



KTH ROYAL INSTITUTE
OF TECHNOLOGY



Real-time probabilistic programming, a DSL in Miking

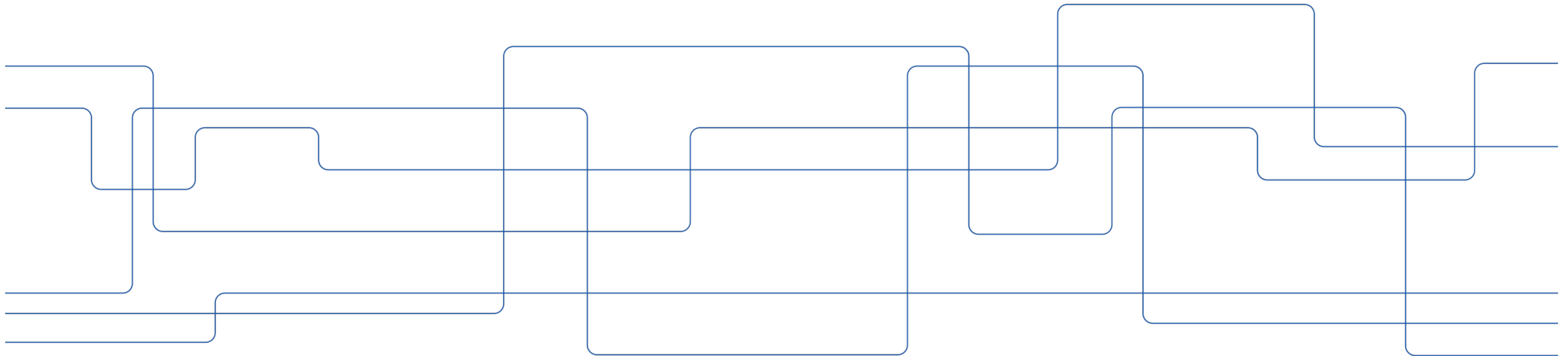
Miking Workshop 2023

Lars Hummelgren, Matthias Becker, David Broman



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digital futures





Overview

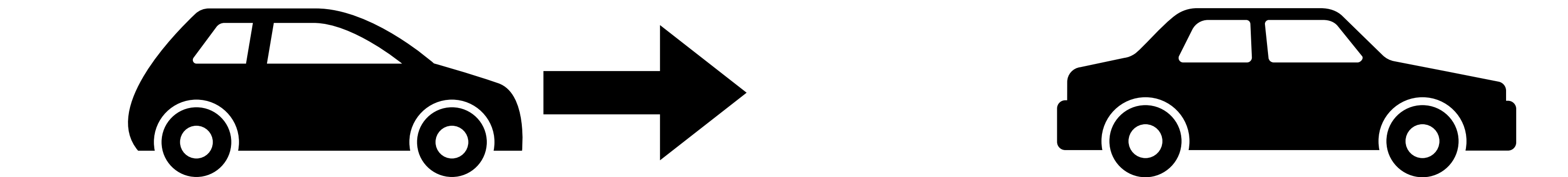
- Real-time probabilistic programming
- Case study
- Compiler
- Conclusion

