Lecture 10: Materials, July 4th

Online Algorithms: Secretary and Online Learning Problems

1. Material for Final Exam

The exam will be open-book again. If you can understand the discussion in the class, reviewing materials is not required. However, if you want to review some, the following list can help you.

- We still assume that students can understand the discussion until midterm. A brief reviewing on materials for mid-term could be helpful.
- **Materials on Inapproximability**
  Chapter 2.2 and Chapter 16.1 of the following book:
  Williamson and Shmoys, "The Design of Approximation Algorithms", Cambridge University Press, 2010.
- **Online Algorithm (Basic Definitions)**
  Sections 1-2 of the following lecture note by Prof. Luca Trevisan:
  Trevisan, "CS261 - Optimization: Lecture 17 - Online Algorithms and Competitive Analysis", Stanford University, 2011.
- **Online Learning Algorithm:**
  Chapter 14.1 and Chapter 14.2 of the following book:
  Blum, "On-Line Algorithms in Machine Learning", Online Algorithms: The State of the Art, Fiat and Woeginger (Eds.), Lecture Notes in Computer Science Vol. 1442, Springer, 1998.
- Some students will take the exam on July 4th. The exam problem for those students will be published just after the exam.

2. Schedule from next week

July 11	Final Examination
July 18	Class 11 - We will discuss about answers for Quiz and Final in this class. The participation to this class is totally optional.
July 25	You will be notified by e-mail, only if your score is not enough for the credits. There will be an instruction how to submit a report in that e-mail. If you asked to submit a report, your grade could be B or C, based on the quality of the report. If you are not notified by e-mail, then you will get the credit and your grade could be A or B. From July 26, you can read my feedback by visiting my office.
August 8	Report submission deadline for students who are asked to submit.

3. **Basic Definitions of Secretary Problem**

   Our explanation is based on the lecture note by Prof. Luca Trevisan with the
   following information.
   Trevisan, "CS261 - Optimization: Lecture 17 - Online Algorithms and Competitive
   Analysis", Stanford University, 2011.

4. **Online Learning Algorithm**

   Our explanation is based on Chapter 14.1 and Chapter 14.2 of the following book:
   Blum, "On-Line Algorithms in Machine Learning", Online Algorithms: The State of
   the Art, Fiat and Woeginger (Eds.), Lecture Notes in Computer Science Vol. 1442,
   Springer, 1998.