

# Speculative Analysis: Exploring Future States of Software

Yuriy Brun\*, Reid Holmes†, Michael D. Ernst\*, and David Notkin\*

\*University of Washington and †University of Waterloo

# Crystal Demo

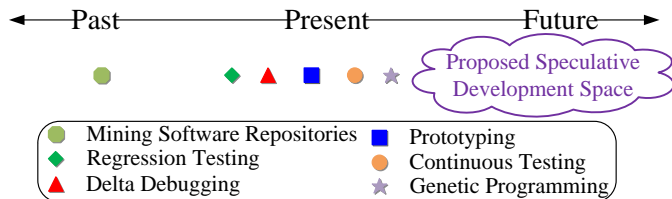
<http://www.cs.washington.edu/homes/brun/research/crystal>

# Crystal Demo

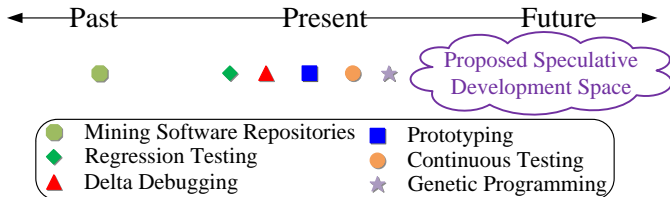


<http://www.cs.washington.edu/homes/brun/research/crystal>

# Exploring the Future



# Exploring the Future



# Speculative Analysis: Exploring Future States of Software

```
package com.metamolecular.chemwriter.model;

public class Molecule
{
  private List atoms;
}
```

	c	t	m	compile	test	merge
← Import 'List' (com.sun.xml.internal.bind.v	▲	▶	▲	OK	▲412 ▼10	OK
← Import 'List' (java.awt)	▲	▶	▲	OK	▲399 ▼23	OK
← Import 'List' (java.util)	▼	∅	⌚	2 errors		⌚
⊕ Create class 'List'	▼	∅	⌚	3 errors		⌚
ⓘ Create interface 'List'	▼	∅	▼	2 errors		2 conflicts
⊕ Change to 'LCONST' (com.sun.org.apache	▲	▼	▲	OK	▼422	OK
⊕ Change to 'Line' (javax.sound.sampled)	▲	▼	▼	OK	▼422	1 conflict
⊕ Change to 'Link' (sun.awt.image.ImageV	▲	⌚	▼	OK	⌚	1 conflict
⊕ Change to 'ListDV' (com.sun.org.apache	▲	⌚	▲	OK	⌚	OK