

Conference Paper Plan

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Topic

Moore's Law roughly implies that the computing power of individual chips should double every two years [1]. This law held strong since its inception in 1965, but we are now reaching the limits of what is physically possible [1]. This means that since developers can no longer rely solely on the single-threaded performance of CPU's, software must adapt and take advantage of the multi-processing capabilities of modern computers.

Concurrency in software development is a sensitive subject. It can massively increase the complexity of a piece of software, and concurrency bugs tend to be particularly difficult to pin down.

This conference paper is intended to highlight the difficulties in building concurrent software, and to look at various technologies and techniques developers can use to reduce the risk of creating concurrency bugs.

Target Venue

The conference we selected is "Principles and Practice of Parallel Programming" or PPOPP for short [2]. Although we have been unable to find an explicit statement on who attends this conference, the description of the scope as well as the tickets available gave us the impression that it is meant for students, professionals as well as researchers [3][4]. The requirements on the papers are that they must be in the general topic of parallel programming but that appears to be the only requirement, topics wise. They should also be accessible to "the entire parallel programming research community" [3].

Suggested Literature

Transcripts from Cooperating Sequential Processes [5]
Erlang User's guide: Concurrent Programming [6]
Fearless Concurrency with Rust [7]

References

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- [6] Erlang. (2020). Erlang user’s guide: Concurrent programming, [Online]. Available: https://erlang.org/doc/getting_started/conc_prog.html (visited on Jan. 31, 2020).
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Andra källor

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