

# Advanced Mathematical Perspectives 1

## Lecture 18: Tools of the Trade: Inkscape



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# Section 1

## Tools of the Trade: Inkscape

# Inkscape

Inkscape is a vector-graphics editor

- Free <https://inkscape.org/en/>
- Open source
- Linux, MacOS, Windows
- WYSIWYG
- Good output and input flexibility
- Professional quality
- Very powerful
- Extensible
- Great community

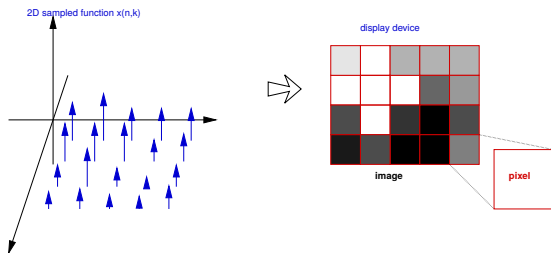
# Image vs vector-graphics editors

There are two main types of visual graphics we deal with

- 1 Raster images
- 2 Vector images

# Raster

Idea: store information about each “pixel” of the image



Pros:

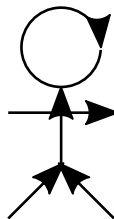
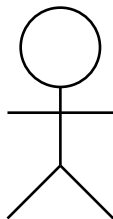
- simple
- natural mapping to some data (e.g., photos) and some devices (e.g., cameras, monitors, printers)
- fixed cap on information content

Examples:

- image files: JPG, PNG, ...
- editors: Photoshop, Gimp, ...

# Vector

Idea: store drawing as a series of simple shapes: lines, circles, etc.



Pros:

- exact representation of line drawings
- scalable
- can be much smaller than raster

Examples:

- image files: SVG, (E)PS, PDF, ...
- editors: Inkscape, Adobe Illustrator, ...

# Which should you use?

## Raster

Output to a device that is intrinsically raster, e.g., screen, printer

Data is samples of a surface

Photographs

## Vector

Output to a physical actuator, e.g., laser cutter

Data describes movements

Technical drawings

**Image that might be scaled up or down**

# Learning Inkscape

I won't teach you Inkscape (and its still yet to be installed on the lab computers)

It's pretty easy to get started, and there are lots of good resources

- <https://inkscape.org/en/learn/>
- <https://inkscape.org/en/learn/books/>
- Search for Inkscape on Amazon

Aim for simple, clean, easy-to-read, professional and aesthetic diagrams



# Suggested Use

I am not going to tell you how to do your poster

But I will provide an Inkscape template

Wait, was that a hint?

# The next few weeks

The break is not a holiday!

- Get started on your report and poster
  - ▶ download the templates and get them working
  - ▶ do your own research
  - ▶ start writing

# Activities

- Download Inkscape poster template, and play with it.

# Further reading I