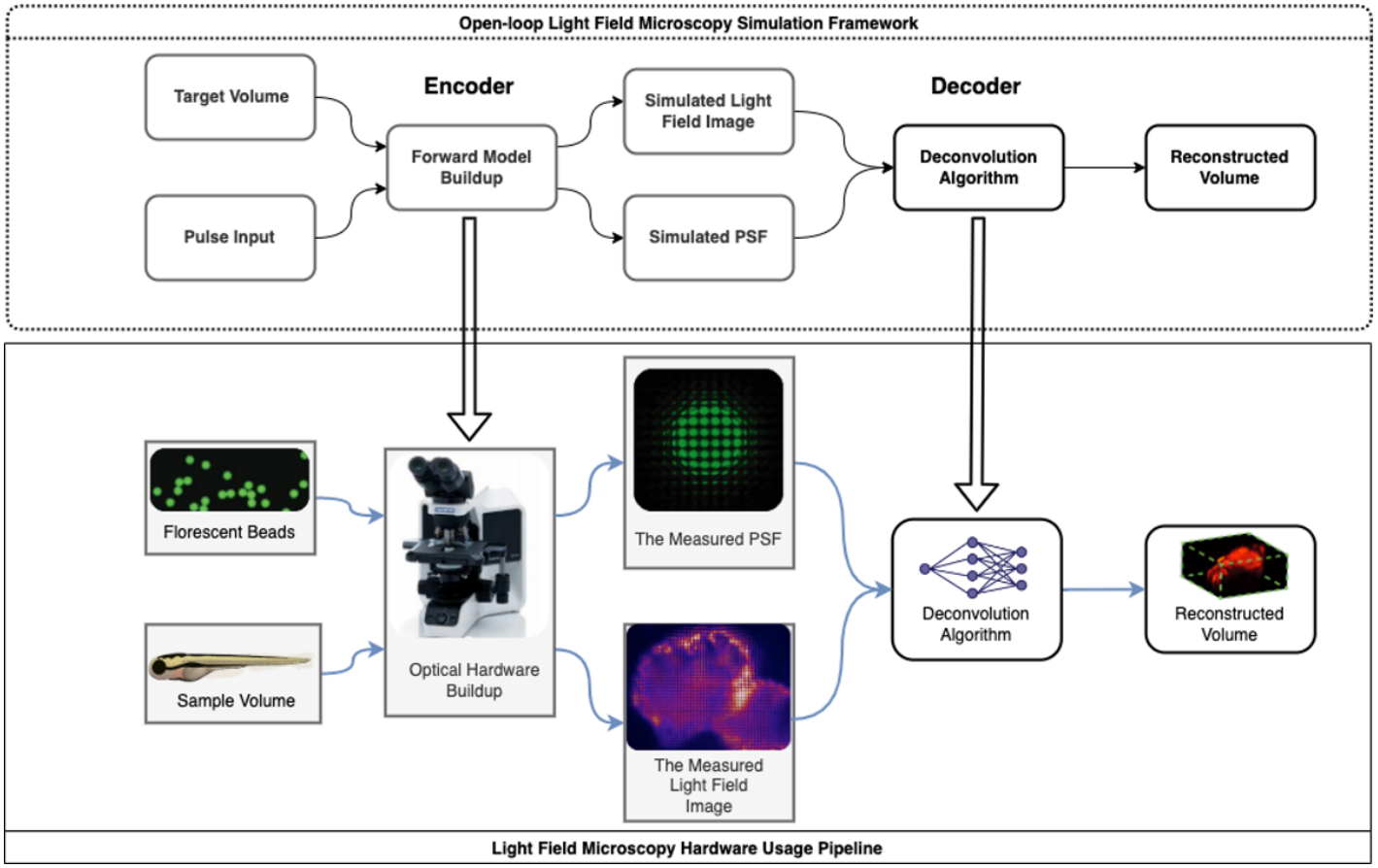
1. The Simulation for the Forward Model of Light Field Microscopy
2. The Differentiable Approach for Light Field Microscopy Forward Model Simulation
3. The Simulation and Optimization for the Forward Model of Light Field Microscopy

