Evolution of Object Oriented Coupling Metrics: 
A Sampling of 25 Years of Research
“We need to reduce complexity and increase maintainability”

But...what metrics do we have to quantify these?
Motivation

10625 results from IEEE Xplore
247 results from ACM
27300 results from Google Scholar
42510 results from Science Direct
**Results**

- **Cognitive Coupling**
  - Conceptual Coupling

- **Coupling for Security**
  - Coupling for Component Identification

**Static vs. Dynamic?**

- **Dynamic Metrics**
  - Arisholm

- **Case Studies**
  - (Fault proneness, Maintainability)

**1990 - 2000**

- CK
- Mood

**2000 - 2010**

- R. Martin
- Briand

**> 2010**

- Meta-Models
- Frameworks
- Taxonomies
How to select the right coupling metrics?
Which are the “best” ones for a given context?
An index of metrics is still missing!

The technology evolved…and so did the coupling (?)
Do we need more research?

Are we measuring coupling from the ivory tower?

Are OO coupling metrics used in the industry?
(not really, according to our experience)