## **Lecture 03**, 14.01.2014

- Dirichlet kernel. Formula, graph.
- Convergence of the Fourier series. Dini condition.
- $\bullet$  Lipschitz condition. Examples.
- Idea of summation method
- ullet Chezaro summation
- Chezaro summation in terms of the Fourier coefficients
- Fejer kernel
- Properties of the Fejer kernel
- Chezaro summation of Fourier series for continuous functions
- ullet (Reminder) Shifts are continuous in  $L^1$  and in  $L^2$
- Chezaro summation for functions in  $L^1$  and  $L^2$ .