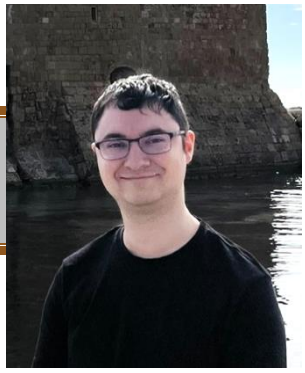
# Attila Fodor

## Curriculum vitae



## Introduction and contact information

Self-employed freelancer electrical engineer with a passion for research and programming. My expertise lies in enhancing the efficiency of vehicle propulsion systems. I have a track record of contributing to innovative projects and presenting my work at international conferences as an IEEE Member. I am Medior/Senior in various programming languages, and I possess strong problem-solving and communication skills. I am eager to continue my professional growth and contribute to projects that drive innovation and sustainability.


- Phone number: +36 70 422 5802
- E-mail address (for official use): fodor.attila@fodyweb.hu
- ResearchGate: Attila-Fodor-5
- MTMT: 10082867
- LinkedIn: fodor-attila-86540611b/


## Spoken languages

| | | | |
|---|---|---|---|
| English: | Conversational | Hungarian: | Native |
| German: | Begginer | Vietnamese: | Begginer |

## Relevant professional experience

- *Founder of STERADIAN engineering office (Since 2023)*

  Development of several hardware and software components in the following industries: field buses, communication interfaces and electronics for stage lighting, marine and land transport vehicles and online gaming softwares.

- *Research team Leader at Óbuda University (Since 2023)*

  Currently I am leading a research team of 6 people, including PhD students and research associates with PhD degrees. Considering the results of my previous research projects, I was appointed by the professor in charge of the College as the leader of the research team (IEEE Student Branch) and responsible for the professional and scientific activities of the College.

- *Development engineer at Fuzzysys Kft. (Since 2023)*

  Development of an automated aerosol flow measurement system for environmental certification in Košice, Slovakia. During the visits to the customer, I presented the hardware and software tests and continued the communications in English regarding the new needs.

- *System administrator at Külső-Pest Educational Center (2022-2023)*

  Operated technologies: Hyper-V, Active Directory Domain Services, Omada SDN; Helpdesk and support for the teachers with KRÉTA and other online services. