

SARAVerify – Static Analysis Register Allocation Verifier

```
int f(int n) {  
    if (n < 0) {  
        n *= -1;  
    } else {  
        g();  
    }  
    return n;  
}
```

```
func f(reg0) {  
    if (reg0 < 0) {  
        reg0 = mul reg0, -1  
    } else {  
        stack0 = mov reg0 // backup reg0  
        call g // kills reg0  
        [SARAVerify: Missing move: stack0 → reg0]  
    }  
    ret reg0  
}
```

Problem:

- Register Allocation:
 - Variables → Machine Registers
- Debugging is hard!
- *Static Analysis* to the rescue!

Implementation:

- Graal Just-in-Time Compiler
 - OpenJDK Project
 - Written in Java



Contact:

- Josef Eisl
<http://ssw.jku.at/General/Staff/Eisl/>