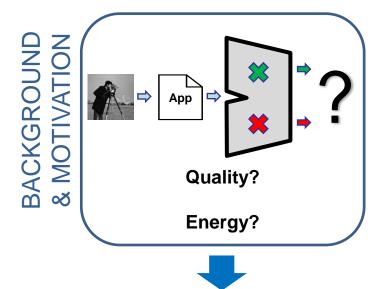


AxPIKE: Instruction-Level Injection and Evaluation of Approximate Computing

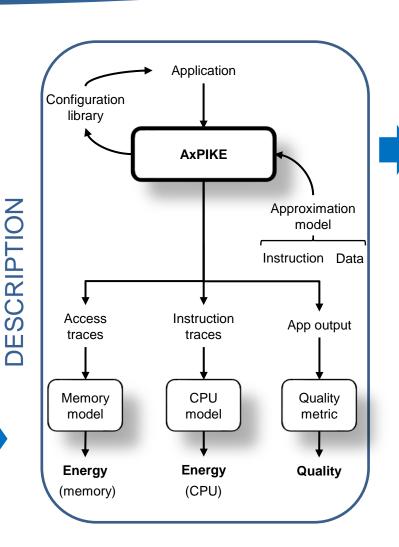


Isaías Felzmann, João Fabrício Filho, Lucas Wanner



Architectural simulation can improve evaluation...

- But setting up a simulator is difficult.
- Designers need a framework to help.



Approximating Sobel Filter



Accurate computation No energy savings



DANTI

Approximate multiplier ~1.7% energy savings



Approximate DRAM ~10.4% energy savings



- AxPIKE profiles energy and quality of results with reduced effort.
- Find out more at varchc.github.io/axpike



INSIGHT



SUMMARY AND CONCLUSION

2/03/2021