

CS 2601 Linear and Convex Optimization

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John Hopcroft Center for Computer Science
Shanghai Jiao Tong University

Fall, 2022

Course Group

CS2601-1凸优化2022

群号: 274592599



Course Information

Course: CS2601 Linear and Convex Optimization

Time: Mon 16:00–17:40, every week
Thu 18:00–19:40, odd weeks

Location: Upper Hall 211

Website: <https://oc.sjtu.edu.cn/courses/48900>

- lecture schedule, homeworks, slides ...

Instructor: Bo Jiang (江波)

- Office: Software Building 1102-2
- Email: bjiang@sjtu.edu.cn
- Office Hours: By appointment

TAs:

- Baoxiang He (何保祥), 1172548623@sjtu.edu.cn
- Jian Yuan (袁健), yuanjian@sjtu.edu.cn

Topics

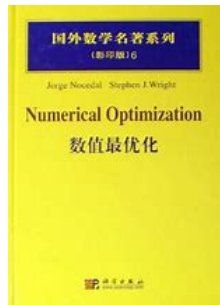
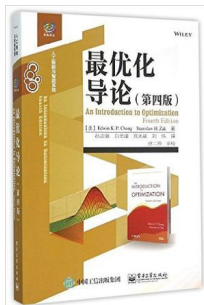
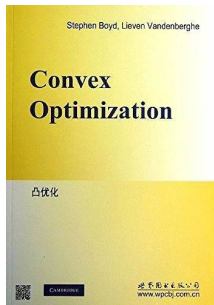
- Basics of mathematical optimization
- Optimality conditions for unconstrained optimization
- Convex sets
- Convex functions
- Convex and linear optimization problems
- Basic algorithms for convex optimization
- Lagrange duality
- Optimality conditions for constrained optimization
- Applications

References

Convex Optimization by Boyd and Vandenberghe
available at <https://web.stanford.edu/~boyd/cvxbook/>

An Introduction to optimization by Chung and Zak, 4th
Edition

Numerical Optimization by Nocedal and Wright



Requirements

Work

- homework assignments every 1-2 weeks (~50% of grade)
 - written and programming
 - pdf and source code to be uploaded on Canvas
 - no late submission allowed
- final (~50% of grade)

Honor Code

- You are encouraged to talk to each other and help each other, but **write up solutions on your own!**
Sharing or copying a solution will result in **zero score** for that assignment for **both parties!**
- If a significant part of any of your solutions is due to someone else or from other sources (e.g. books, forums), **acknowledge the source!**