Abstract
Follow the book

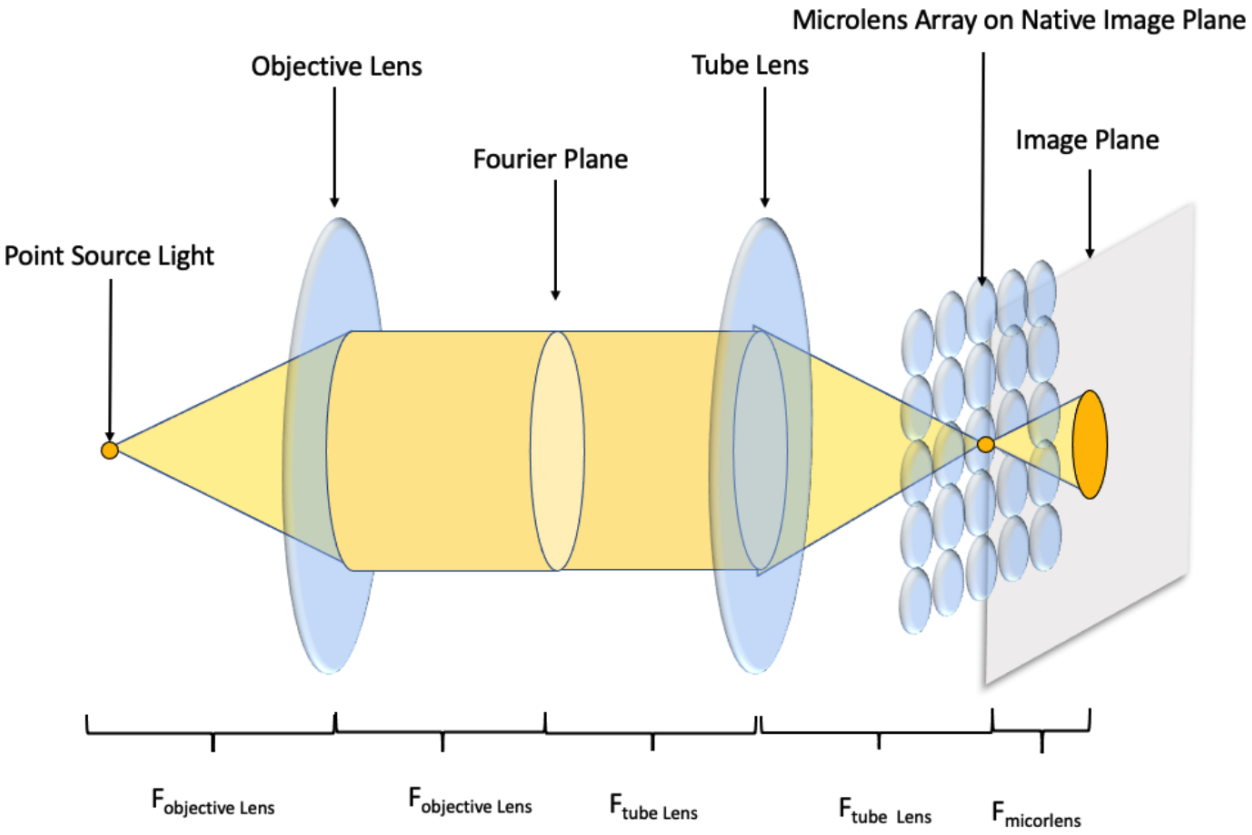
Introduction: (Chapter 1 & Chapter 2 before 2.2.3)

