

# ROCKET PROPELLED JAVA

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# ABOUT THE SPEAKER

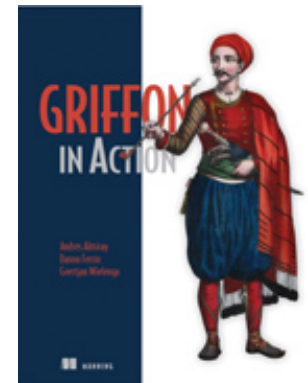
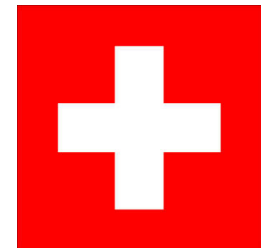
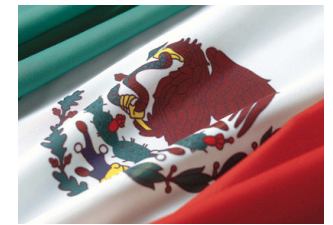
Java developer since the beginning

True believer in open source

Groovy committer since 2007

Project lead of the Griffon framework

Currently working for **canoo**



# PROJECT LOMBOK

## Where, Who, How?

- <http://projectlombok.org/>
- Reinier Zwitterloot  
@surial
- Roel Spilker  
@rspilker
- Relies on JDK6's Annotation Processor
- Modifies Bytecode at compile time

## Why?

- Get rid of boiler plate code
- Compiler does the heavy lifting
- Developers just have to write the essentials

# HOW DOES IT LOOK?

```
import lombok.Data;  
import lombok.ToString;  
  
@ToString(includeFieldNames=true)  
@Data public class DataExample {  
    private final String name;  
    private final String lastName;  
    private int age;  
}
```

# ANNOTATIONS

- @Getter / @Setter
- @ToString
- @EqualsAndHashCode
- @NoArgsConstructor
- @AllArgsConstructor
- @Data
- @RequiredArgsConstructor  
or
- @Cleanup
- @Synchronized
- @SneakyThrows
- @Log
- @Delegate

# LOMBOK-PG

## Where, Who, How

- <https://github.com/peichhorn/lombok-pg/>
- Philipp Eichhorn
- peichhorn @ github
- Delivers its own common AST API
- Easier to write cross compiler AST

## Why?

- Extends Lombok with additional annotations such as:
  - @Singleton
  - @FluentSetter
  - @Builder
  - and more!

# GROOVY AST TRANSFORMATIONS

## Where, Who, How

- <https://groovy.codehaus.org>
- The Groovy Team
- Compile time metaprogramming
- Changes registered in the bytecode

## Why?

- Groovy plays nicely with Java
- Compile time metaprogramming executes faster than runtime
- Changes visible to other JVM languages

# HOW DOES IT LOOK?

The `@Immutable` AST transformation makes writing immutable classes trivial

```
@groovy.transform.Immutable
class ImmutablePerson { String name }

person1 = new ImmutablePerson('Duke')
person2 = new ImmutablePerson(name: 'Duke')
assert person1 == person2

shouldFail(ReadOnlyPropertyException) {
    person1.name = 'boom!'
}
```



# SOME ANNOTATIONS

- @Bindable / @Vetoable
- @Grab
- @Immutable
- @Singleton
- @ToString
- @EqualsAndHashCode
- @TupleConstructor
- @Canonical
- @Delegate
- @Log
- @Synchronized
- @AutoClone
- @AutoExternalize
- @TypeChecked
- @CompileStatic
- Plus many more!

# THANK YOU!

**@AALMIRAY**

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