

1st Summer School on InfraRed Nanospectro-imaging 2025

Monday, June 9, 2025 - Friday, June 13, 2025

Institute of Nuclear Physics Polish Academy of Sciences

Scientific Programme

On the first day of the Summer School (June 9th), **Professor Alexandre Dazzi (University of Paris-Saclay in Orsay, France)**, the pioneer behind the development of photothermal AFM-IR technology, will deliver a keynote presentation. Attending a lecture by the “father” of this technique will be a unique and highly significant opportunity. Thus all presentations on this day will be streamed online to allow participation for those unable to attend in person at the Institute of Nuclear Physics PAS. The first day will be open to everyone interested in the AFM-IR technique.

The following days of the Summer School (June 10th to 13th) will combine lectures with practical laboratory sessions and spectral data analysis.

- **Biological Panel**: Participants will have hands-on training in preparing biological samples (e.g., cell lines), applying appropriate treatments, performing fluorescence staining, and assessing results under a microscope.
- **Spectroscopy Panel**: This panel is dedicated to measuring prepared biological samples using both a conventional FT-IR spectrometer and the nanoscale AFM-IR system. Members of Professor Dazzi's group will actively assist in the measurements, making this a rare opportunity to learn directly from the creators of AFM-IR technology.
- **Data Analysis Panel**: The collected data will undergo detailed processing and chemometric analysis during the Data Analysis Panel. Lectures will also cover essential aspects of preparing data for in-depth analysis.

On the final day of the Summer School, participants will present their findings, showcasing the results developed through the week's sessions. This final session will provide a collaborative platform to discuss insights gained from the program's activities and experiments.