Computer Vision I: Variational Methods

Winter 2017/18 - Exercise Sessions

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Organization

- Contact: `cvvm-ws17@vision.in.tum.de`
  Please always use the course email address, do not contact tutors directly!
- Course material can be accessed at
  `https://vision.in.tum.de/teaching/ws2017/vmcv2017`
  If you do not remember the password, contact us.
- Exercises time: Tuesdays, 16:00-18:15
  Exercise room: 02.05.014
- Exercise sheets will be uploaded after Wednesday's lecture.
  Solutions will be provided online after the exercise sessions.
- Second session is on 07.11.2017 (no exercise and lecture next week).

Exercise Format

- Part 1 of each sheet consists of theoretical exercises.
  - They are meant to be solved at home *before* the exercise session (highly recommended, in particular as preparation for the exam).
  - The solution will be discussed *during* the exercise session.
- Part 2 consists of programming exercises in Matlab.
  - They are meant to be solved *during* the exercise session.
  - Feel free to ask for help.
- You do not hand in your solution. We provide comprehensive solutions to both parts after the exercise session. We are available for any questions regarding the solutions.
- Attendance to the exercise sessions is voluntary. However, you should view them as a vital part of the course and take them seriously (you probably know how this works by now).

MATLAB on Your Computer

- You can install MATLAB on your own computer using the university's student licenses
- Website (forwards to TUMonline): `http://matlab.rbg.tum.de`
- Login with your TUMonline account
- Follow the steps as described to get "MathWorks Matlab for Students"
- Make sure to get at least the `Image Processing Toolbox`

Short MATLAB Introduction

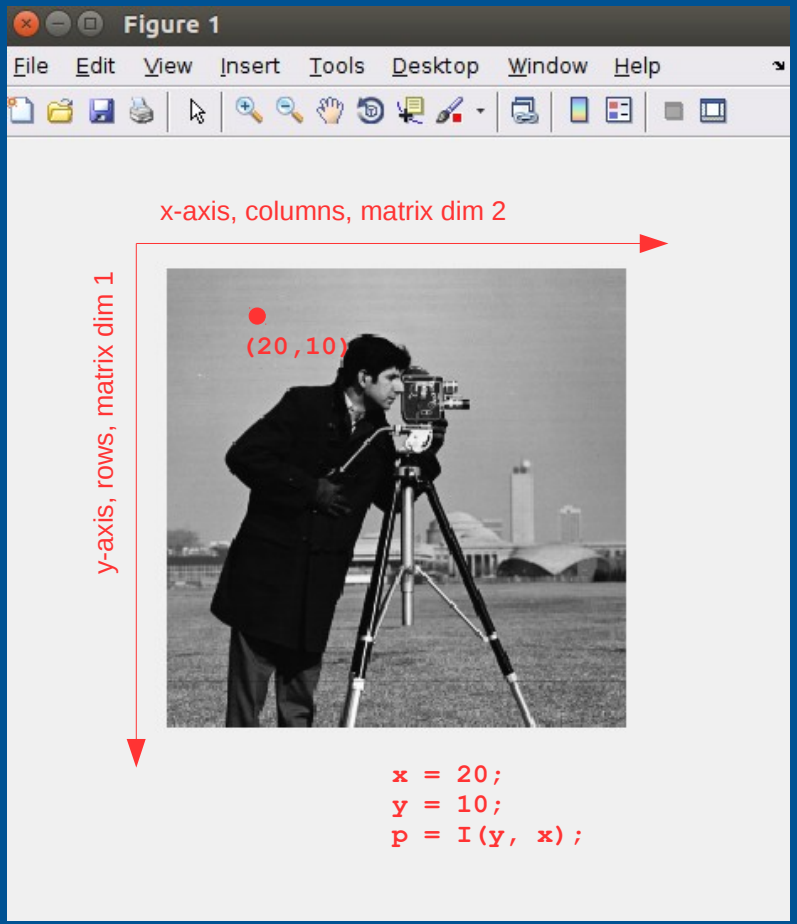
- MATLAB has a very good built-in documentation:
  - `help <function>` shows a short overview in the command window
  - `doc <function>` opens the long documentation in a new window
  - `open <function>` opens the source code in the editor
- For further questions, you can always ask us during the exercise sessions!
- Short useful cheat sheet can be downloaded at

  `http://web.mit.edu/18.06/www/Spring09/matlab-cheatsheet.pdf`
- Longer basic documentation:

  `http://campar.in.tum.de/twiki/pub/Chair/TeachingWs13TDCV/MATLABWorkshop.pdf`

Image Axes and MATLAB Indices

- By convention, the x-axis is left to right (image columns), y-axis top to bottom (image rows).
- Matrix indices in MATLAB are row first, therefore you write: `p = I(y,x);`



Questions?