Large Sparse Matrix Computations

Wenwei Lin

1.	introduction part 1
2.	Introduction part 2
3.	Introduction part 3
4.	Introduction part 4
5.	Introduction part 5
6.	Numerical Methods for Solving Linear Systems part 1
7.	Numerical Methods for Solving Linear Systems part 2
8.	Numerical Methods for Solving Linear Systems part 3
9.	Perron-Frobenius Theorem part 1
10.	Perron-Frobenius Theorem part 2
11.	Orthogonalization and Least Square Method part 1
12.	Orthogonalization and Least Square Method part 2
13.	Orthogonalization and Least Square Method part 3
14.	Iterative Methods for Large-sparse Linear System part 1
15.	Iterative Methods for Large-sparse Linear System part 2
16.	Iterative Methods for Large-sparse Linear System part 3
17.	Iterative Methods for Large-sparse Linear System part 4
18.	Iterative Methods for Large-sparse Linear System part 5
19.	Conjugate Gradient Method part 1
20.	Conjugate Gradient Method part 2
21.	Conjugate Gradient Method part 3
22.	Conjugate Gradient Method part 4
23.	Conjugate Gradient Method part 5

- 24. Conjugate Gradient Method part 6
- 25. Conjugate Gradient Method part 7
- 26. Conjugate Gradient Method part 8
- 27. Conjugate Gradient Method part 9
- 28. Conjugate Gradient Method part 10
- 29. Eigenvalue Problems part 1
- 30. Eigenvalue Problems part 2
- 31. Eigenvalue Problems part 3
- 32. Eigenvalue Problems part 4
- 33. Eigenvalue Problems part 5
- 34. QR algorithm part 1
- 35. QR algorithm part 2
- 36. QR algorithm part 3
- 37. QR algorithm part 4
- 38. Symmetric Eigenvalue Problems Perturbation Theory part 1
- 39. Symmetric Eigenvalue Problems Perturbation Theory-part 2
- 40. Symmetric Eigenvalue Problems Perturbation Theory-part 3
- 41. Symmetric Eigenvalue Problems Perturbation Theory-part 4
- 42. QR- algorithm for solving symmetric Eigenvalue problem
- 43. Lanczos Method part 1
- 44. Lanczos Method part 2
- 45. Lanczos Method part 3
- 46. Lanczos Method part 4
- 47. Krylov-Schur Method
- 48. Jacobi-Davidson Method part 1

- $49.\ \, {\rm Jacobi\text{-}Davidson}$ Method part 2
- 50. Materials

June 15, 2025