

Mathematical Foundations of Computer Graphics & Vision



Dr. Jean-Charles Bazin

Imaging and Video
Disney Research Zürich

Dr. Cengiz Öztireli

Computer Graphics Laboratory
ETH Zürich

Dr. Martin Oswald

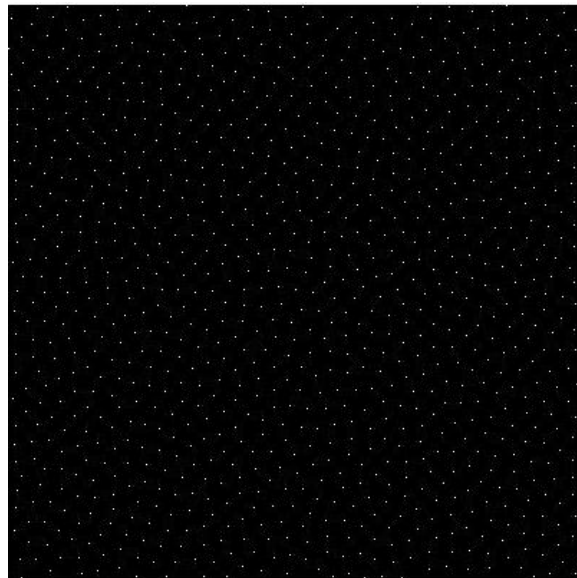
Computer Vision and Geometry
ETH Zürich

Today!

- 1) Handout, exercise 4;
- 2) Presentations, exercise 3.

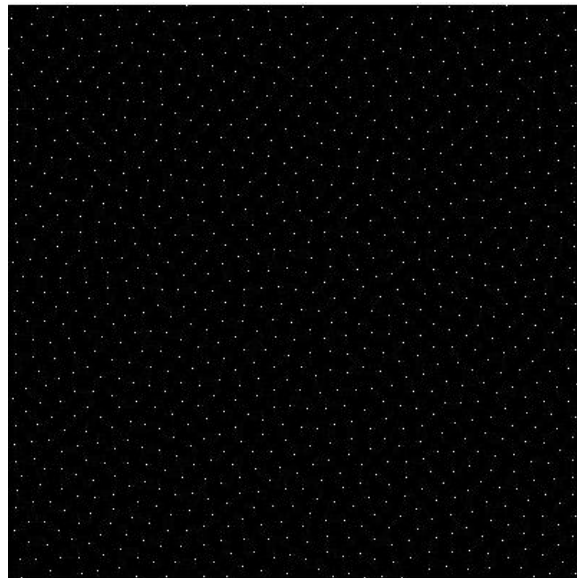
Part 1

- Looks at sampling patterns
- Different ways to represent a pattern



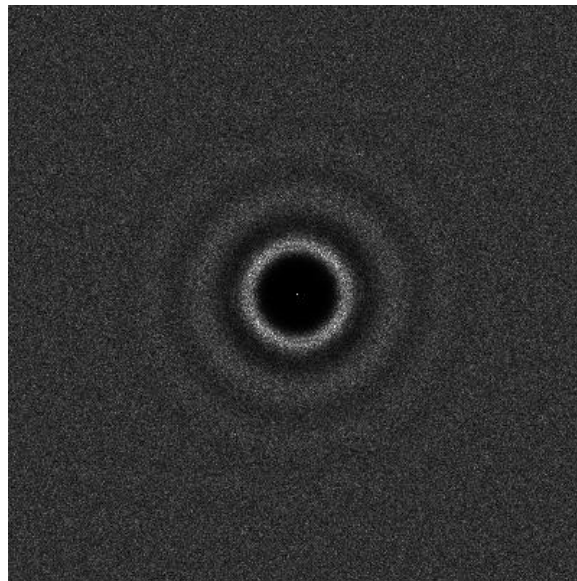
Part 1

- Task 1 deals with periodograms
- You will take a set of distributions and compute the FFT



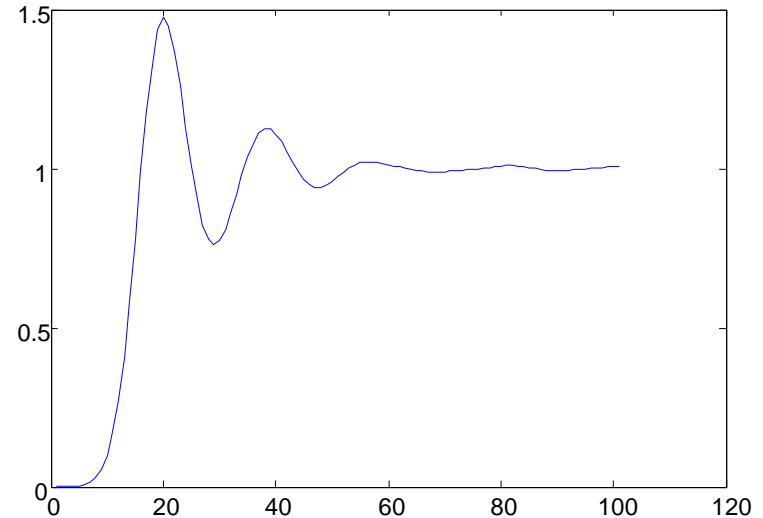
Part 1

- Task 1 deals with periodograms
- You will take a set of distributions and compute the FFT



Part 1

- Task 2 deals with pair correlation functions
- You will find the necessary information in the handout .pdf and section 3.2 of the Provided paper.
- There are some additional theoretical questions.



