BIIF: Support on BioImage Analysis in Sweden

Support and Training for Image Data Analysis.

State-of-the-art analysis on image data using computer vision, machine learning, and bioinformatics.

Help to deploy computational methods.

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Scientific Director

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Jonas Windhager
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Starting April 2023

AIDA Data Hub

Kevin Smith
(KTH)
Scientific Director

UPPSALA UNIVERSITET

Chan Zuckerberg Initiative

KTH VETENSKAP OCH KONST

NBIS NATIONAL BIOINFORMATICS INFRASTRUCTURE SWEDEN

NATIONAL MICROSCOPY INFRASTRUCTURE

Bioimage Analysis Sweden

SciLifeLab
Swedish National Research Infrastructure

- National center for molecular bioscience research
- 1500 persons with ~400 infrastructure staff
- E.g. Advanced Microscopy Unit, Spatial Omics Platform

NBIS
National Bioinformatics Infrastructure Sweden

- Bioinformatics support
- Access to cluster infrastructure
- FAIR data handling
- Training/workshops
- Sweden Elixir Node

NMI
National Microscopy Infrastructure Sweden

- Provide the life science research community with access to unique competence and instrumentation in microscopy.
- Swedish Eurobioimaging Node

Chan Zuckerberg Initiative

NBIS

National Microscopy Infrastructure

EuroBioImaging

BIIF - general statistics 2021/2022

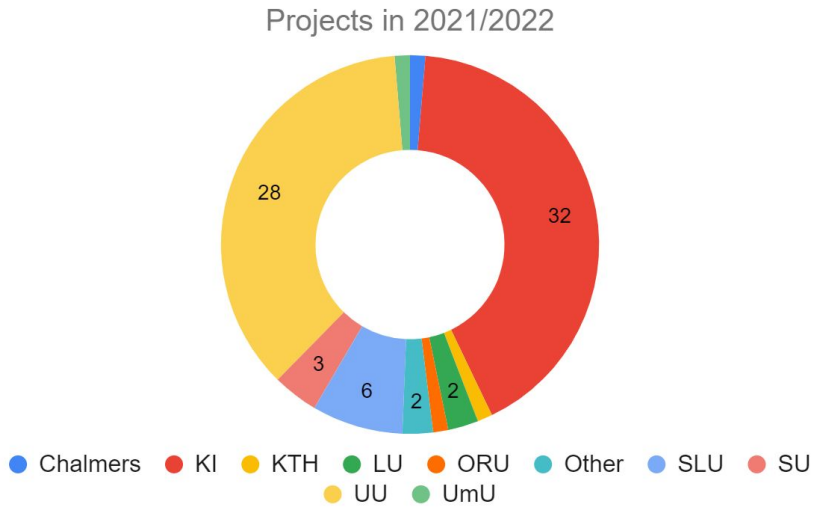
FTEs: **3.5** (2021), **5.5** (2022)

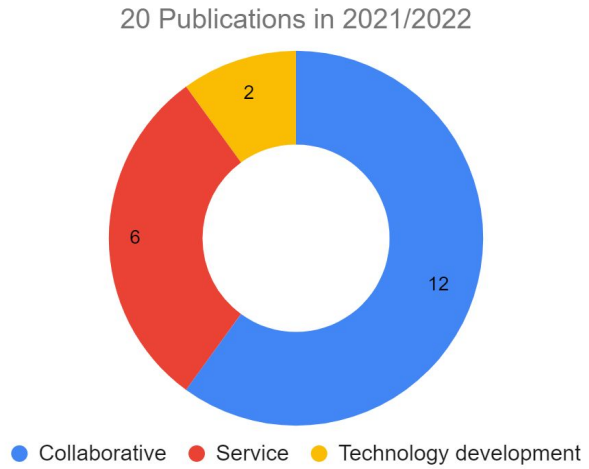
Projects: 62

Publications: 20

Courses: 18 training events

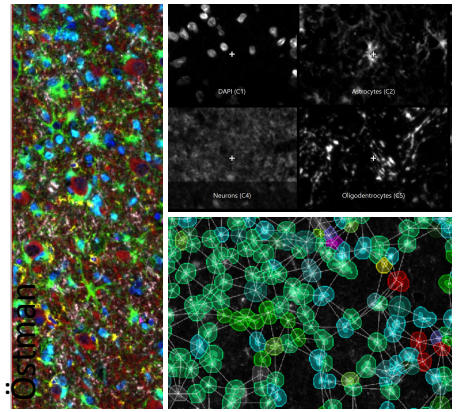
Focus area in this period:
Spatial and Single Cell Biology





