26 May 2023, Rudolf

Running Streamlit on MacBook Pro

processing GUVs: guv1.h5, guv2.h5, guv3.h5, guv4.h5 generated using Mathematica code in BirefrObjectGeneratorMay2023.nb.

**Optical settings:**

Number of microlenses: 7

Pixels per microlens: 17

Number of voxels per microlens (supersampling): 1

Magnification: 60

NA of objective: 1.2

Wavelength of light: 0.55 µm

camera pixel size: 6.5 µm

refractive index of medium: oil n=1.35

**Forward Projection:**

**guv1.h5 -> guvBir[radius=3.5, membrane thickness=1, Δn=0.01]**

single voxel deep slice through center of GUV

A picture containing diagram, plot, line, screenshot

Description automatically generatedA picture containing screenshot, colorfulness

Description automatically generated

**guv2.h5 -> guvBir[radius=3.5, membrane thickness=1, Δn=-0.01]**

A picture containing screenshot, line, plot, diagram

Description automatically generatedA picture containing screenshot, colorfulness

Description automatically generated

**Reconstruction:**

Iteration 10

**A picture containing screenshot, diagram, line, plot

Description automatically generated**

**guv3.h5 -> guvBir[radius=6.5, membrane thickness=1, Δn=0.01]**

Complete GUV

Number of microlenses: 31

Number of voxels per microlens (supersampling): 1

Volume shape: [15, 61, 61]

A picture containing pattern, symmetry, colorfulness, art

Description automatically generated A picture containing screenshot, colorfulness, plot, line

Description automatically generated

Number of microlenses: 11

Number of voxels per microlens (supersampling): 3

A picture containing screenshot, colorfulness, line

Description automatically generated

**Reconstruction:**

Iteration 0

A picture containing screenshot, diagram, line, plot

Description automatically generated

Iteration 4

A picture containing diagram, screenshot, line, plot

Description automatically generated

Iteration 10

A picture containing screenshot, diagram, line, plot

Description automatically generated

**guv4.h5 -> guvBir[radius=9.5, membrane thickness=1, Δn=0.01]**

Number of microlenses: 17

Number of voxels per microlens (supersampling): 3

Volume shape: [23, 91, 91]

A picture containing screenshot, line, colorfulness, plot

Description automatically generated