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Propositions (Stellingen)

Accompanying the PhD dissertation

“Workload Modeling and Performance Evaluation in Parallel Systems”

by Trần Ngọc Minh

1. A model that is able to capture all the characteristics observed in real workloads will be the most representative model. [This Thesis]

2. A new scheduler should be evaluated with both real traces and synthetic workloads. While real traces reflect precisely the operation of real systems in the past, synthetic workloads help the new scheduler face several hard situations that may occur in the future. [This Thesis]

3. When viewing user submissions as either jobs or bags, parallel system traffic can have contrary characteristics. [This Thesis]

4. A scheduling study that does not take into account performance of statistical features of real workloads may miss important clues that can help to improve schedulers. [This Thesis]

5. Performance evaluation for schedulers is similar to many other endeavors in that it follows the garbage-in-garbage-out principle: using unrealistic workloads will generate inaccurate results. [D. Feitelson’s Book Draft 2011]

6. A programmer who subconsciously views himself as an artist will enjoy what he does and will do it better. [Donald E. Knuth, Comm. ACM 17(12) 1974]

7. In any collection of data, the figure most obviously correct, beyond all need of checking, is the mistake. [Finagle's Third Law]

8. In the Netherlands, a doctor in computer science is welcomed by most IT companies. This is not the case in Vietnam, where most IT companies need developers with a low salary for their insourcing projects. So employing a doctor with a high salary is considered wasteful.

9. People have to face trade-off in life. That is, to get one thing we like we often have to give up another thing we also like. [Mankiw’s Ten Principles of Economics]. This principle also holds for a scientist.

10. A PhD student should plan carefully his diversion, not when the job is done, but when put under high pressure by his professor.