

# Mathematical Foundations of Computer Graphics & Vision



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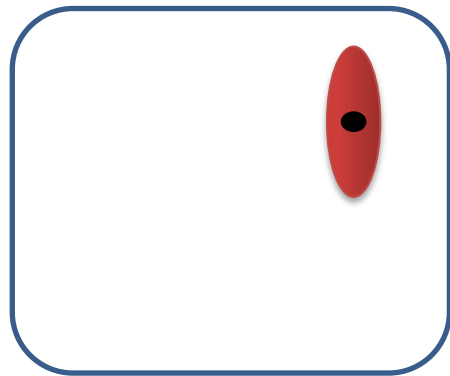
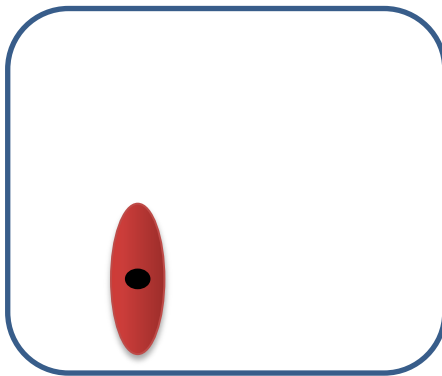
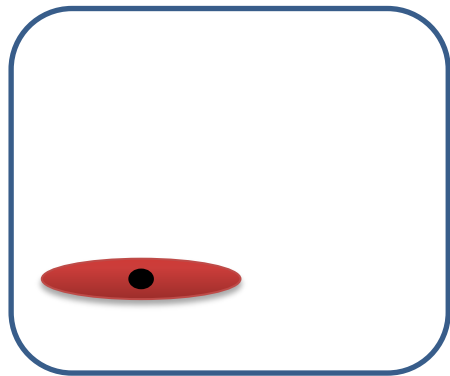
# Today!

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- 1) Handout, exercise 5;
- 2) Presentations, exercise 4.

# Part 1

- Dual Quaternions – How to blend rigid transformations
- Theoretical questions



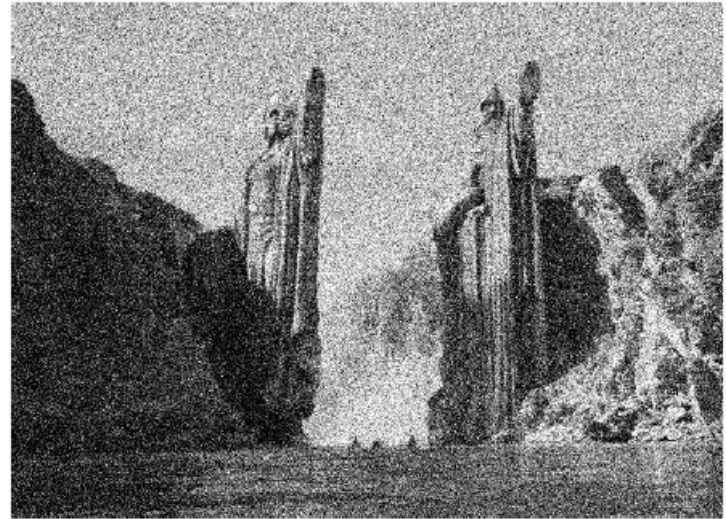
# Part 2

- Denoising methods

Original image



Noisy image



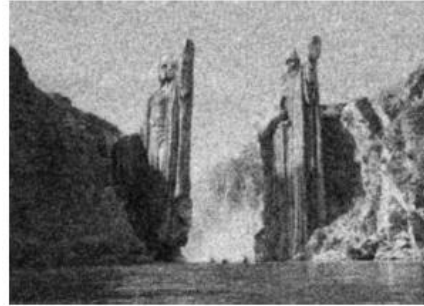
# Part 2

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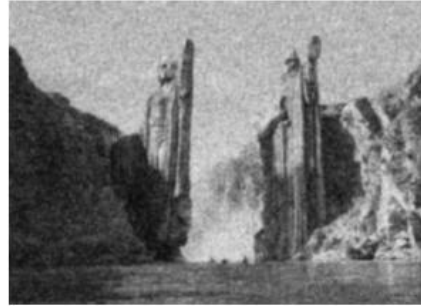
- Compare 3 techniques of denoising
  - Filtering
  - Heat Diffusion
  - Variational method

# Part 2

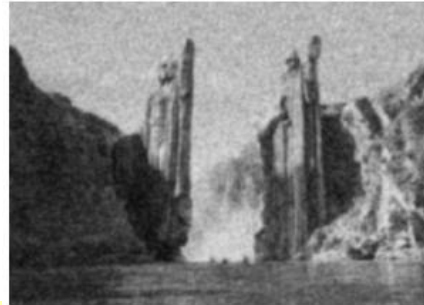
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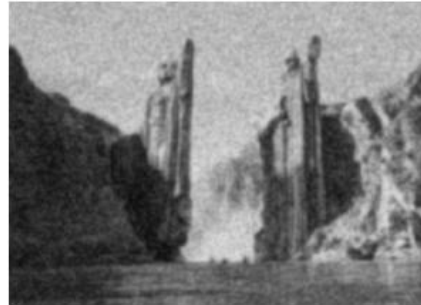
Filtered 16 times



