

Karl Lieberherr

A. Academic and Professional History

POSITION: Professor, since 1985

ADDRESS: College of Computer Science, Northeastern University, Boston MA 02115.

EMAIL AND PHONE: lieber@ccs.neu.edu; (617) 373-2077

EDUCATION: Dipl. math. ETH, 1973, ETH Zurich, Switzerland

Dr. sc. math. ETH, 1977, ETH Zurich, Switzerland

POSITIONS HELD

1979-1983, Assistant Professor, EECS, Princeton University

1983-1985, GTE Laboratories, Inc., M.T.S. and Principal M.T.S.

RESEARCH ACCOMPLISHMENTS

Theory of P-Optimal Algorithms for Constraint Satisfaction, Non-chronological backtracking based on clause learning, Hardware Description Language Zeus, Demeter project (started in 1985), Law of Demeter, early contributor to Adaptive and Aspect-Oriented Programming.

B. Selected Publications

1. Mira Mezini and Karl Lieberherr, "Adaptive Plug-and-Play Components for Evolutionary Software Development" *1998 Proc. Object-Oriented Programming Systems, Languages and Applications Conference (OOPSLA), Special Issue of SIGPLAN Notices*, Vol. 33, no. 10, pages 97-116, ACM Press.
2. Karl Lieberherr and Boaz Patt-Shamir and Doug Orleans, "Traversals of object structures: Specification and Efficient Implementation", *ACM Trans. Program. Lang. Syst.*, vol. 26 (2), 2004, pages 370-412, ACM Press.
3. Linda Seiter and Jens Palsberg and Karl Lieberherr "Evolution of Object Behavior Using Context Relations", *IEEE Transactions on Software Engineering*, Vol. 24, no. 1, pages 79-92, 1998.
4. Karl Lieberherr, "Adaptive Object-Oriented Software: The Demeter Method with Propagation Patterns", *PWS Publishing Company*, 1996, 650 pages, ISBN 0-534-94602-X.
5. Karl J. Lieberherr, "Controlling the Complexity of Software Designs", International Conference on Software Engineering, 2004, Edinburgh, Scotland, pages 2-11, editors Jacky Estublier and David Rosenblum, ACM Press, invited keynote presentation.

C. Software Projects, Collaborating Institutions, and Individuals

Xerox PARC, IBM Yorktown Heights, Citibank, SAIC.

Collaborating individuals include: Mira Mezini (University of Darmstadt), Jens Palsberg (UCLA), Boaz Patt-Shamir (Tel Aviv University).

D. Selected Ph.D. students (and current location):

Crista Lopes, 1997, University of California at Irvine; Linda Seiter, 1996, John Carroll University; Ignacio Silva-Lepe, 1994, IBM T.J. Watson Research Center. Doug Orleans, 2005, Gensym Corporation