SOFTWARE FOUNDATIONS

VOLUME 4: QUICKCHICK: PROPERTY-BASED TESTING IN COQ

TABLE OF CONTENTS INDEX

POSTSCRIPT

Future Directions

We have lots of plans for future directions:

- Automatic derivation of generators and shrinkers for data satisfying Inductive relations
- Vellum2 testing
- DeepSpec Web Server
- Testing-only variant of *Software Foundations*?

Recommended Reading

The material presented in this short course serves as an introduction to property based random testing using QuickChick. For the interested reader, we provide a few more references for additional reading:

- The original QuickCheck paper by Koen Claessen and John Hughes from ICFP 2000. http://www.cs.tufts.edu/~nr/cs257/archive/john-hughes/quick.pdf
- The original QuickChick paper that focuses on a framework for proving the correctness of QuickChick generators. http://www.cis.upenn.edu/~llamp/pdf/Foundational.pdf
- A case study that uses QuickCheck to test non-interference for information-flow-control abstract machines. http://www.cis.upenn.edu/~llamp/pdf/TestingNonInterferenceQuickly.pdf
- Code for that case study exists under the QuickChick organization of github (https://github.com/QuickChick) for both Haskell ("Testing Noninterference") and Coq ("IFC").

- A paper on deriving QuickChick generators for a large class of inductive relations. http://www.cis.upenn.edu/~llamp/pdf/GeneratingGoodGenerators.pdf
- Leo's PhD dissertation. https://lemonidas.github.io/pdf/Leo-PhD-Thesis.pdf