Filtered 24 times

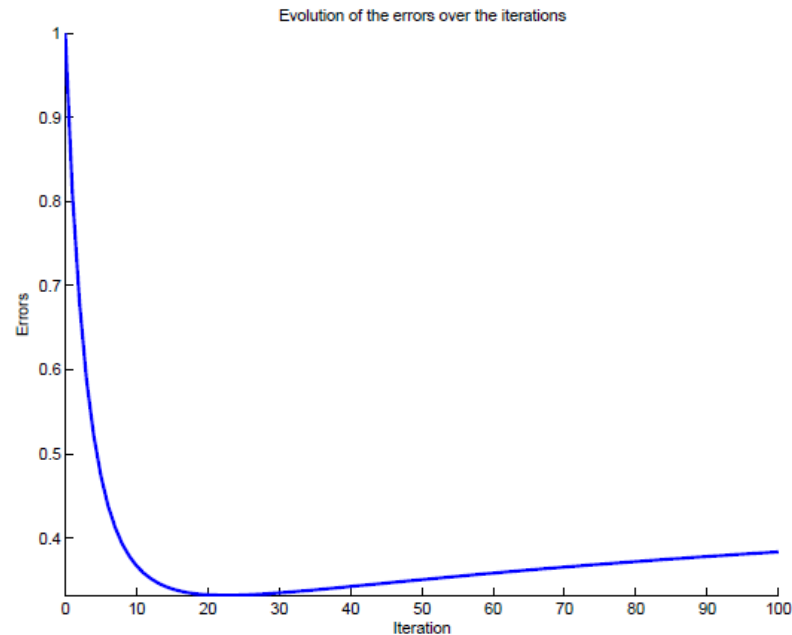
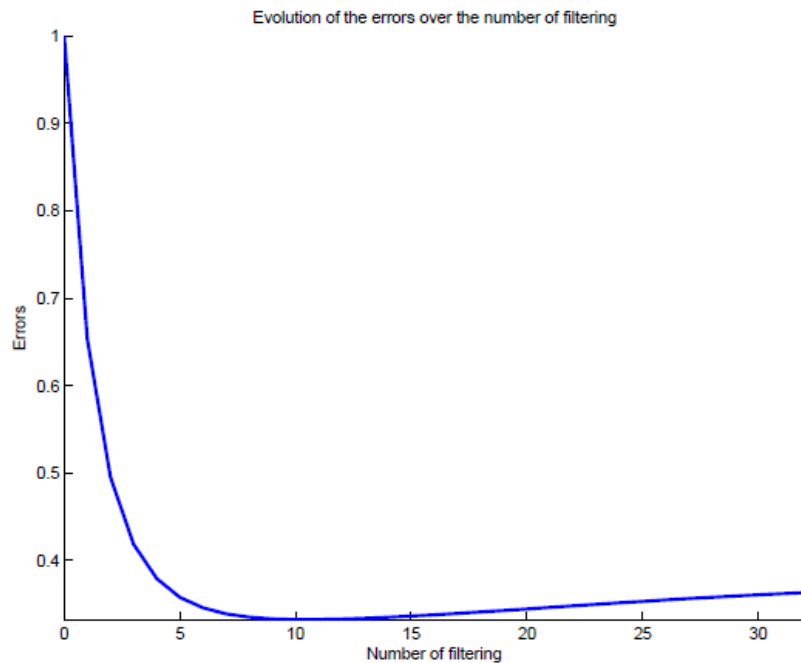


Filtered 32 times



# Part 2

- Observe the errors for filtering and denoising



# Part 2

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- Understand what each method is doing
- Compare the methods



# End of handout 5!

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- Questions?
- In 5 minutes - presentations

# Presentations Ex. 4

	16:00	16:05	16:10	16:15	16:20	16:25
JC	Daniel Sampaio	Purwar Prateek	Muyan Xiao	Zhang Qixuan	Patrick Dürrenberger	
Cengiz	Fang I-Lin	Irene Baeza Rojo	Gökcen Cimen	Cedric Renggli	Ioana Pandele	Delio Vicini
Martin	Carlotta Soler Arasanz	Nemanja Bartolovic	Chen Xu	Dominik Borer	Nektarios Lianos	Ribin Chalumattu
Riccardo	Jayaram Vivek	Rishu Agrawal	Dominik Kasper	Jonathan Gan	Daniel Keyes	Loic Ciccone
Ian	Endri Dibra	Karani Neerav	Jihwan Youn	Sandro Lombardi	Matej Hamas	Niclas Scheuing