

Lecture 4: Materials, May 2nd

Approximation Algorithms: Vertex Cover Problem

1. Announcement

We are going to have a quiz on May 30th and an examination on July 11th. We will have no class on May 16th, and we will stay at Sci. 7 #214 until further announced.

The quiz and examination will be in the same style as my course on last semester (<http://www.vorapong-sup.net/NetOpt2016.html>). There will be 3 problems and you have to solve them in 90 minutes.

The course website is <http://www.vorapong-sup.net/A02017.html>. I decided to put my note there in this semester, and I hope that the note will help you understanding the course better. I also put a list of students that have bonus on each week. Please inform me, if you are supposed to have the bonus but your ID is not there.

2. Approximation Algorithm

Our main textbook for the first half of this course is the following book. Williamson and Shmoys, “*The Design of Approximation Algorithms*”, Cambridge University Press, 2010.

The book can be downloaded for free from the following URL.
<http://www.designofapproxalgs.com/book.pdf>

We have covered Chapter 1.2 and 1.3 today.

3. Anomaly Detection Using Passive Probes

Our problem definition is a simplified version of the problem considered in the following paper.

Agrawal, Naidu, and Rastogi, “*Diagnosing Link-level Anomalies Using Passive Probes*”, Proceedings of the 26th IEEE International Conference on Computer Communications (INFOCOM’ 07), pages 1757–1765, 2007.