

CV of János Kornis

Personal data

Name János Kornis
Position Associate professor
Current institution Department of Physics,
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Date of birth 12.02.1960.

Education

High School : Debrecen, Fazekas Mihály Secondary School
University : Budapest University of Technology and Economics, Hungary
Thesis : 1984, "Application of speckle pattern interferometry"
PhD : 2006, Department of Physics, Budapest University of Technology and Economics, "Shape and deformation measurement by adaptive methods in TV holography and digital holography"

Employment

Work History:

1984 – Department of Physics, Budapest University of Technology and Economics

Academic Positions:

1984 – 1989 : Department Engineer
1989 – 1995 : Lecturer
1995 – 2005 : assistant Professor
2009 – : associate Professor

Research interest:

Laser speckle metrology

Development of new optical measuring principles for shape and deformation measurement of diffuse objects.

New results: Comparative speckle interferometry. adaptive metrology. Application of neural networks in interferometry.

Highly stabilized laser diode based light source.

Development of rubidium stabilized laser diode light source for ultra precise displacement measurement. Development of measuring methods for Allan variance measurements.

Application of optical metrology in high energy physics.

Participation in international collaborations

Optical calibration system for neutrino oscillation experiment for the KamLand experiment in Japan

(collaboration with the Department of Physics of University of Alabama).

Optical calibration system for neutrino oscillation experiment for the Palo Verde experiment in USA.

(collaboration with the Department of Physics of University of Alabama).

Displacement measurement of the Silicon Microvertex Detector.

(participation in the CERN L3 experiment)

Design of a position monitoring system for the AMS spectrometer on the ISS space station for the position measurement of the silicon detectors.

(participation in the CERN L3 experiment)

Optical investigation of the detector parts of the LAR detector in the ATLAS experiment.

(participation in the CERN ATLAS experiment and collaboration with CPPM Marseille)

Image processing

Research of industrial optical inspection systems and development of custom image processing methods.

- Door mirror inspection system: FLABEG Hungary

- Flatnes measuring device: EPCOS Sumperk/Czech Republic

- Optical distance measuring head: AUDI-Győr/Hungary

Quantum optics

- Development and building different optical devices for quantum key distribution

Participation in the research work in FETI (since 2007)

- UV camera development

- Battery monitoring system

- UWB/ISM radar development

Publications:

<https://m2.mtmt.hu/gui2/?type=authors&mode=browse&sel=10041502&view=pubTable>

Number of citations by independent authors: 631.

Computer Skills

Visual basic, Delphi, Matlab, C

Sport, hobby

ship model building