

Curriculum Vitae

First name / surname Dr. **László TÓTH**
Born 1966, Hungary
Company / Position 1. [University of Debrecen, Faculty of Informatics](#) / Assistant Professor
2. SciTech Műszer Kft. / Owner, CEO
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Work Experiences

1.

Dates **1991 -1996**
Name and address of employer [Institute of Nuclear Research of HAS](#), H-4001 Debrecen, POB. 51., Hungary
Position Young Research Associate, assistant lecturer
Main activities and responsibilities

- Investigation of Post Collision Interactions (PCI) in ion-atom collisions.
- Investigation of inner atomic shells' structures, as well as coherence and electron correlation effects with electron spectroscopy of ion-atom collision induced Auger electrons.
- Development of electron spectroscopy related instruments and measurement systems, as well as data processing software.

2.

Dates **1996 - 2004**
Name and address of employer [Konkoly Observatory of the HAS, Heliophysical Observatory](#) 4010 Debrecen, Pf. 30.
Position Research Associate, visiting lecturer/ research fellow
Main activities and responsibilities

- Statistical investigation of the subsurface behavior of solar bipolar active regions.
- Study of the effect of solar particle radiation activity on the terrestrial weather, planetary-waves and cyclone activity.
- Building astronomical instruments, as well as developing data and image processing software.
- Participating in the regular daily photosphere observation service.
- History of astronomy, astronomical ethnography..

3.

Dates **2004 – 2008**
Name and address of employer *Employer:* [Core Research for Evolutional Science and Technology](#) program at the [Japan Science and Technology Agency](#)
Workplace: [Surface and Materials Science Laboratory](#) at the [Nara Institute of Science and Technology](#), 8916-5 Takayama, Ikoma, NARA 630-0192 JAPAN
Position Researcher
Main activities and responsibilities

- We have designed and built a new type $\pm 60^\circ$ (1.00π sr) Wide Acceptance Angle spherical aberration corrected Electrostatic objective Lens (WAAEL) as well as a $\pm 45^\circ$ (0.59π sr) WAAEL based Display-type Ellipsoidal Mesh Analyzer (DELMA) for spectroscopy and spectroscopic selected direction real- and selected area 2D angular imaging.

4.

Dates **2008**
Name and address of employer [Institute of Nuclear Research of HAS](#), H-4001 Debrecen, POB. 51., Hungary
Position Research Associate
Main activities and responsibilities Participation in different running projects

5.

Dates **2008 – present**
Name and address of employer [University of Debrecen, Faculty of Informatics, Department of Informatics Systems and Networks](#), 4028, Debrecen, Kassai út 26.
Position Assistant Professor
Main activities and responsibilities

- Participation in the WAAEL-DELMA project at [NAIST SMSL](#) and [Spring-8](#), Japan
- Investigation of the methods and development of Ultrasound-CT based on National Instruments PXI system.
- Invention and development of Software Based Imaging Energy Analyzer (SBIEA)
- Invention and development of Distributed Sensor Network for meteorological sensing and numerical weather Prediction Calculations (DSN-PC).
- Teaching and supervising thesis works (see “Teaching Experiences”)

6.

Dates **2010 - present**
Name and address of employer **SciTech Műszer Kft.**, Debrecen, Hungary.
Position Owner, CEO
Main activities and responsibilities

- Development of
 - SciTech-SIM charged particle optics simulation software
 - electron optical systems (calculation, design and construction)
 - Software Based Imaging Energy Analyzer (SBIEA)

7.

Dates **2012 – 2014**
Name and address [SPECS Surface Nano Analysis GmbH](#), Voltastrasse 5, 13355 Berlin, Germany
Position cooperating partner
Main activities and responsibilities

- Participated in and supported projects to improve existing and design new $+30\text{deg}$ (0.27π sr) WAAEL lens systems and other related developments.

Teaching Experiences

1.

Time Periods **1995**
Institution/ Department, Location [Institute of experimental Physics](#) of [University of Debrecen](#), H-4026 Debrecen, Bem tér 18/a, Hungary
Position Assistant
Description

- Development and presentation of classroom experiments for the introductory “Experimental Physics” course related to Electrodynamics, Relativity, Optics, Quantum Mechanics, Atomic & Molecular Physics.

2.

Time Periods	2002 – 2004
Institution/ Department, Location	Institute of Theoretical Physics of University of Debrecen , H-4026 Debrecen, Bem tér 18/B, Hungary
Position	Visiting Lecturer
Description	<ul style="list-style-type: none">Teaching “Introduction to Astronomy” courses for students of physics

3.

Time Periods	2008 – present
Institution/ Department, Location	University of Debrecen , Faculty of Informatics , Department of Informatics Systems and Networks , 4028, Debrecen, Kassai út 26.
Position	Assistant Professor
Description	<ul style="list-style-type: none">Teaching FPGA (Verilog), μC (Assembly, C) and LabView related courses.Supervising<ul style="list-style-type: none">Scientific Student Association (TDK) works (17 pcs)BSc (18 pcs), MSc (2 pcs) thesis works as well asPhD (2 pcs) thesis works

Education, Degree

1.

Title of qualification awarded	MSc in Physics (234/1991)
Name and type of organisation providing education and training	University of Debrecen , Faculty of Science and Technology , 4010 Debrecen, Pf. 18. Institute of Nuclear Research of HAS , H-4001 Debrecen, POB. 51., Hungary

2.

Title of qualification awarded	PhD in Physics (140/2008)
Name and type of organisation providing education and training	University of Debrecen , Faculty of Science and Technology , 4010 Debrecen, Pf. 18. Institute of Nuclear Research of HAS , H-4001 Debrecen, POB. 51., Hungary

Prices

- „Price of the Faculty of Informatics”, University of Debrecen, 26 VI 2011.

Languages

Mother tongue	Hungarian
Other language	<ul style="list-style-type: none">English (Hungarian State Accredited Exam; Intermediate Level C/2004/410524)Russian (University Final Exam, Equivalent with the Hungarian State Accredited Exam on the base of 11/1990. (X.4) MKM decree; Basic Level C/ 12 06 1996)

Other skills

Frequently used IT tools	MS Windows, Linux, MS Office, LaTeX, C/C++, SciLab, Matlab, LabView, Assembly (μ C), Verilog (FPGA), Solid Edge, Qcad, SIMION, SciTech-SIM, GIMP, POV-Ray, ImageJ, Inkscape, ...
Driving license	B
Sport	judo (1976-1982), gliding (1983-1991), speleology (1991-1996), horse-riding (1994-...)

Additional information

Main publications and references are listed at:

- MTMT : <https://vm.mtmt.hu/www/index.php?AuthorID=10047484#>
- ResearchGate : http://www.researchgate.net/profile/Laszlo_Toth5
- Google Scholar : <https://scholar.google.hu/citations?user=FWNIY3YAAAAJ>