Projects - Support

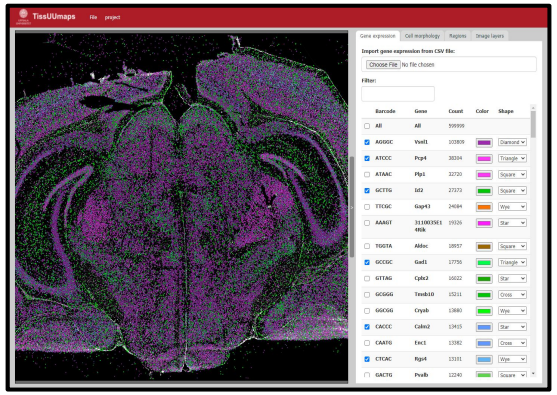
Multiplexed Tissue Analysis



Data: L. Wik, A. Östman

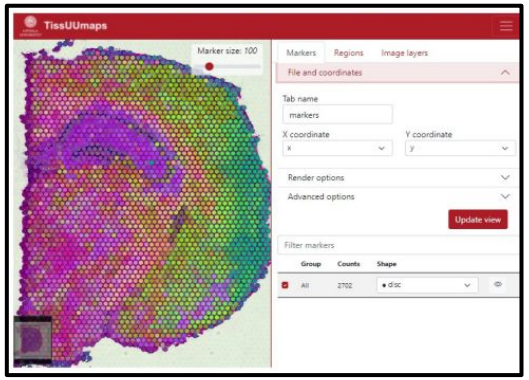
Cell segmentation
Cell classification
Spatial analysis
Automation

In-Situ-Sequencing

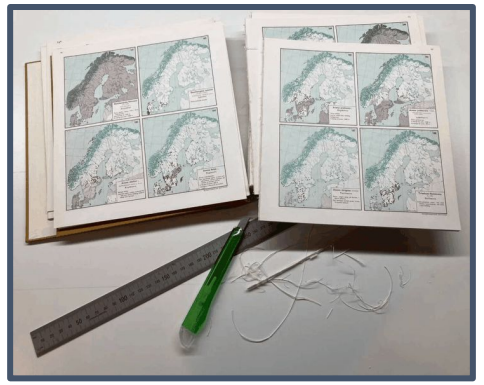


Raw data inspection
Cluster analysis
Visualization

Spatial Transcriptomics



Cluster analysis
Visualization
Combination with HE-stains

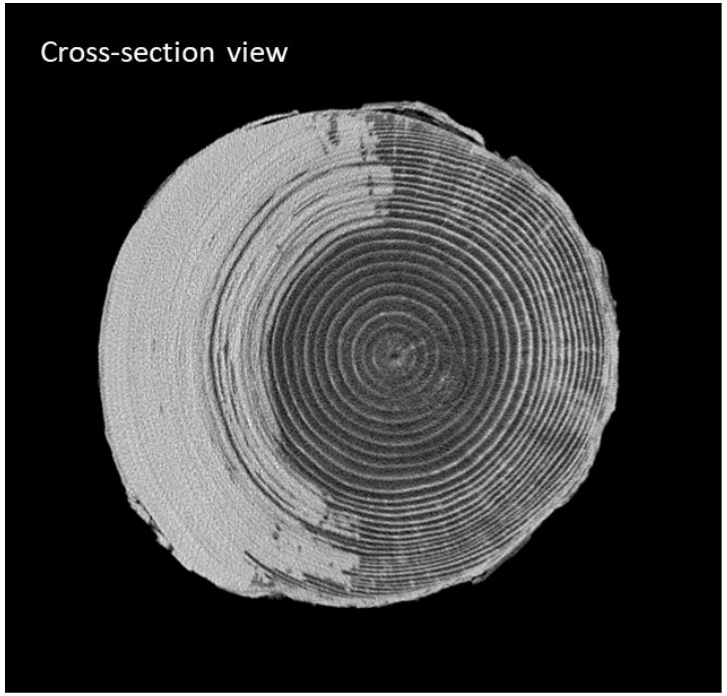


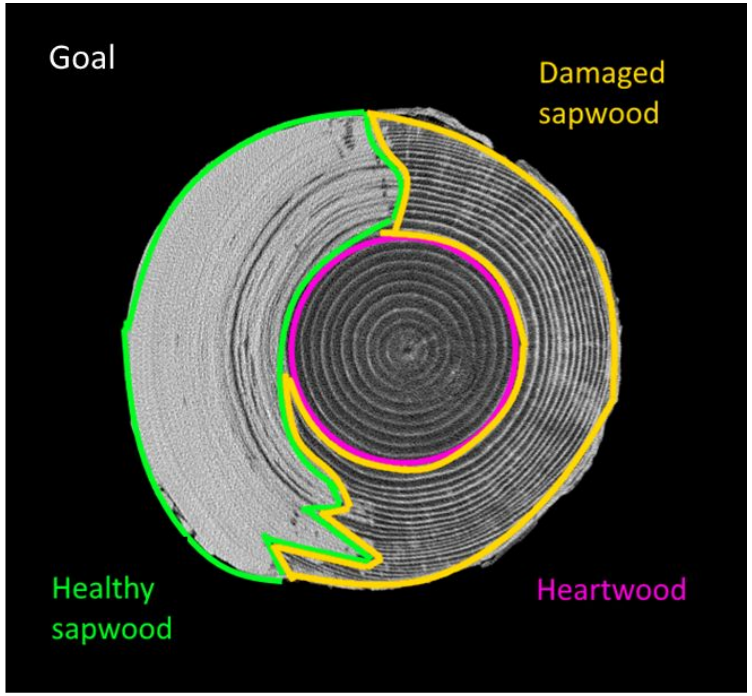
..and more!