Part 2

- Part 2 will deal with graph cut
- Application to segmentation

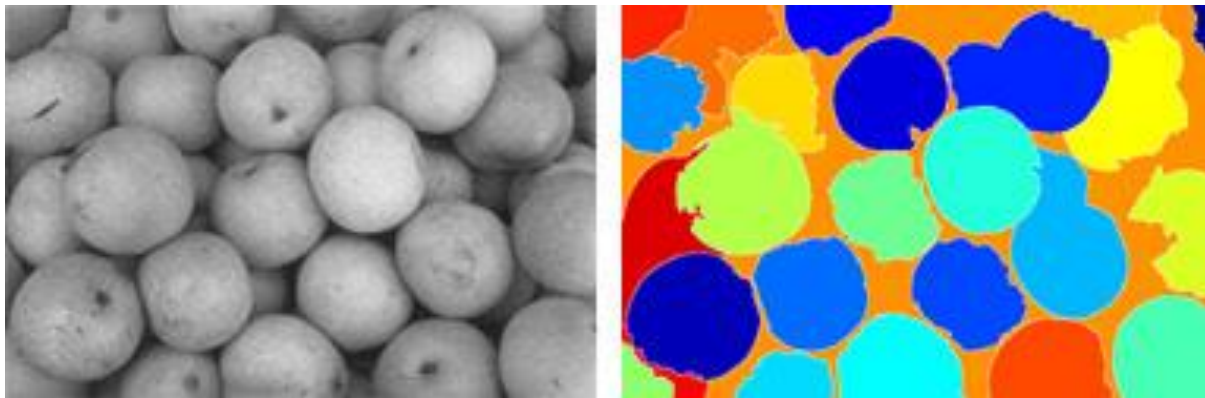


Image Source : <http://ch.mathworks.com/discovery/image-segmentation.html>

Part 2

- Labeling problem : label pixels as foreground or background
- Your work will be to build a proper graph and compute the corresponding costs

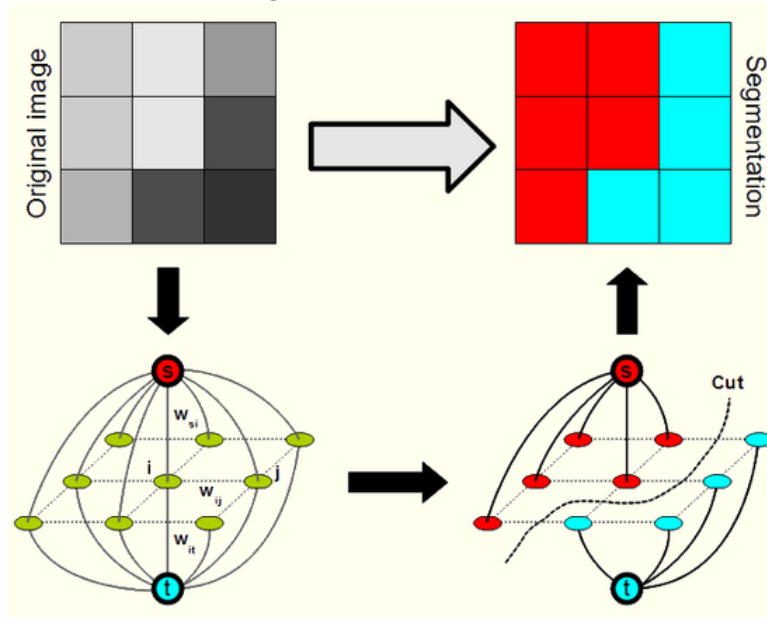
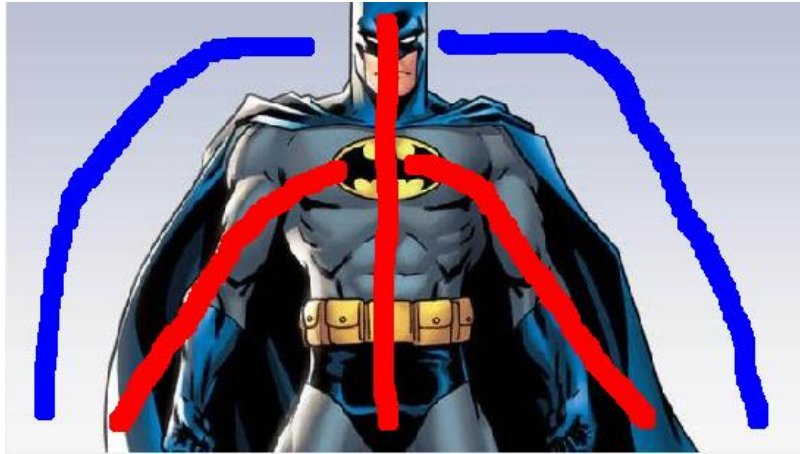


Image Source : <http://www.ondrej-danek.net/en/research>

Part 2

- Interactive segmentation



End of handout 4!

- Questions?
- In 5 minutes - presentations

Presentations Ex. 3

	16:00	16:05	16:10	16:15	16:20	16:25	16:30
Riccardo	Dibra Endri	Bartolovic Nemanja	Fang I-Lin	Chen Xu	Karani Neerav	Keyes Daniel	
JC	Pandele Ioana	Dürrenberger Patrik	Carlota Soler Arasanz	Purwar Prateek	Borer Dominik	Lianos Nektarios	Vicini Delio
Ian	Kasper Dominik	Lombardi Sandro	Jayaram Vivek	Gan Enjie Jonathan	Ribin Chalumattu	Muyan Xiao	Hamas Matej
Martin	Youn Ji Hwan	Valério Sampaio Daniel	Agrawal Rishu	Baeza Rojo Irene	Cimen Gökcen	Renggli Cédric	Niclas Scheuing

If your name is missing – let us know and we will append you to the end of the list!