

## Curriculum Vitae - László Jakab

### Studies

1977-81: Technical University of Budapest, Faculty of Electrical Engineering, specialized in microelectronics and technology; profession: electrical engineer; degree: M.Sc. with summa cum laude diploma

### Scientific degrees

1985: PhD in solid state physics, topic: "Optimization of acousto-optic devices and their technologies"

1992: Candidate of Technical Science of the Hungarian Academy of Sciences, topic: "Investigation of acousto-optic signal processing devices and systems"

2013: Habilitation at the Faculty of Electric Engineering of the Budapest University of Technology and Economics, topic: "Optoelectronic devices and systems"

2014: Doctor of Hungarian Academy of Sciences

### Professional experience and projects

Receiving his M. Sc. diploma from the Faculty of Electric Engineering of the Technical University of Budapest (TUB) in 1981 he started working at the Technical University of Budapest, Department of Physics later at the Department of Atomic Physics, where he was an associate professor. He received his Ph. D. in the field of solid state physics at the Faculty of Electrical Engineering in 1985. He became the Head of the Optics Research Laboratory in 1992.

In 2006 he joined the Department of Electronics Technology, where he was the deputy head of department between 2008 and 2015.

He was the Vice Dean of the Faculty of Electrical Engineering and Informatics from 2008 to 2015.

He is the Dean of the Faculty from 2016.

His research is in the field of applied optics in particular the development and design of acousto-optic devices and systems, surface acoustic wave devices, optical signal processing systems, integrated optical systems and devices. His most important results are: high speed scanning acousto-optic spectrum-analyzers, new and high efficiency acousto-optic mode-lockers, two dimensional deflectors and tunable filters as well as the examination of anisotropic planar waveguide systems containing surface acoustic transducers, circular lenses and coupling elements. He has experience with laser systems (actively mode-locked Nd:Cr:GSGG and Er:YLF lasers), coherent optical systems ( optical Fourier transformation, convolution, signal and image processing), in optical technologies (evaporation, diffusion, ion etching, lithography), in optical measurement techniques (fiber and waveguide measurements, investigation of optical thin films, acoustic beam profiling) and with complex optoelectronic systems (multichannel optical processor for phased antenna arrays ).

Recently he is active in research of automatic optical inspection systems of electronics technology processes.

His results both in basic science and applied techniques are reflected in more than 100 scientific publications, patents, know-how and technical reports.

He worked as a visiting scientist with professor H. J. Eichler at the Optical Institute of the TU Berlin in 1989. He spent one year research fellowship from the Alexander von Humboldt Foundation

Germany in 1994 for investigation light frequency comb generation methods at the Max-Planck-Institut für Quantenoptik, Garching.

He is the member of the Committee of Electronics Devices and Technologies of the Hungarian Academy of Sciences.