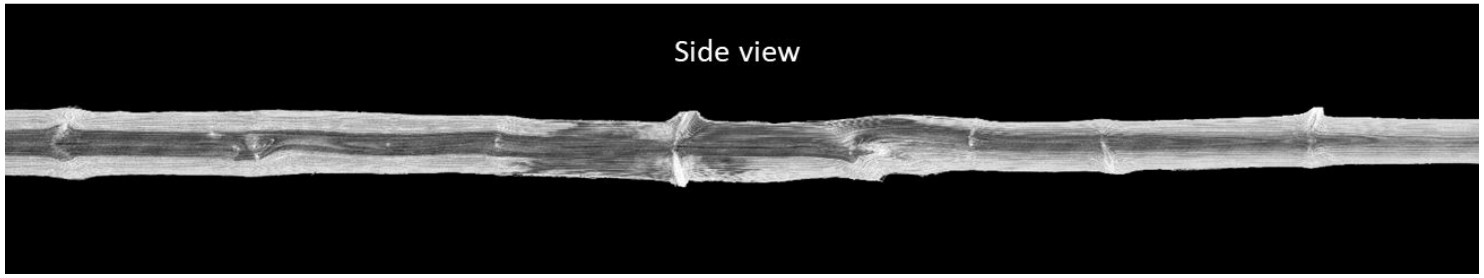
Read more here:
biifsweden.github.io

https://biifsweden.github.io/

CT-Tör 2: Detection of fungus damage in wood







BIIF Principal Investigators

- Fredrik Nysjö

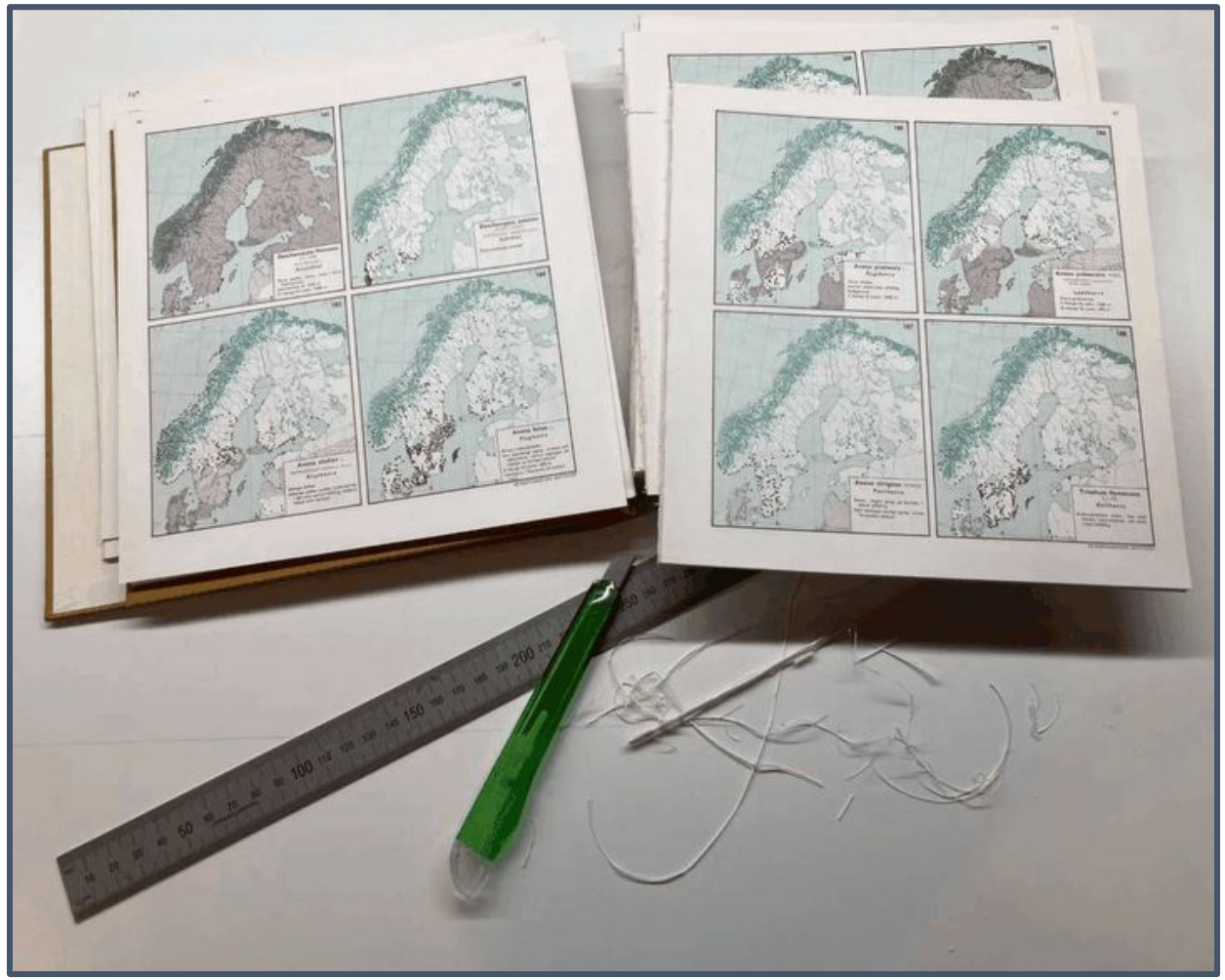
External Authors

- Sheng Joevenller, Kari Hyl

read more:
https://biifsweden.github.io/projects/2022/08/01/KariHyll2022-1/

Funded by NBIS
Long-Term Support (KAW)

Digitizing historical range maps to estimate range shifts of Nordic vascular plants



