



# Семинар

**Пятница, 13 октября,  
11-00  
Конференц-зал ЛЯП**

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## **"Instrumentation Development for Optical Tracking in Water and Liquid Scintillator Detectors".**

By reconstructing the arrival position and time of photons produced in water or liquid scintillator on highly segmented photo-detectors one can reconstruct tracks by using the 'drift time' of photons, much as one does with electrons in a conventional Time Projection Chamber. I will discuss the development of instrumentation and event reconstruction techniques for optical tracking. In particular I will focus on the Large-Area Picosecond Photo-Detectors (LAPPDs) and their application for separation of Cherenkov and scintillation light which opens up a possibility to build a large directional liquid scintillator detector with a broad physics program including neutrinoless double beta decay, solar neutrinos, geo-neutrinos, supernova neutrinos, nucleon decay, and long baseline neutrino physics.