

## RESEARCH OUTPUTS / RÉSULTATS DE RECHERCHE

### Software Testing Research

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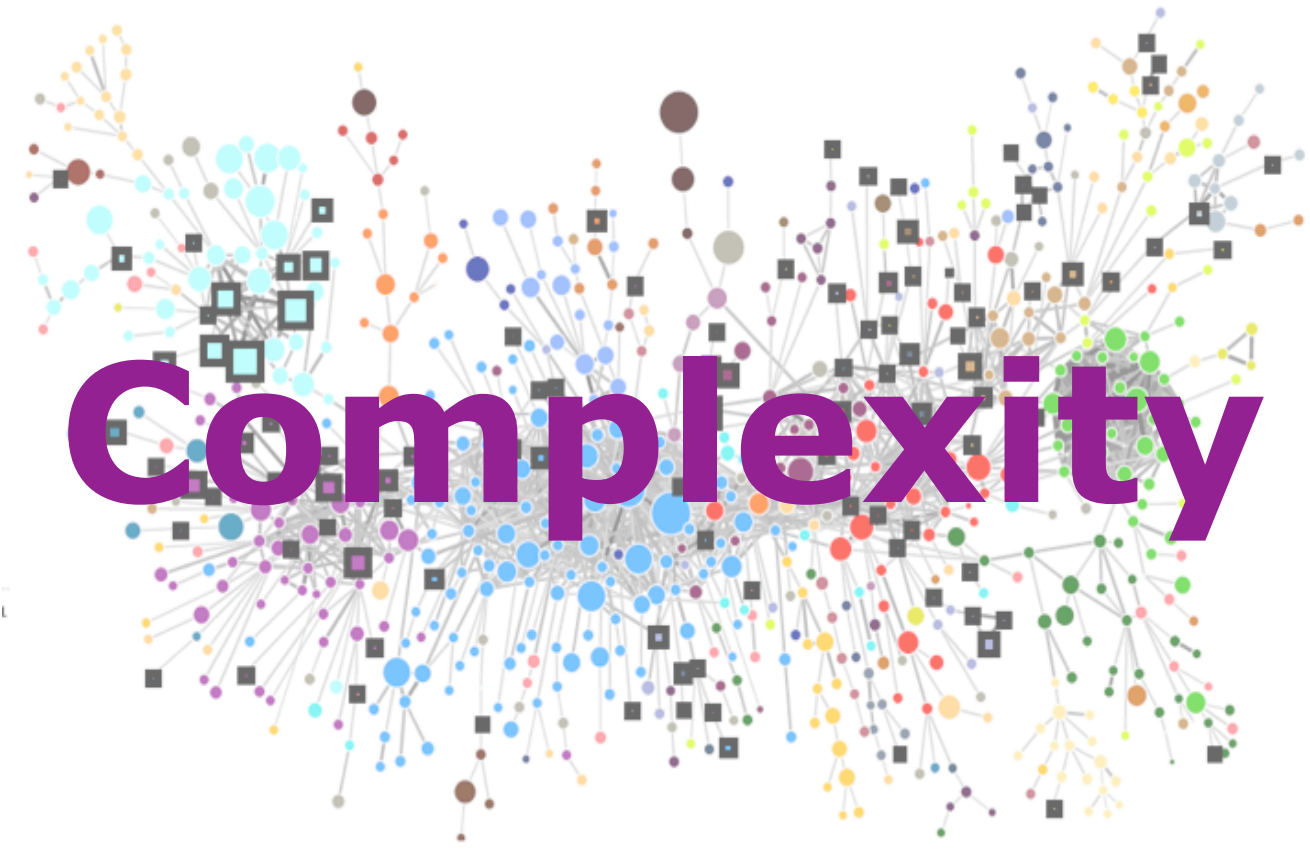