BIIF Principal Investigators

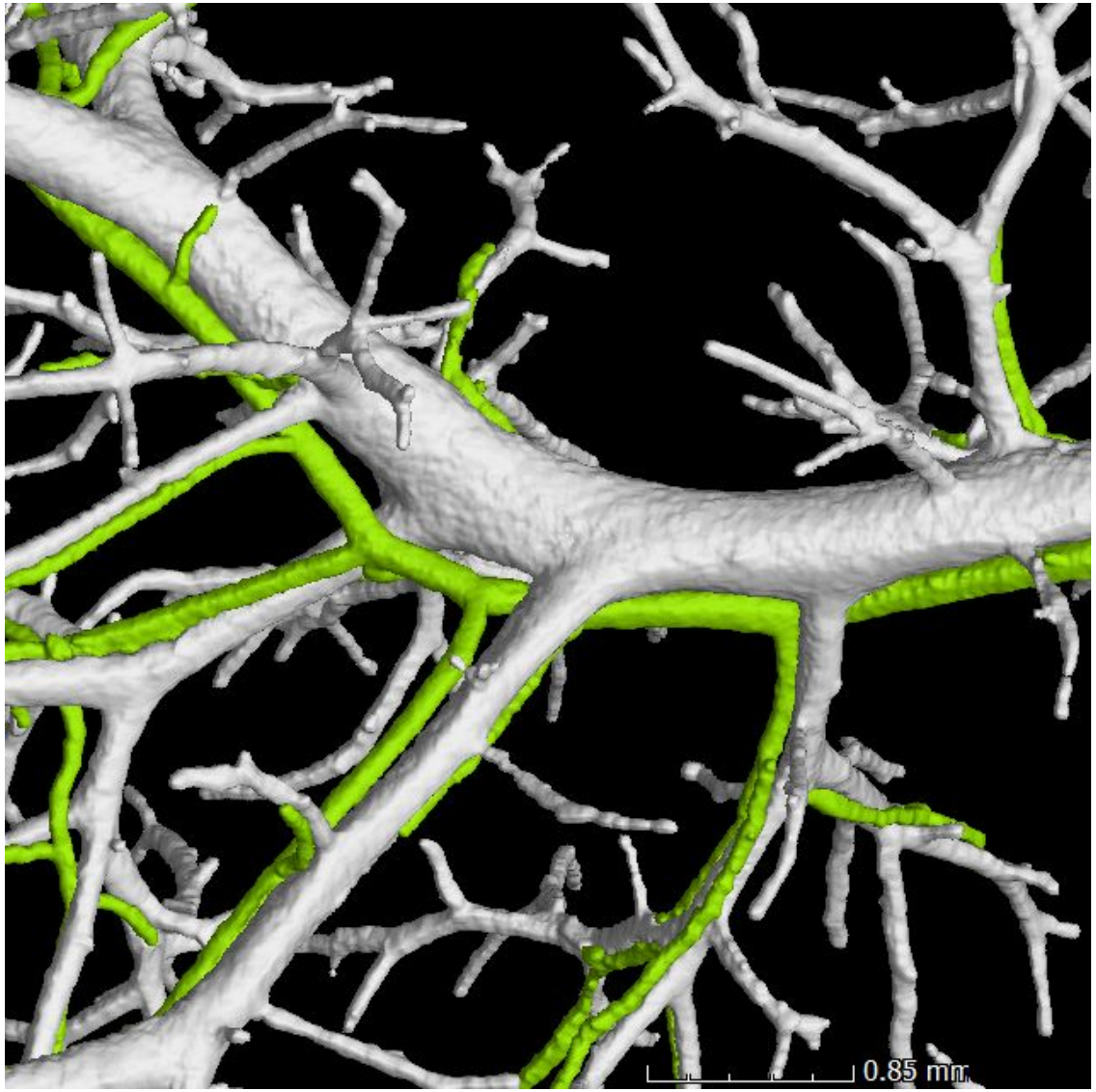
- Christophe Avenel

External Authors

- Matilda Arnell, Kristoffer Hylander (SU)

read more: https://biifsweden.github.io/projects/2022/11/14/KristofferHylander2022-1/

DoUble resin casting microCT (DUCT)