Real-time probabilistic programming

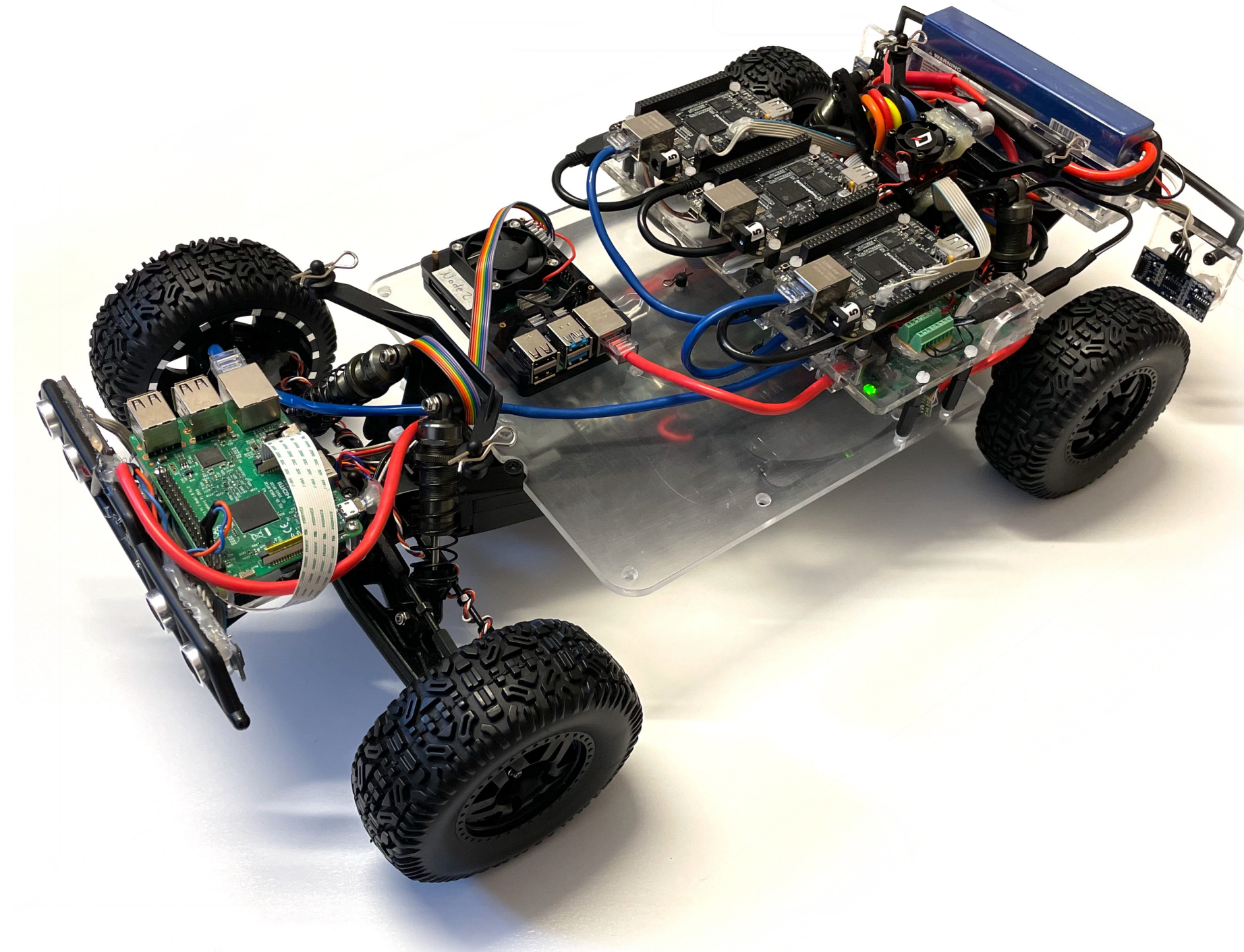
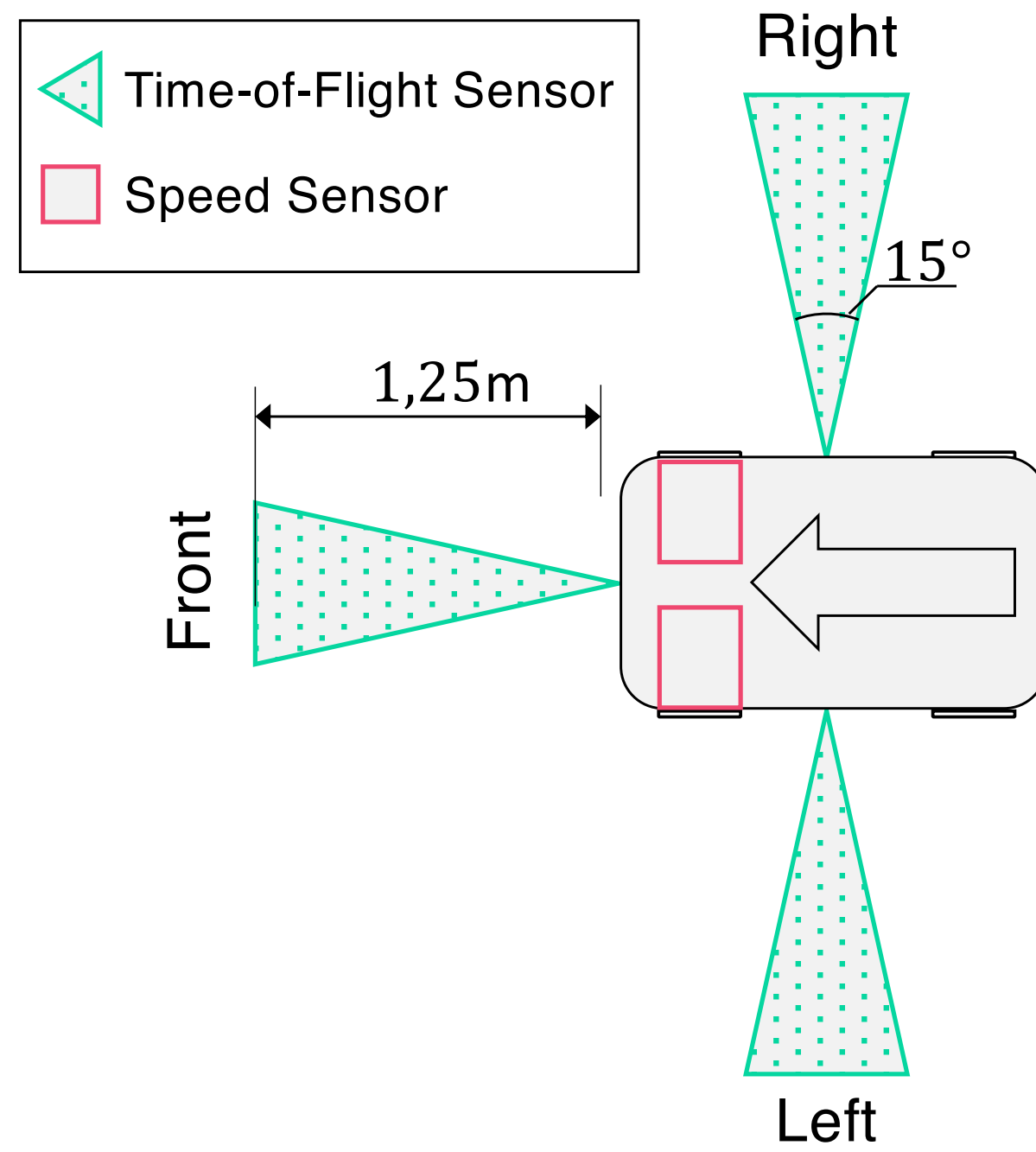
- Probabilistic programming
- Real-time programming
- ProbTime

