

What's Hot in Software Testing (mostly in US)

- **Test-input generation**
 - Specification-based: Korat (Marinov@UIUC), TestEra (Khurshid@UT Austin), NASA Java Pathfinder (Visser@NASA), Spec#, AsmIT (MSR FSE)
 - Code-based: Rostra/Symstra (Xie@NCSU), JCrasher/CnC(Smaragdakis@GeorgiaTech), Eclat (Ernst@MIT), CUTE (Sen@UIUC), TGEN (Gupta@Arizona), Blast (Berkeley), SLAM (MSR)
- **In-field testing**
 - Residual testing (Young@Oregon)
 - Gamma (Orso, Harrold@GeorgiaTech)
 - Skoll (Porter, Memon@Maryland, Schmidt@Vanderbilt)
- **Regression testing**
 - Regression test selection/prioritization (Rothermel, Elbaum@UNL, Porter@Maryland, Harrold@GIT)
- **Testing various types of programs/based on different artifacts**
 - Testing GUI app- GUITAR (Memon@Maryland),
 - Testing database app- AGENDA (Frankl@Polytech), DIATOMS(Lou Soffa@Virginia),
 - Testing spreadsheet app (Rothermel@UNL, Burnett@OregonStateU),
 - Testing aspect-oriented programs (Zhao@SJTU, Alexander@WSU, Xie@NCSU)
 - Testing web app (Offut@GMU, Elbaum@NUL, Pollock@Delaware)
 - Testing access control policies (Xie@NCSU)
 - Architecture-based testing (Richardson@UC Irvine)
 - Security testing (McGraw@Cigital)
- **Dynamic property inference**
 - Daikon (Ernst), Spec mining (Bodik@Berkeley), Hastings-sequencing constraints (Lam@Stanford), Perracotta-temporal properties (Evans@Virginia), Algebraic spec inference (Diwan@Colorado), Statistical algebraic spec inference, Object state machines (Xie@NCSU)
- **Debugging**
 - Delta debugging (Zeller@Saarland)
 - Bug isolation (Liblit@Wisconsin)

2004 UW/MSR Summer Institute: Trends in Testing: Theory, Techniques and Tools

<http://research.microsoft.com/projects/T5/>