Bachelor Proposals

Logic and Semantics & Programming Languages

Andreas Pavlogiannis

November 24, 2022

AARHUS UNIVERSITY

LS & PL Members

Logic and Semantics

Programming Languages

All Things Programming Languages, Analysis and Verification

- Programming language design
- Logic, compilers
- Type systems, type inference
- Security, Coq
- . . .

- Automata theory and formal languages
- Algorithmic verification
- Symbolic model checking
- Static program analysis
- . . .

Amin Timany

- Contextual equivalence
- Relational Reasoning
- Prove program equivalences

Amin Timany

- Contextual equivalence
- Relational Reasoning
- Prove program equivalences

Lars Birkedal

- Polymorphic Type Inference
- Learn About Milner's type system
- Implement and extend inference algorithms

Andreas Pavlogiannis

- Automata-based verification
- Data structures for analyzing
  distributed systems

Andreas and Jaco

Andreas Pavlogiannis

- Automata-based verification
- Data structures for analyzing distributed systems

Jaco van de Pol

- Mechanized verification of graph algorithms
- Quantified Boolean Logic and 2-player games

Magnus Madsen

- Flix programming language
- Code formatting, sub-typing
- Compiler optimizations

Magnus Madsen

- Flix programming language
- Code formatting, sub-typing
- Compiler optimizations

Aslan Askarov

- Language-based security
- Property-based testing

Jean Pichon-Pharabod

- Web Assembly
- Secure and efficient compilation

Jean Pichon-Pharabod

- Web Assembly
- Secure and efficient compilation

Bas Spitters

- Programming with dependent types
- Refinement types for smart contracts
- High-assurance cryptography

What next?

- Meet us after this lecture
- Check our project descriptions on brightspace
- Email us, drop by our offices

What next?

- Meet us after this lecture
- Check our project descriptions on brightspace
- Email us, drop by our offices

Also reach out if

- You like a project but are in doubt
- You are passionate about an idea/project not listed