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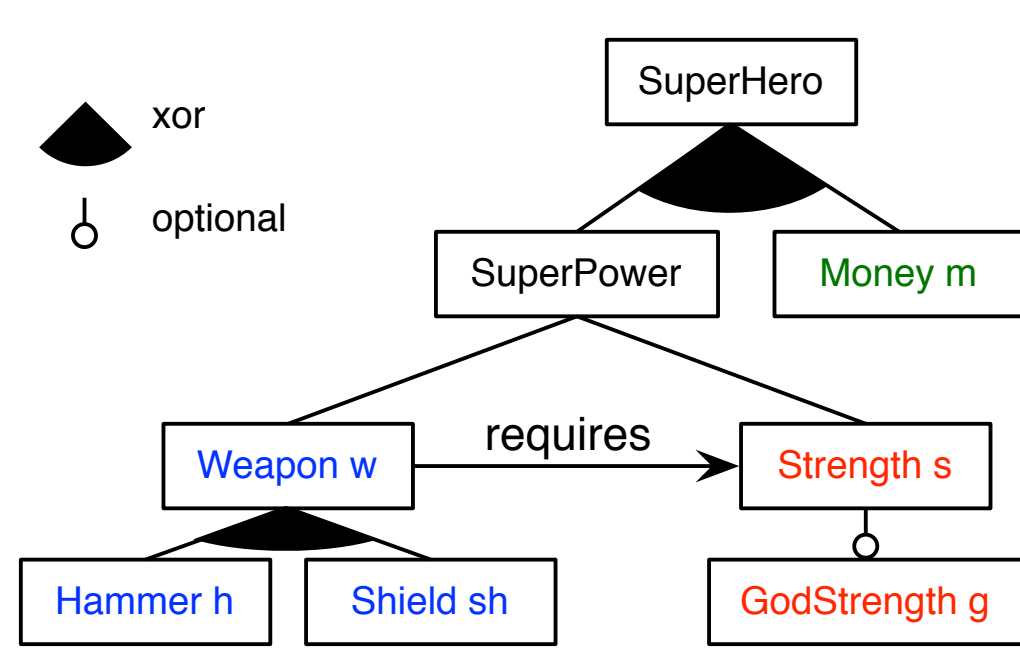
## Software Testing Challenges