Probabilistic
model
(program)

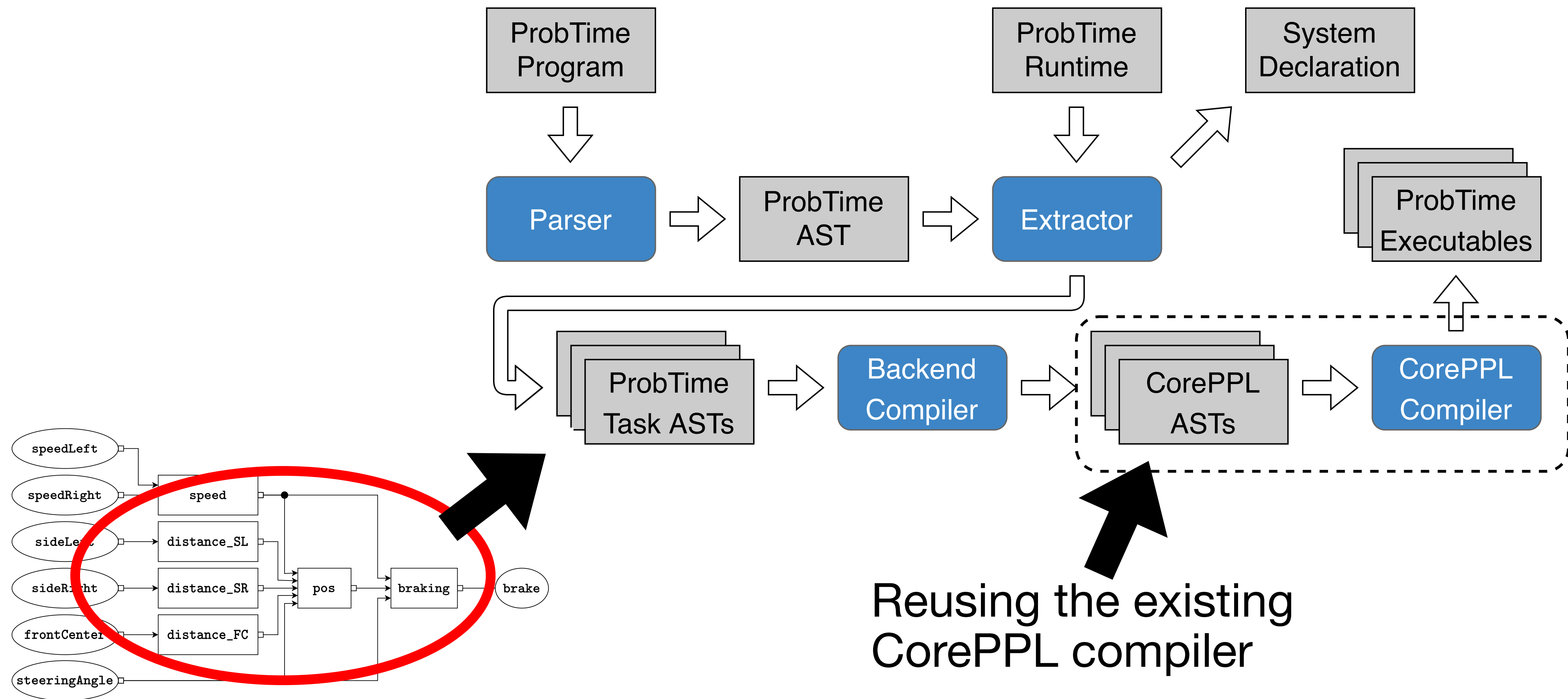
Inference
method



Case study



ProbTime compiler





Conclusion

- ProbTime — a real-time probabilistic programming language
- Real-time systems using probabilistic models
- Reusing the CorePPL and Miking compilers