WELCOME

to the Master’s Programme in Image Analysis and Machine Learning

at the Department of Information Technology
Uppsala University
HT2021
Head of Division of Visual Information and Interaction

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Today’s agenda
Monday, August 23, 11:00-12:00

• Welcoming words
• About us
• Info on registration
• What shall we do tomorrow
• Homework
Programme coordinator

Nataša Sladoje

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Student advisor

Olga Kaj

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https://katalog.uu.se/empinfo/?id=N6-911
Some words about Nataša

Professor in Computerized Image Analysis, Dept for IT, UU
25 years of research in the field of image processing
Interest in mathematical foundation of methods for image analysis
Interest in applications in biomedicine
Interest in education

MIDA - Methods for Image Data Analysis

Centre for Image Analysis

Centre for Interdisciplinary Mathematics
My research interests and recent projects

Interdisciplinarity – advance each of the fields to reach synergy and push the boundaries.

Bring theoretically sound methods into a broad range of applications.

Bring together model-based and data-driven approaches.
Distance measures between images for image alignment (registration)

Rigid registration of cell nuclei, fluorescence microscopy
Images courtesy of the *TissueMaps* project, C. Wähby et al.

- Intensity interpolation free
- Fast, based on gradient descent optimization
- Symmetric
- Precise, robust to noise and transformation size

**Applied to:**
- Hand-written text classification
- Virus detection and classification in TEM
- Cell and tissue analysis in microscopy
Multimodal registration by learned representations of a shared content

Collaboration between MIDA and Wählby Lab
A trustworthy AI-based decision support system for early oral cancer detection:

What is interesting at that location? How certain are you?

Collaboration with:
Joakim Lindblad, MIDA, IT, UU
Jan-Michaël Hirsch, FTV, UU
Christina Runow Stark, FTV
Eva Darai Ramqvist, KI/KS
Vladimir Bašić, CKF Dalarna
Kristina Edman, CKF Dalarna

VINNOVA, MedTech4Health (AIDA)
Some words about Olga and the student advisors’ office

(separate presentation)
Some words about you
Information regarding Covid-19

Uppsala University

Folkhälsomyndigheten (Public Health Agency of Sweden)

TekNat (Faculty of Science and Technology)

Important:
Testing and quarantine after your arrival (Info sent by UU, now on Welcoming week info-page)
“Please note that all students should get tested after arriving, including those who have been vaccinated.”

Vaccination

More info regarding teaching will come during this week!
Registration to the programme

Please, follow the link in the chat and fill in the google form (now).

We will use the provided information to complete the necessary administration related to the beginning of your studies at the programme.
We will do this together!
What shall we do tomorrow
Agenda for Tuesday, August 24, 10:00-12:00

10:00-11:00
Programme overview and course presentations – Nataša

11:00-12:00
11:00-11:20 Practical issues - Olga
11:20-11:30 Presentation of UTN
11:30-12:00 Further info and Q&A
Homework

• **Schedule** your individual meeting with Nataša or Olga
  – Nataša will set a Doodle and send you the link via email

• **Prepare** for your individual meeting (more on that tomorrow)
  – Read the [syllabus of the Programme](#)
  – Read the [outline of the Programme](#)
  – Think of a course plan that would suit you!

• Open your **student account**!
See you tomorrow on zoom!