

(a) HW1 Q3 Summary, supplemental paper [Winstein13a]

(b) Keith Winstein and Hari Balakrishnan. TCP ex machina: Computer-generated congestion control. In Proceedings of the ACM SIGCOMM Conference, pages 123–134, Hong Kong, China, August 2013. ACM.

(c) [https://moodle.ant.isi.edu/pluginfile.php/4504/mod\\_folder/content/0/Winstein13a.pdf](https://moodle.ant.isi.edu/pluginfile.php/4504/mod_folder/content/0/Winstein13a.pdf)

(d) This paper gives us a program named Remy, which could generate congestion-control algorithms to run at the endpoints. With this new method, we do not need to manually formulate reactions at endpoints to handle congestions.

(e) The idea about how to design a way to generate congestion controlling protocol automatically is quite novel. Writing rules by hand for endpoints to follow may be easy, but how to design a mechanism to handle complex and even unknown situation is very difficult, but interesting.

(f) Idea-Experiment-Analysis. First, this paper gives us three steps to design such a system; then, it develops a program and does some experiments; finally, it gives us the results.

(g) This paper could be improved if it provides more study cases like examples about how to tradeoff between generality and performance. More study cases could help us understand the ideas better.

(h) Why we assume the network is Markovian? Is there any potential problem with this assumption or is there a better assumption?

(i) If using a different objective function, will we get a better performance?

(j) You know, many papers have the same assumption with this paper, assuming that the state of our network is Markovian. I am sure that it is a good assumption in most cases, but sometimes only considering limited previous states may lead to errors.

(k) Good paper! This is my first time to read some intelligent design in network. It gives me many new perspectives.

(l) Quite similar to [Dhamdhere18a] Inferring persistent interdomain congestion, and [Shaikh00a] Routing stability in congested networks: Experimentation and analysis. All these papers are trying to model our network, run experiments and do some inference about the future.

(m) Address issues remained, like how to understand generated rules, how to use this methods to real-world Internet, and etc.

(n) Give an idea, design experiments, evaluate, analyze and compare the result.

(o) Give us new idea about computer generated algorithms, prove its trustworthy and provide some tools for further research.

(p) Try to figure out why the rules generated by RemyCC work.