



CompAD History

- **Prototype 1: Forward Mode** using overloading mechanism
J. Riehme, M. Cohen, U. Naumann. Towards differentiation-enabled Fortran 95 compiler technology. In *Proceedings of the 2003 ACM Symposium on Applied Computing*, 2003.
- **Prototype 2: Forward Mode**, operating on statement level
U. Naumann, J. Riehme. A differentiation-enabled Fortran 95 compiler. *ACM Trans. on Math. Software*, vol. 31 number 4, 2005.
- **Prototype 3: ReveMode**



CompAD-II Overview & Goal

CompAD-II \$ C++ Interface \$ NAG F95 API

AST Visualization

1 Caught CompAD Exception **CADebugException**: 4]7TD5([bugExcepti on).000.00rg1.0kpti on

Control Flow Reversal: Original



Control Flow Reversal: Adjoint

1 POP (-i)