BIIF Principal Investigators

- Petter Ranefall
- Anna Klemm

External Authors

- Emma R. Andersson, Simona Hankeova, Department of Bioscience and nutrition, KI

read more:
https://biifsweden.github.io/projects/2019/02/22/EmmaAndersson2019-1/

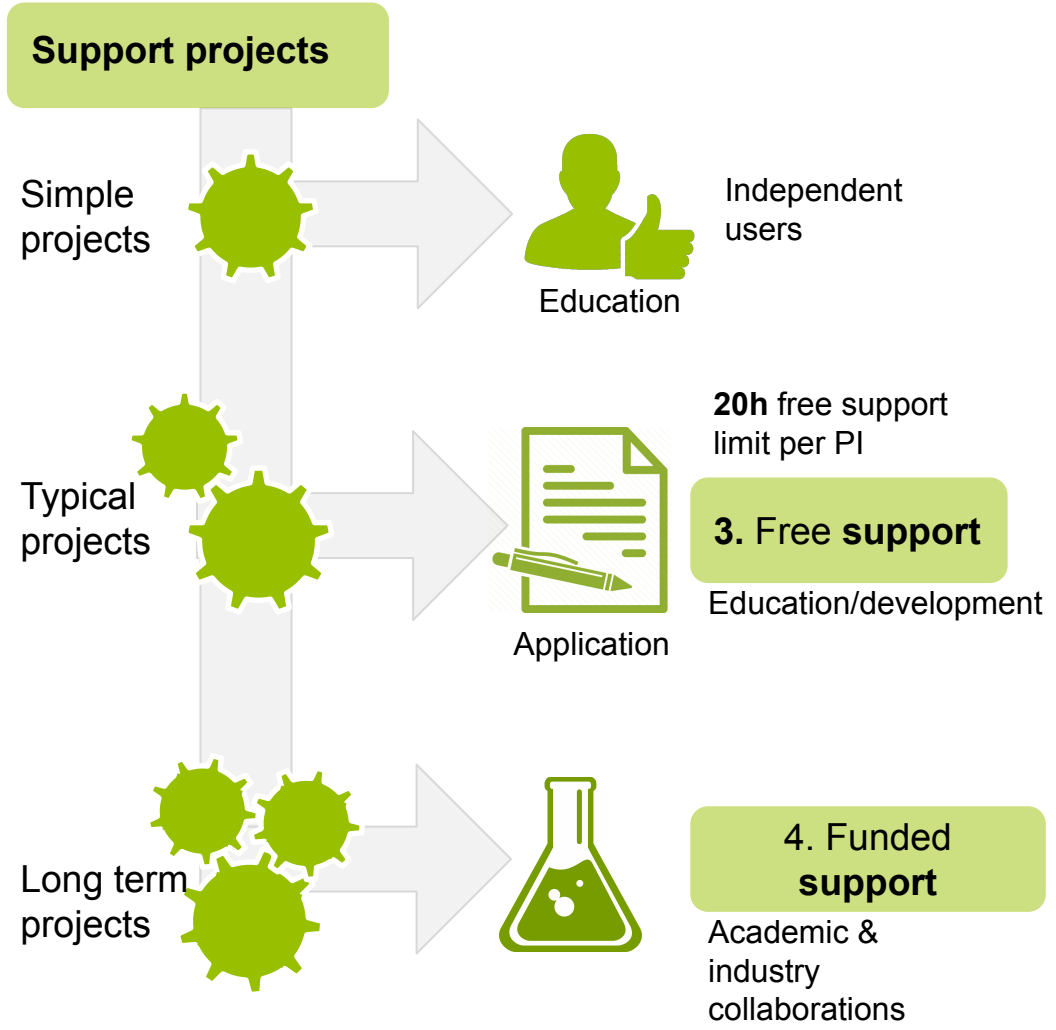
Ways of Support

Free **education**

BIIF YouTube Channel
Open Course Material
Courses: coming soon
DIASA course

Free **consultancy**

Call4Help
1x per month
together with
Sylvie LeGuyader,
LCI



Online resources

https://www.scilifelab.se/units/bioimage-informatics/

https://biifsweden.github.io/

Connected to:

https://www.it.uu.se/about_us/divisions/vi3/research/quantitative microscopy