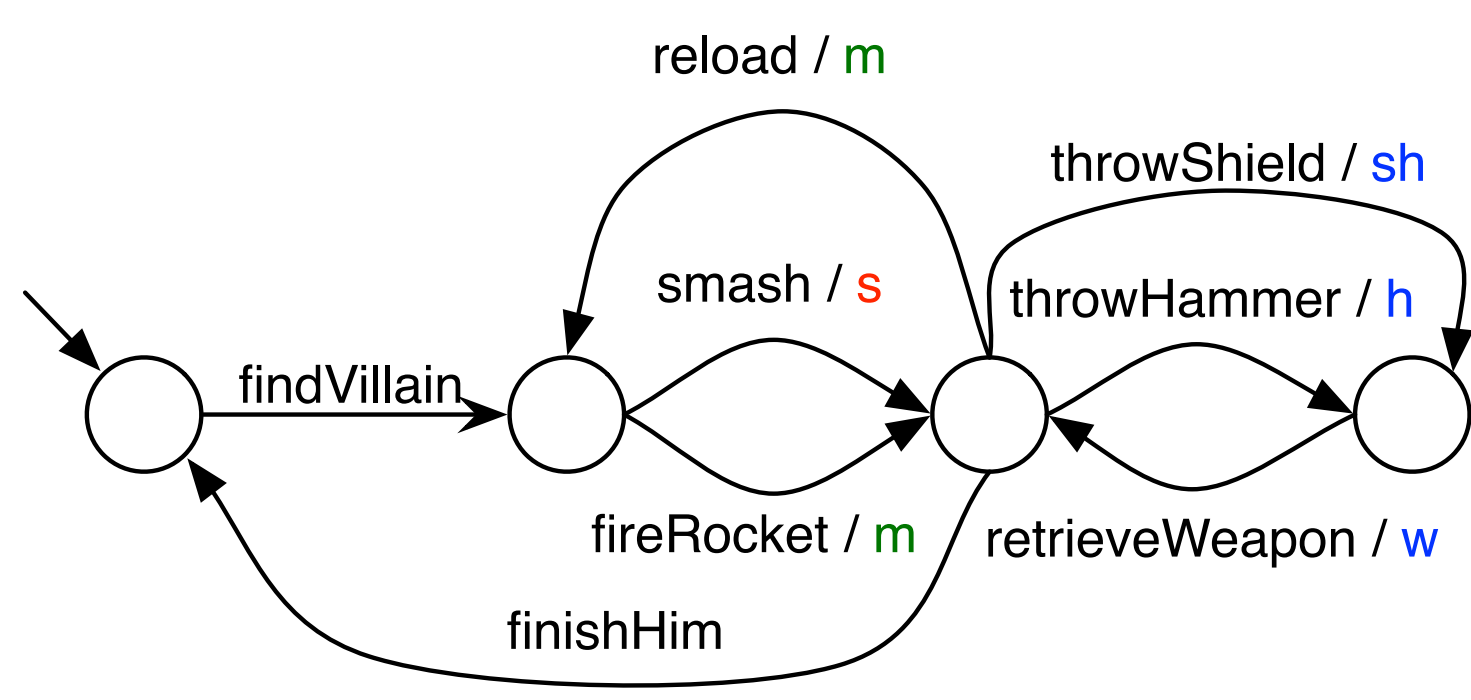
Unpredictability



## Modelling

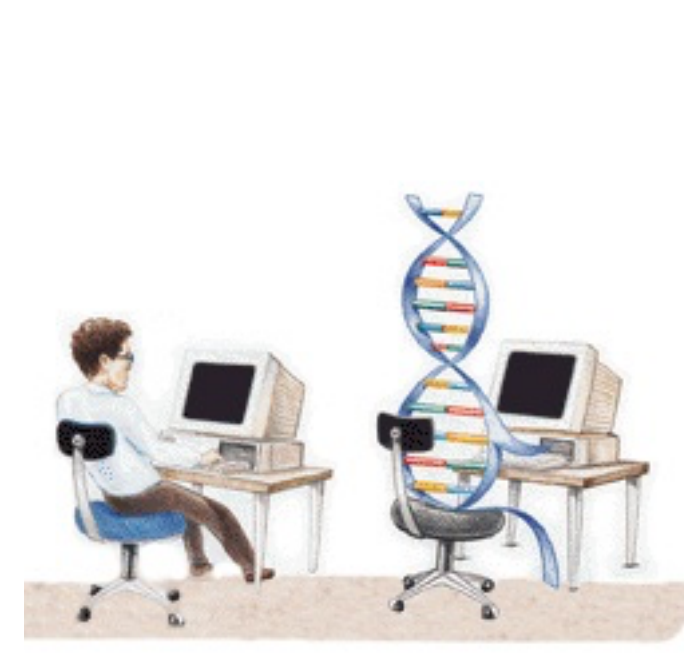


Feature Diagram

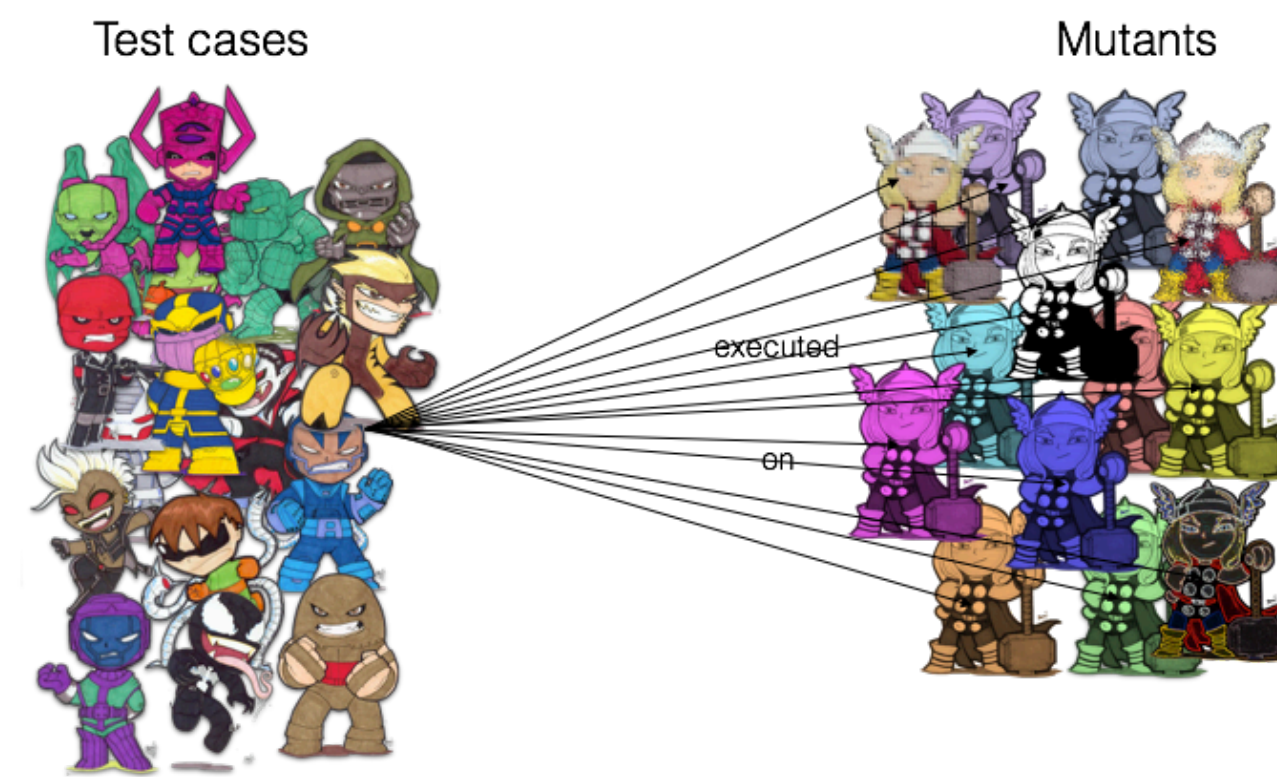


Featured Transition System

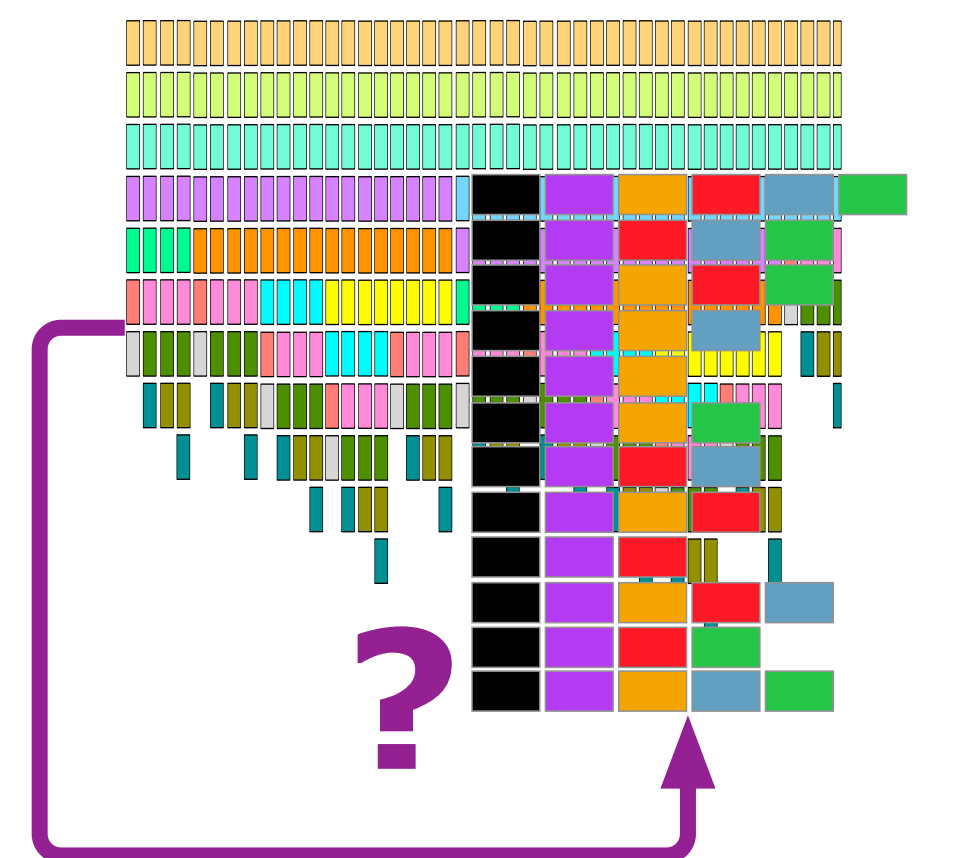
## Test Generation and Analysis



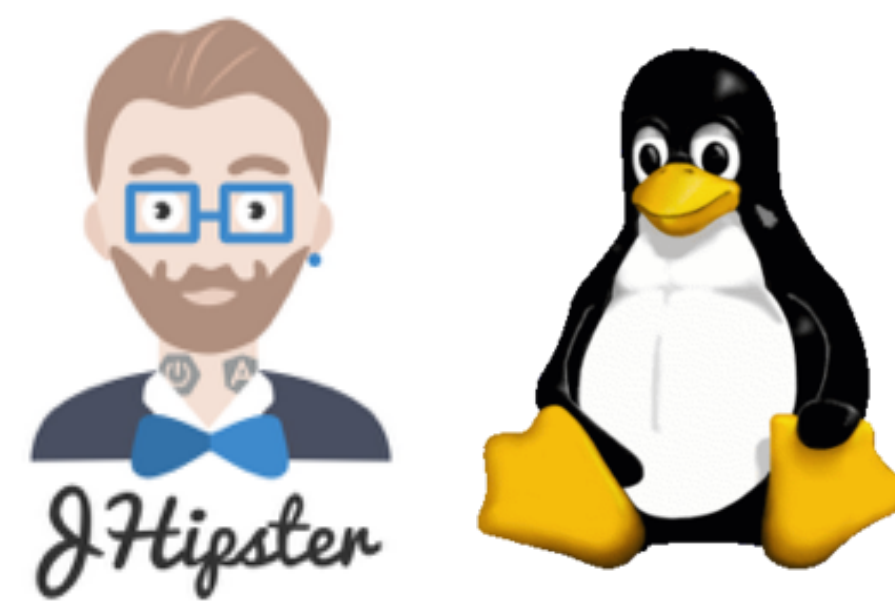
Evolutionary Testing



