Themenübersicht

Learnability

Literatur:

- Moving from the known to the unknown to measure the initial learnability of programming languages
- Chasing the AHA! moment: Exploring initial learnability of programming languages
- Gradual structuring: Evolving the spreadsheet paradigm for expressiveness and learnability

Comprehensibility

Literatur:

- A controlled experiment for evaluating the comprehensibility of UML Action Languages
- Enhancing program readability and comprehensibility with tools for program visualization?
- Understanding Lolita: program comprehension in functional languages
- Using Verbal Protocols to Assess the Influence of Import-Coupling on the Comprehensibility of OCL Expressions

Productivity

Literatur:

- An Empirical Study to Revisit Productivity across Different Programming Languages
- Do Programming Languages Affect Productivity? A Case Study Using Data from Open Source Projects
- Productivity of High-Level Languages on Reconfigurable Computers: An HPC Perspective?

Maintainability

Literatur:

- Code from requirements: new productivity tools improve the reliability and maintainability of software systems?
- Requires analysis based on software maintainability
- How Does Context Affect the Distribution of Software Maintainability Metrics?

Performance evaluation

Literatur:

- Performance evaluation of programming languages
- How Programming Languages and Paradigms Affect Performance and Energy in Multithreaded Applications
- Performance Analysis with High-Level Languages for High-Performance Reconfigurable Computing

Expressiveness

Literatur:

- Gradual structuring: Evolving the spreadsheet paradigm for expressiveness and learnability
- Practical expressiveness of internal and external domain-specific modeling languages
- Programming language expressiveness and circuit complexity
- On the expressive power of programming languages
- On the notion of expressiveness and the rule of adaptation- Gradual structuring: Evolving the spreadsheet paradigm for expressiveness and learnability

Fault-proneness

Literatur:

- Investigating effect of design metrics on fault proneness in object-oriented systems.
- Empirical analysis for investigating the effect of object-oriented metrics on fault proneness: a replicated case study
- Fault prediction and the discriminative powers of connectivity-based object-oriented class cohesion metrics
- The impact of accounting for special methods in the measurement of object-oriented class cohesion on refactoring and fault prediction activities

Defect-density

Literatur:

- Evaluating the impact of object-oriented design on software quality.
- Fuzzy clustering of open-source software quality data: a case study of Mozilla.

Reusability

Literatur:

- A method for assessing the reusability of object-oriented code using a validated set of automated measurements
- Predicting object reuse using metrics.
- Package level cohesion measurement in object-oriented software.

Changeability

Literatur:

- Using information retrieval based coupling measures for impact analysis
- Empirical assessment of the impact of structural properties on the changeability of object-oriented software.
- Towards a framework for empirical assessment of changeability decay.

Testability

Literatur:

- An empirical study into class testability.
- An empirical analysis of lack of cohesion metrics for predicting testability of classes.
- Evaluating the effect of control flow on the unit testing effort of classes: an empirical analysis.
- Prediction of testability using the design metrics for object-oriented software.
- An in-depth investigation into the relationships between structural metrics and unit testability in object-oriented systems

Extensibility

Literatur:

- Achieving Extensibility through Product-Lines and Domain-Specific Languages: A Case Study
- Dynamic extensibility in a statically-compiled object-oriented language

Security

Literatur:

- Compile-Time Security Certification of Imperative Programming languages
- Smart Contract Programming Languages on Blockchains: An Empirical Evaluation of Usability and Security?
- A Study on Software Vulnerability of Programming Languages Interoperability