Final Exam will be on Thursday, May 5, 8:00 - 9:50 a.m. in 022 DEIKE.

No books, notes, calculators, or other electronic devices will be allowed on the exam.

The exam will cover Chapters 1, 2, 3.A-D, 5, 6 and parts of Sections 10.A, 10.B, 8.A, 8.B, 8.D. The material covered after Exam 2 will be emphasized.

You may be asked to

- Answer short questions on understanding of the definitions and results listed below.
- Solve problems similar to homework problems. Make sure that you know how to solve all homework problems, the practice problems and the ones that were collected.
- State definitions marked with *.
- Give proofs of the results marked with *.

You need to understand (know if marked with *) the following definitions:

- Chapter 1 # 19, 32*, 36, 40;
- Chapter 2 # 3, 5, 10, 15, 17*, 27*, 36;
- Chapter 3 # 2*, 6, 8, 12*, 15, 17, 20, 32, 41, 53, 55, 58*, 67;
- Chapter 5 # 2*, 5*, 7*, 16, 25, 34, 36*, 39*;
- Chapter 10 # 2, 3, similar matrices*, 33, 42, 25*.
- Chapter 8 # 8, 9, 16, 27, 59;
- Chapter 6 # 3*, 8*, 11, 23*, 27, 39, 45*, 53*;

You should understand the following results (along with the proof for those marked with *):

- Chapter 1 # 34, 39, 44, 45;
- Chapter 2 # 7, 21, 23, 29, 35, 39, 42, 43;
- Chapter 3 # 5, 7, 9, 14, 16, 19, 22, 56, 59*-61, 69*;
- Chapter 5 # 6, 10, 21, 26, 27, 30, 32, 38, 41, 44*;
- Chapter 10 # 4, 5, 7, 39-41, 44, 23, 24, zeros of $\chi_T$ are the (complex) eigenvalues of $T$.
- Chapter 8 # 13, 18, 19, 21, 60;
- Chapter 6 # 7, 10, 12-15, 18, 22, 25, 26*, 30*, 31, 34, 35, 37, 38, 42, 46, 47*, 50, 51, 55, 56.