

Invitation to Project Seminar Measurement,
Sensor and Embedded Systems

Interdisciplinary applications of light, ultrasound, and electronics

Abstract:

The [Electronics Research Laboratory at the University of Helsinki](#) was founded in the 1970's and has since then invented and created customized measurement devices for both academic and industrial uses. In this presentation, I will discuss the current projects that are being developed in the laboratory alongside interdisciplinary projects that have been completed in the past. I will discuss custom instruments utilizing both low intensity and high intensity ultrasound (generated with both contact or non-contact transducers) and light in various forms. The topics touched upon in the talk include acoustic levitation and particle manipulation, ultrasonic sensing and microscopy, non-contact sampling utilizing ultrasound and nanofiber generation with ultrasound. I will also demonstrate uses of light for non-contact measurements and actuation of various systems. The end uses for the techniques developed in our laboratory include e.g. medicine (drug delivery, wound care, orthopaedics, ophthalmology), various industrial applications, biology and food physics.



Speaker: Prof. Ari Salmi, Ph. D., Acting head of Electronics Research Laboratory, University of Helsinki

Place: UBH-0205

Date: 16.1.2026, 1.30 pm

Audience: All interested members of TUBAF