Fundamental of Raman and Optical Microscopy

When: July 18th, 2024 (Thurs)
Where: Ajou Univ.
Lecturer: Sung Sik Lee (Head of Optofluidics unit, ScopeM, ETH Zurich)

9:30 - 11:30 Fundamentals of Raman Scattering Phenomena and Measurement

- What is Raman Scattering?
- Applications of Raman
- Principles of Raman Instruments
- Functions and Operations of Raman Microscope Components
- Summary

11:30 - 13:30 Q&A and Break

13:30 - 14:45 Fundamentals of Transmission Optical Microscopy

- Geometrical Optics and Resolution
- Objective Lenses
- Illumination
- Phase Contrast Microscopy and DIC Microscopy
- Quantitative Phase Imaging

14:45 - 15:00 Break

15:00 - 16:15 Fundamentals of Fluorescence Microscopy

- Optical Filters
- Confocal Microscopy (Scanning and Spinning Disk)
- TIRF Microscopy
- Super-Resolution Microscopy

16:15 - 16:30 Break

16:30 - 17:15 Fundamentals of Microscopy Image Analysis

- Optical Sectioning
- Deconvolution
- Resolution
- Digital Imaging
- Segmentation

17:15 - 17:30 Q&A