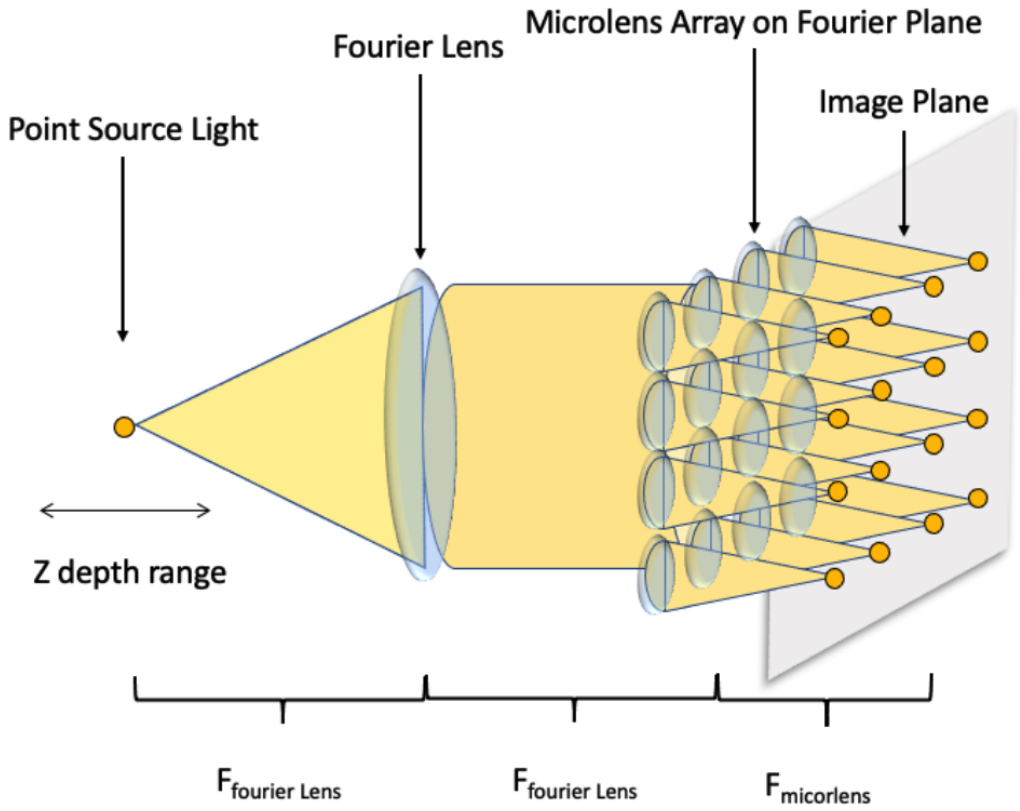
1. What is LFM (1.1)
    a. Light field technology to gather angular information from the scene
2. What is the LFM simulation(3 parts) chapter2
    a. Forward PSF
    b. Backward Reconstruct the volume
3. What is the forward model 2.1
    a. Predict 3d object
4. Rationale of the LFM pipeline *
    a. PSF
    b. Convolution
    c. Reconstruction
5. Why do we need forward model simulation
    a. Predict the performance of a possible optical design plan
    b. Optimize in the future
6. *Why do we need differentiability



