. [Dagstuhl] [In MMM as well]
- Mary Shaw, "[Prospects for an engineering discipline of software](#)," *IEEE Software*, November 1990, pp. 15-24.
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## Maintenance: 1 Paper

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- Parnas, D. "[Software Aging](#)," *ICSE 16*, 1994.
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## Design Principles: 2 Papers

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- David L. Parnas, "Designing [Software for Ease of Extension and Contraction](#)," *IEEE Trans. on Software Engineering*, 5(2), March 1979, p. 128-138. [ICSE]
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- F. DeRemer and H.H. Kron, "[Programming-in-the-Large Versus Programming-in-the-Small](#)," *IEEE TSE*, SE-2, 1976, p. 80-86. [Dagstuhl]

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- Fredrick P. Brooks, *The Mythical Man-Month: Essays on Software Engineering, 20th Anniversary Edition*, Addison Wesley, Reading, Mass., second edition, 1995.
- Tom Demarco, and Timothy Lister, *Peopleware: Productive Projects and Teams*. Dorset House, 1987.

## Architecture: 1 Paper

- David Garlan and Mary Shaw, "[An Introduction to Software Architecture](#)," Tech. Report CMU-CS-94-166 (Also appeared in *Advances in Software Engineering and Knowledge Engineering*, ed. by V.Ambriola and G.Tortora, World Scientific Publishing Company, New Jersey, 1993.)

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- Harlan D. Mills, "[Structured Programming: Retrospect and Prospect](#)," *IEEE Software*, 3(4), Nov. 1986, p. 58-66
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- David L. Parnas, Paul C. Clements, David M. Weiss, "[The Modular Structure of Complex Systems](#)," *ICSE-7*, 1984. [ICSE]

## New Abstraction Methods: 1 Paper

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## Program Analysis: 2 Papers

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- Beck, K., "[Embracing Change with Extreme Programming](#)," *IEEE Computer*. 32(10), p. 70-77, 1999.
- Barry W. Boehm, "[A Spiral Model of Software Development and Enhancement](#)," *IEEE Computer*, 21(5), May 1988, p. 61-72. [Dagstuhl]
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- Leon J. Osterweil, "[Software Processes Are Software Too](#)," In *Proceedings of the 9th International Conference on Software Engineering*, pp. 2-13, Monterey, CA, March 1987. [ICSE]
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- Richard A. De Millo, Richard J. Lipton, Alan J. Perlis, "[Social Processes and Proofs of Theorems and Programs](#)," *Communications of the ACM*, 22(5), May 1979, p. 271-280.

## Modularity and Components: 1 Paper

- K. Sullivan, W. G. Griswold, Y. Cai, B. Hallen, "[The Structure and Value of Modularity in Design](#)", 8th European Software Engineering Conference; Held Jointly with 9th ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2001), September 2001.
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## Quality Assurance: 2 Papers

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## Testing: 2 Papers

- C. Boyapati, S. Khurshid, and D. Marinov, "[Korat: Automated Testing Based on Java Predicates](#)," *International Symposium on Software Testing and Analysis (ISSTA 2002)*, Rome, Italy. Jul 2002.
- Dawson Engler, David Yu Chen, Seth Hallem, Andy Chou, and Benjamin Chelf, "[Bugs as Deviant Behavior: A General Approach to Inferring Errors in Systems Code](#)," *SOSP 2001*.
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## Methodology: 0 Papers

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## Safety & Reliability: 0 Papers

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