**LECTURE 13**

## PARTIAL DIFFERENTIAL EQUATIONS *cont.*

### Heat equation

- <u>2D heat equation</u>

  - General form of the heat equation

  - Steady 2D heat equation. Laplace equation.

  - Boundary value probllems:

    * Dirichlet
    * Newman
    * mixed

  - Separation of variables for a Dirichlet problem in a rectangle

    * splitting into problems with "almost" zero data
    * Step 1
    * Step 2
    * Step 3

- Other examples of Laplace and Poisson equations