Materials and Methods

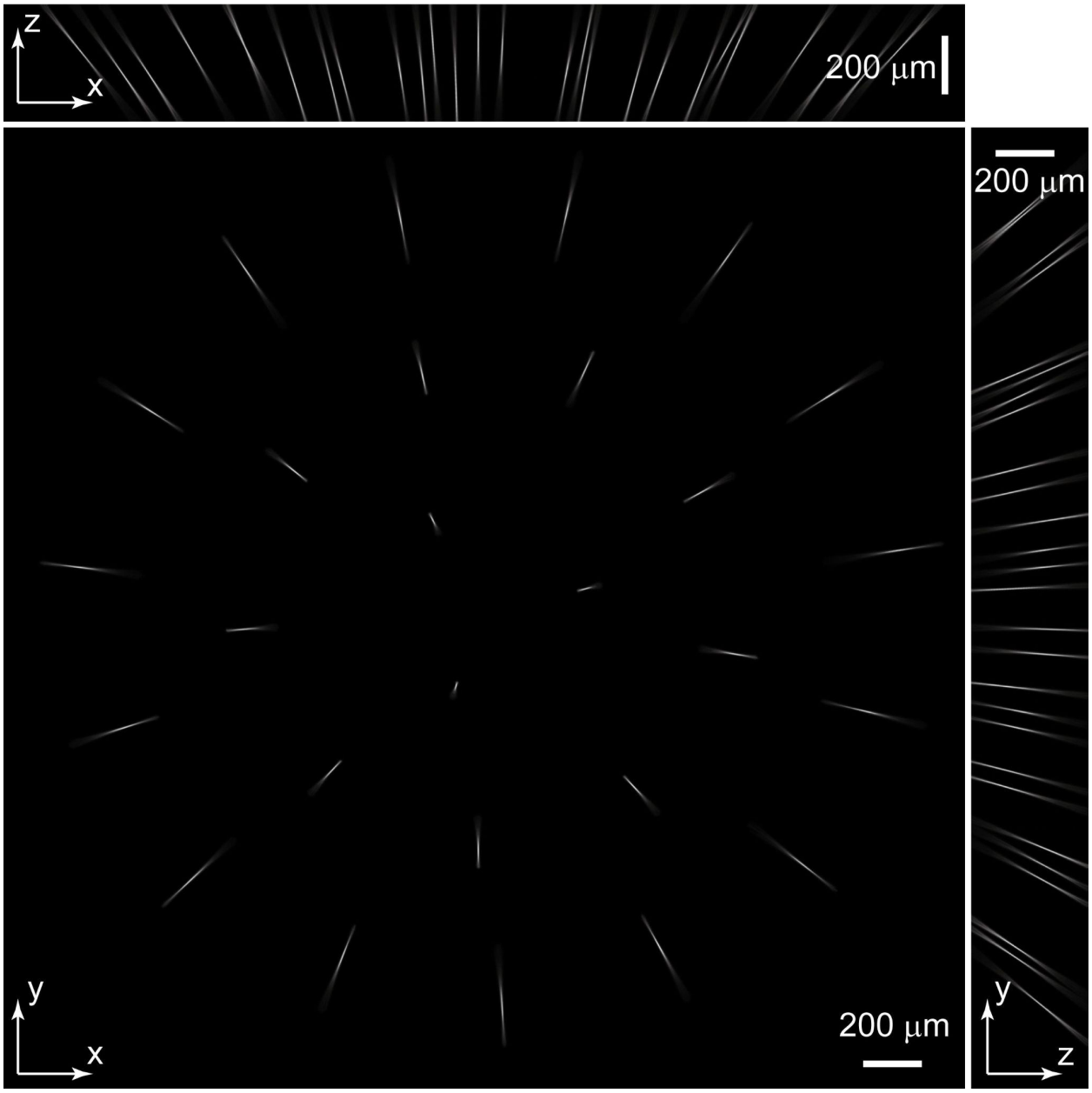
1. How to use LFM
    a. 2.2.1 section
2. What optical elements for your implementation
    a. Section 3.1
    b. Propagator
        i. 3.1.1.1. Angular Spectrum Method.
    c. Optical Component
        i. 3.1.2.2. Thin Lens.
        ii. Fourier lens
        iii. Microlens array
        iv. Camera sensor
3. What is your optical path (How do you combine the optical elements before to implement your forward model)
    a. Conventional LFM
        i. 3.2.1. Forward Model for Conventional Light Field Microscopy
    b. Fourier LFM
        i. 3.3.2

