CSE484   **TOPICS IN APPLIED OPTIMIZATION**

9 TAUGHT BY

10 • prof. pawan kumar

11

COURSE TOPICS :

12

0. review of linear algebra

1

    calculus

2

    probability and statistics

3

4 1• concept of convex sets

5   convex functions

6   convex optimization problems

7   duality

2• algorithms for constrained and unconstrained
      minimization

    applications

2018

Week 26
180-185

4.8.2020
2

JUNE

Friday

29

3. algorithms for interior point methods

applications

4. algorithms for stochastic gradient methods

1st order and 2nd order methods

preconditioning

momentum based ~~and~~

nestrov accelerated gradient descent

applications

5. algorithms for non-smooth optimization

sub-gradient methods

primal-dual sub-gradient methods

stochastic sub-gradient methods

applications

AUG
2018

S	M	T	W	T	F	S
*	*	*	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	*

30 Saturday

6. variants of conjugate gradient methods

" truncated newton methods

app.
applications

7. algorithms for non-convex minimization and applications.

TEXTBOOKS

1. numerical optimization ; nocedal. (1999)

2. optimization methods for large scale machine learning; arxiv. (2016)

3. optimization for machine learning ; srav.

01 Sunday