

Bachelor Proposals

Logic and Semantics & Programming Languages

Andreas Pavlogiannis

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AARHUS UNIVERSITY

LS & PL Members

Logic and Semantics



Programming Languages



All Things Programming Languages, Analysis and Verification

- Programming languages
 - Logic, compilers
 - Type systems, type inference
 - Security, Coq
 - ...
- Automata and formal languages
 - Algorithmic verification
 - Symbolic model checking
 - Static program analysis
 - ...



Amin Timany

- Contextual equivalence
- Relational Reasoning
- Prove interesting cases of program equivalence



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Lars Birkedal

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



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- Verification based on automata and formal languages
- Data structures for analyzing distributed systems



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- Verification based on automata and formal languages
- Data structures for analyzing distributed systems



Jaco van de Pol

- Symbolic model checking
- Binary decision diagrams
- I/O-efficient algorithms



Magnus Madsen

- Flix programming language
- Compiler optimizations
- Compiler fuzzing

Magnus and Aslan



Magnus Madsen

- Flix programming language
- Compiler optimizations
- Compiler fuzzing



Aslan Askarov

- Language-based security
- Mitigating side channels
- Privacy-preserving browsing



Jean Pichon-Pharabod

- Web Assembly
- Secure and efficient compilation



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- Web Assembly
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Bas Spitters

- Programming with dependent types
- High-assurance cryptography
- Property-based testing of smart contracts

What next?

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

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Also reach out if

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