**A random testing approach using pushdown automata**

Developing efficient and automatic testing techniques is one of the major challenges faced by the software validation community. In this paper, the author illustrated how to use pushdown automata for testing large systems, and the problem like this is tackled by extending the approach to pushdown systems that can encode either a stack data structure or the call stack. The method is based on CFG and related algorithms.

This paper discussed a practical approach since automatic random testing is a common demand for most software companies. The contribution of this approach is using pushdown models to conduct random testing and it’s tractable, in other words, it’s running within polynomial complexity. In addition, it deeply increases the chance of computing paths corresponding to real executions.

# Works Cited

Alois, D., Pierre, H., Olga, K., & Catherine, M. (2014, 12). *A random testing approach using pushdown automata*. Retrieved from EBSCO host: https://na02.alma.exlibrisgroup.com/view/action/uresolver.do;jsessionid=89E403046E1FA96E74283827CA581C9D.app03.na02.prod.alma.dc04.hosted.exlibrisgroup.com:1801?operation=resolveService&package\_service\_id=15974969930002611&institutionId=2611&customerId=26