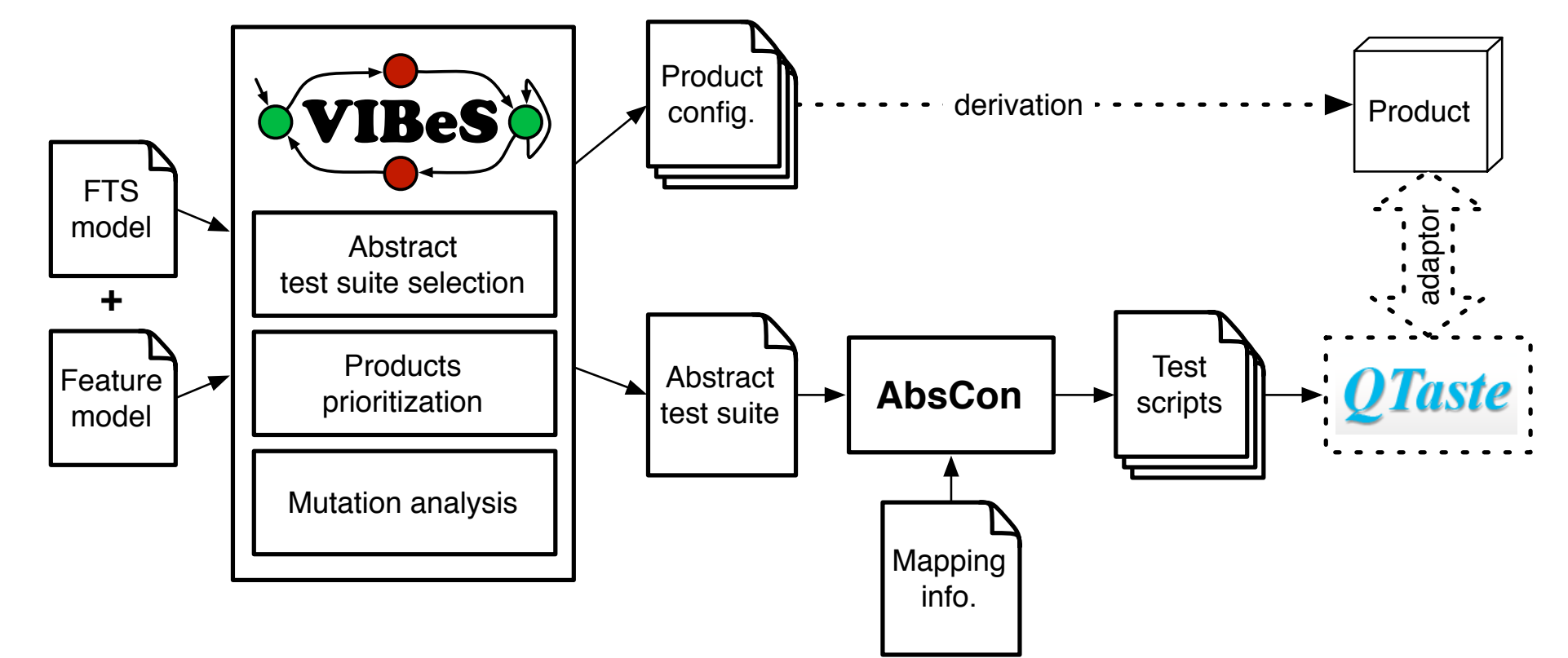
Mutation Testing



Configuration Sampling



Open Source Software Research Cases



Model-based Testing Framework

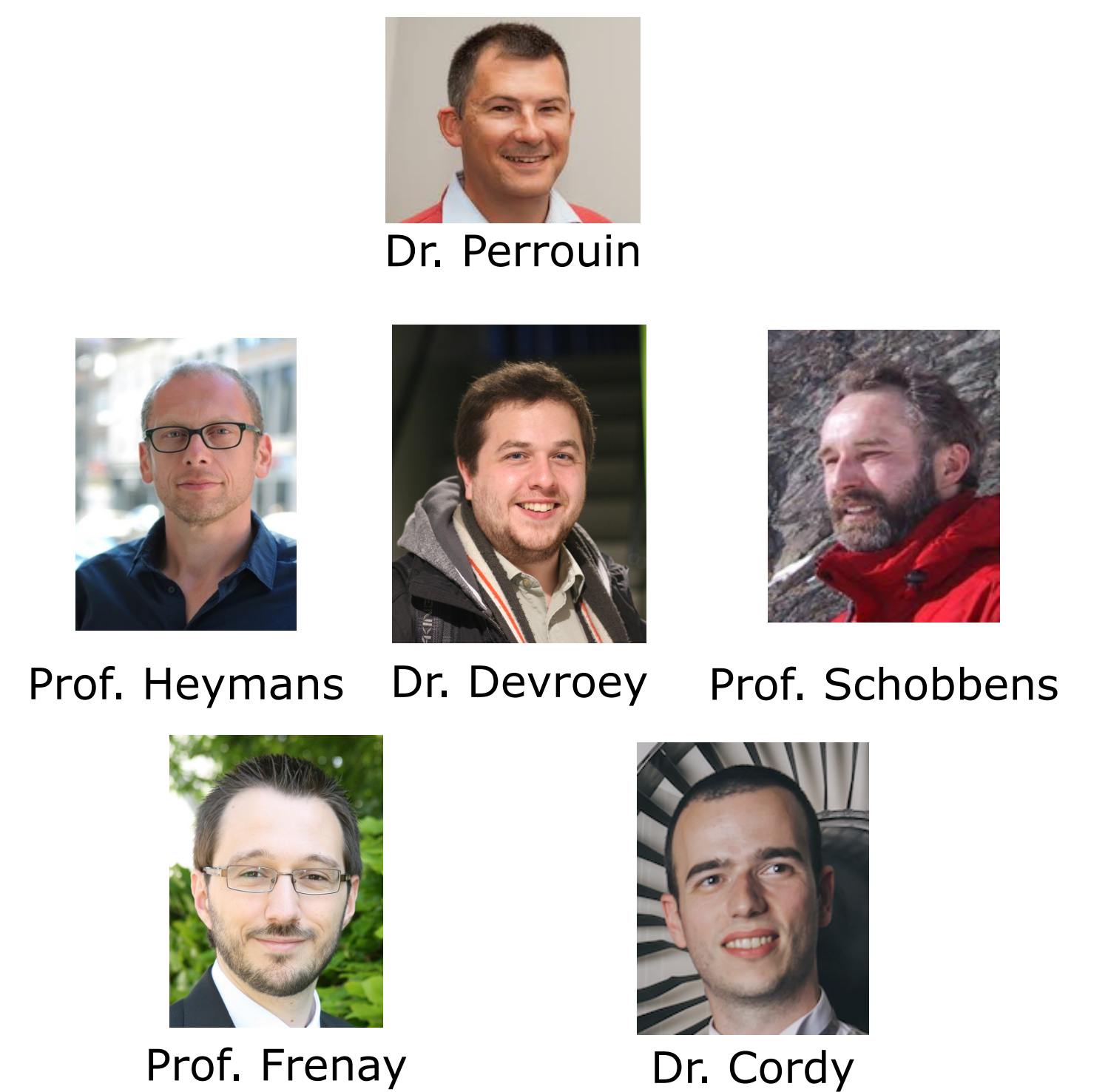
## Partners



## Projects



## Team



## Selected Contributions

Xavier Devroey, Gilles Perrouin, Mike Papadakis, Axel Legay, Pierre-Yves Schobbens and Patrick Heymans, **Model-based mutant equivalence detection using automata language equivalence and simulations**, Journal of Systems and Software, Volume 141, pages 1-15, Elsevier, July 2018.

Xavier Devroey, Gilles Perrouin, Maxime Cordy, Hamza Samih, Axel Legay, Pierre-Yves Schobbens and Patrick Heymans, **Statistical prioritization for software product line testing: an experience report**, Software & Systems Modeling, Volume 16, Issue 1, pages 153-171, Springer, January 2017.

Xavier Devroey, Gilles Perrouin, Mike Papadakis, Axel Legay, Pierre-Yves Schobbens and Patrick Heymans, **Featured Model-based Mutation Analysis**, International Conference on Software Engineering (ICSE), pages 655-666, Austin, TX, USA, IEEE, May 2016.

Christopher Henard, Mike Papadakis, Gilles Perrouin, Jacques Klein, Patrick Heymans and Yves Le Traon, **Bypassing the combinatorial explosion: Using similarity to generate and prioritize t-wise test configurations for software product lines**, Transactions on Software Engineering, Volume 40, Issue 7, pages 650-670, IEEE, July 2014.