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# SoftVarE – Thesis Topics of Paul Bittner

Evolution of Variability in Source Code

# About Me

My name is Paul

2014 – 2020: Study Computer Science in Braunschweig

*Since then:* PhD student at SP in Ulm

My research is about

... evolution of variability in source code,

... formal languages for variability.



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# Variability in Source Code

```
#if A
    foo;
    lol;
#else
    bar;
    lol;
#endif
```

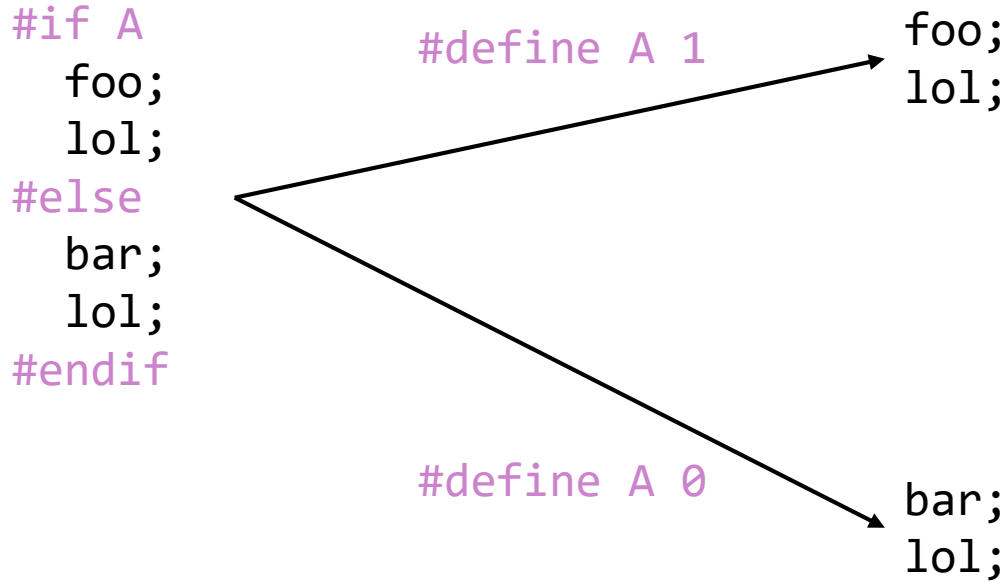
# Variability in Source Code

```
#if A
    foo;
    lol;
#else
    bar;
    lol;
#endif
```

#define A 1

foo;  
lol;

# Variability in Source Code



# Survey on Sharing Metrics for Formal Variability Languages

```
#if A
  foo;
  lol;
#else
  bar;
  lol;
#endif
```

# Survey on Sharing Metrics for Formal Variability Languages

```
#if A
  foo;
  lol;
#else
  bar;
  lol;
#endif
```

```
#if A
  foo;
#else
  bar;
#endif
lol;
```

# Survey on Sharing Metrics for Formal Variability Languages

```
#if A
  foo;
  lol;
#else
  bar;
  lol;
#endif
```

$A\langle \text{foo;lol; } , \text{ bar;lol; } \rangle$

```
#if A
  foo;
#else
  bar;
#endif
lol;
```

$A\langle \text{foo; } , \text{ bar; } \rangle \text{ lol;}$



# Survey on Sharing Metrics for Formal Variability Languages

```
#if A
  foo;
  lol;
#else
  bar;
  lol;
#endif
```

```
#if A
  foo;
#else
  bar;
#endif
lol;
```

$A\langle \text{foo};\text{lol}; , \text{bar};\text{lol}; \rangle$

$\equiv$

$A\langle \text{foo}; , \text{bar}; \rangle \text{lol};$

# Survey on Sharing Metrics for Formal Variability Languages

```
#if A
  foo;
  lol;
#else
  bar;
  lol;
#endif
```

```
#if A
  foo;
#else
  bar;
#endif
lol;
```

$A\langle \text{foo;lol; , bar;lol; } \rangle$

$\succ$

$A\langle \text{foo; , bar; } \rangle \text{lol;}$

# Survey on Sharing Metrics for Formal Variability Languages

```
#if A
  foo;
  lol;
#else
  bar;
  lol;
#endif
```

$A \langle \text{foo}; \text{lol}; , \text{bar}; \text{lol}; \rangle$

?

```
#if A
  foo;
#else
  bar;
#endif
lol;
```

$A \langle \text{foo}; , \text{bar}; \rangle \text{lol};$