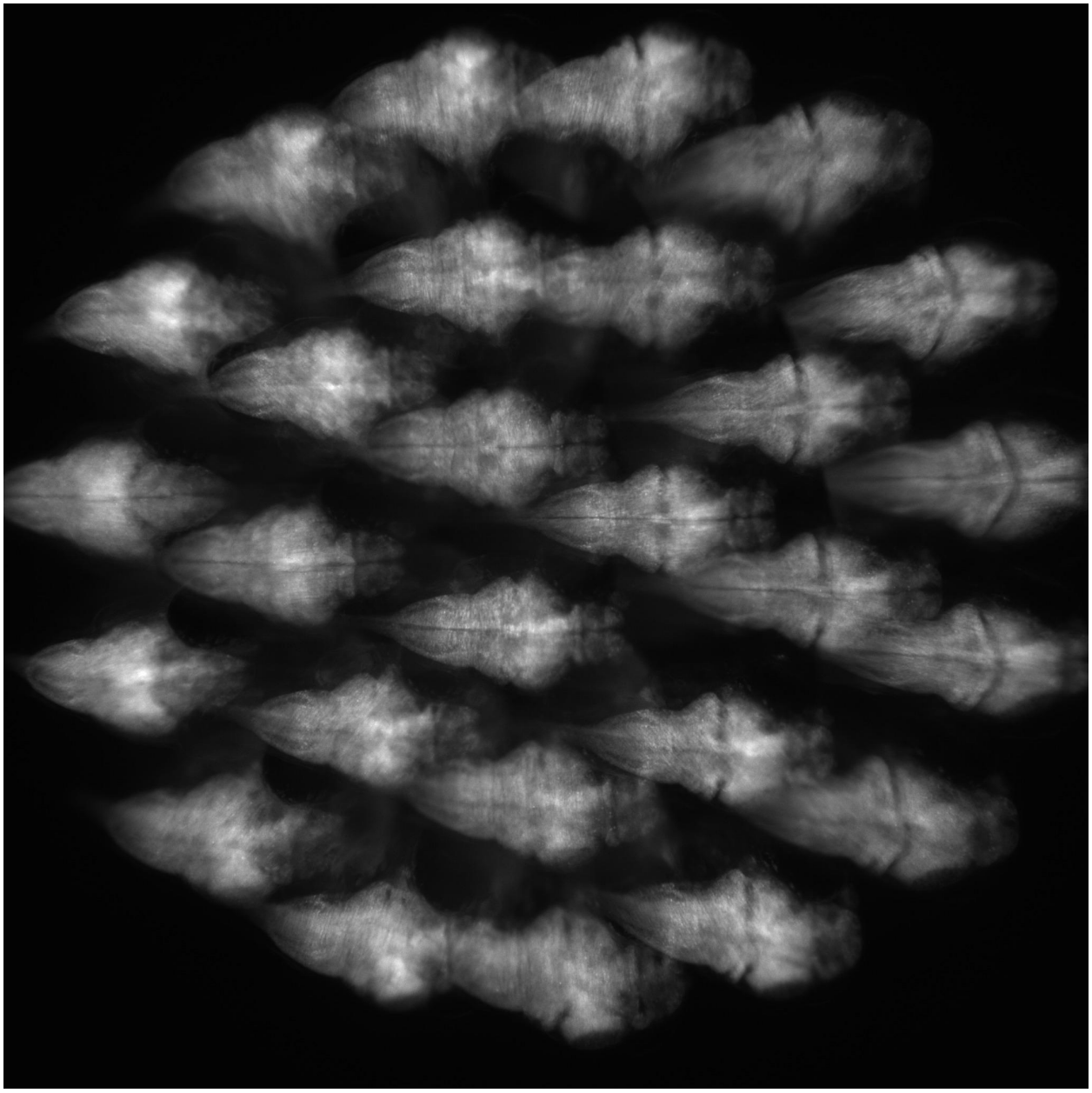

Microlens Array on Native Image Plane
Objective Lens
Tube Lens
Image Plane
Fourier Plane
Point Source Light
F objective Lens
F objective Lens
F tube Lens
F tube Lens
F micorlens



Results

1. PSF point spread function
    a. Conventional LFM
    b. Fourier LFM
2. Github lib link


z
x
200 μm
200 μm
y
x
200 μm
y
z



Conclusion and Future Works

1. What you have done
2. Optimization (Backward Model) to complete the whole simulation process
3. Drawback