

Notes for lecture 9

1. Date: June 6th. This lecture is based on Sections 6.1 and 6.2 of Chapter 6 of the main textbook (see Chapter6.1-6.2.pdf).
2. Section 6.1 (see Chapter6.1-6.2.pdf and Lecture9.pdf) deals with the definition and computation of the Laplace transform.
3. Section 6.2 (see Chapter6.1-6.2.pdf and Lecture9.pdf)) consider the Laplace transform of derivatives and links it to solutions of linear differential equations. Partial fraction decomposition is the main computational tool in finding the inverse Laplace transform.
4. Additional Internet resources
 - a. Short videos from Khan Academy on Laplace transforms
<https://www.khanacademy.org/math/differential-equations/laplace-transform> is recommended
 - b. Short videos from Khan Academy on integration by parts
<https://www.khanacademy.org/math/ap-calculus-bc/bc-integration-new/bc-6-11/v/deriving-integration-by-parts-formula>
 - c. Partial fractions calculators: <https://www.wolframalpha.com/calculators/partial-fraction-calculator> , <https://www.symbolab.com/solver/partial-fractions-calculator> , <https://www.emathhelp.net/calculators/algebra-2/partial-fraction-decomposition-calculator/>
5. The deadline for submitting homework, Assignment 9 (refer to Assignment9.pdf) is June 13th, 13:00. Solutions to this assignment (refer to Assignment9_sol.pdf) will be uploaded to Resource Section on June 13th after the class.