CURRICULUM VITAE

PERSONAL INFORMATION

Name:	Dr. László Csurgai-Horváth
Place and date of birth:	Hungary, Székesfehérvár, 1961.
Workplace:	Department of Broadband Infocommunications and Electromagnetic Theory (BME-HVT) 1111 Budapest, Egry József u. 18.
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DEGREE

2021:

- Habilitation, BME, Engineering and Technology, Discipline of Electrical Engineering. The title of the thesis is "Investigation of certain fading phenomena of terrestrial and satellite radio channels and the related applications".

2010:

- PhD, BME, Engineering and Technology, Discipline of Electrical Engineering. Title of the dissertation is ”Digital modelling of fade and interfade duration on high frequency radio links and its application in time series synthesis”.

1994:

- Digital Design Course (Texas Instruments, Freising, Germany).

1993-1994:

- Tempus Open and Distance Learning Course (BME - Scienter, Bologna, Italy).

1985:

- MSc in electrical engineering (BME, Faculty of Electrical Engineering, Telecommunications, Broadcasting).

LANGUAGE KNOWLEDGE

- English, intermediate
- German, basic level

CURRENT POSITION

Associate professor, BME, Department of Broadband Infocommunications and Electromagnetic Theory

PROFESSIONAL ACTIVITIES

2019-22:

- As the chairman of the BME master's program in space engineering, the elaboration of the establishment and start-up material of the master's degree program, the development of the training curriculum in cooperation with the five faculties of BME.

2014-22:

- Q-band indoor propagation measurements for 5G networks, ESA technology transfer project.
- Construction of satellite wave propagation and communication experimental stations, performing measurements, development of propagation models.
- Measuring the TVWS band and investigating its applications in cognitive radio.
- Development of digital control of the satellite-based power supply system for ESA's ESEO mission.

2011-13:

- Investigation of propagation problems related to cognitive radio.
- Investigation and modelling of E-band propagation and outdoor optical connections, cooperation with the optical research group of the Technical University of Graz and the laboratory of optoelectronic systems of the Technical University of Košice to develop joint wave propagation measurements and models.

2004-10:

- Investigation of the effects of precipitation on wave propagation on microwave terrestrial radio connections in the Laboratory of Digital and Optical Communication Systems of BME-HVT, statistical characterization of the fading process of rain attenuation, development of digital models.

1988-2003:

- Research assistant in the space research group of the Department of Microwave Telecommunications at BME, then research associate.
- Main research areas: development of hardware and software for on-board computers and central measurement data collection systems for scientific spacecraft.

- Participation in the development of a unified telemetry system for Intercosmos satellites; study of the radiation resistance of digital circuits.
- Missions: INTERCOSMOS-24 ACTIVE, INTERCOSMOS-25 APEX, INTERBOL-1 TAIL, ROSETTA lander.
- Industrial research and development works; National Meteorological Service, Antenna Hungária, RTD USA-BME Laboratories, Pannon GSM / Telenor.

1985-87:

- Videoton Development Institute, Budapest, hardware development engineer.

EDUCATIONAL ACTIVITY

- BME-VIK in Hungarian:
  - Radio Systems and Applications Laboratory, BMEVIHVA344, 2005-
  - Space Technology, BMEVIHVBV06, 2010-
  - Space Technology in Practice, BMEVIHVAV07, 2011-2018
  - Space Technology Laboratory, BMEVIHVAV03, 2013-
  - Hardware Basics, BMEVIIIBA01, 2018-
  - In space engineer program starting in 2022: Space Systems Design, BMEVIHVMA12, Space Technology Laboratory, BMEVIHVMA13
- BME-VIK in English and in Hungarian:
  - Space Electronics Design, co-lecturer, 1991-1994
  - Programming for Graphical Environment, BMETKVIB607, (only in English), 1999-2001
  - Programming Practice, BMETKVIB608, BMETKVIB621, (only in English), 2005-2008
  - Programming for MS Windows, BMEVIHVJV43, (earlier BMEVIMH9143), 2001-2015
  - Windows native programming, BMEVIHVAV09, 2015-
  - Space Technology, BMEVIHVBVAC05, 2016-
  - Thematic laboratory and project laboratory supervision in BSc and MSc
  - Supervision of Students' Scientific Conference (TDK) reports; OTDK 2'nd place (1), VIK TDK 1'st palce (1), VIK TDK 2'nd place (3), VIK TDK 3'rd place (6), VIK TDK reward (2)
  - Supervision of BSc theses, (in Hungarian, 20 students, in English 7 students)
  - Supervision of MSc theses, (in Hungarian 6 students, in English 6 students)
  - 5 years of training (in Hungarian 6 students)
  - PhD supervisor:
    - Bernard Adjei Frimpong (in English), degree gained in 2020.
    - From 2021 the supervisor of a Hungarian-speaking student.

NATIONAL AND INTERNATIONAL RESEARCH COOPERATION

2020-:	Ericsson Hungary, BME-HVT research collaboration, AI methods for adaptive beam forming for indoor environments.
2019-2020:	NKFI Thematic Excellence Program TKP-2-1 / PALY-2020 IKA, Indoor Millimeter Wavelength Propagation Demonstration; publication activity.
2017-2019:	EFOP-3.6.2-16-2017-00013 project, 2017-19, Time-critical 5G network infrastructures: Satellite components in the 5G network, satellite channel qualification.
2017-2018:	As a supervisor: "Mobile 5G propagation tester", ESA-Wigner Research Centre for Physics, Technology Demonstration Project.
2015-2017:	As supervisor: "Ground Station for the Alphasat Q / V Band Communications Experiment", ESA 4000114582/15/NL/NDe research contract.
2014-2016:	As supervisor: "Participation in the Alphasat Technology Demonstration Payload Experiment", ESA 4000109841/13/NL/KML research contract.
2012-2014:	As a supervisor: "Future Internet research from theory to application", abbreviated First, TÁMOP-4.2.2.C-11/1/KONV-2012-0001 research and development project, "Cognitive wireless infocommunication technologies".
2010-2012 :	QOSMOS - Quality Of Service and MObility driven cognitive radio Systems, EU Framework 7 Integrating Project.
2011-2015:	COST IC-1101, Optical Wireless Communications - An Emerging Technology.
2009-2010 :	Gigabit - Gigabit radio link networks, Telenor.
2008-2012 :	COST IC-0802 - Propagation Tools and Data for Integrated Telecommunication, Navigation and Earth Observation Systems.
2008-2011:	MARCH - Multilink Architecture for Multiplay Services.
2005-2010:	MIK - Mobile Innovation Centre, Examining the Mobile Radio Channel.

2004-2009: SatNEx - European Satellite Communications Network of Excellence, EU Framework 6 Project.
2003-2006: Broadwan - Broadband services for everyone over fixed wireless access networks.
1997-2007: MilliProp - Millimetre wave propagation, Investigation of terrestrial millimeter wavelength radio communications, Telenor.
1999-2001: TEN - Trans-European Tele-Education Network, EU Framework 4 Project.

PUBLICATION ACTIVITY

The results related to the scientific activities have been presented in several national and international journals and conferences, in more than 100 publications, which can be found in detail in the database of the Hungarian Scientific Bibliography: MTMT.

PARTICIPATION IN NATIONAL AND INTERNATIONAL PROFESSIONAL PUBLIC LIFE

- Regular review of conference and journal articles, TDK reports and thesis works.
- Program committee membership at conferences, committee member of PhD defences.
- BSc / MSc final exam chair.
- Giving professional and educational lectures.

AWARDS, RECOGNITIONS

- Scientific Association for Infocommunications, Gold Badge Award, 2020.
- Excellent instructor at VIK, gold degree, 2019.
- Ericsson HWLab conference, consultant award, several times.
- Scientific Association for Infocommunications, Silver Badge Award, 2015.
- Silicon Labs Diploma Thesis Competition, 2013, consultant award.

PROFESSIONAL MEMBERSHIP

- Scientific Association for Infocommunications, HTE
- Institute of Electrical and Electronics Engineers, IEEE

FACULTY ORDERS

- Space Engineering Committee, Chairman
- Faculty Education Committee, department representative
- Faculty Credit Transfer Committee (member of the Accreditation Committee, Electrical Engineering)

06 April 2022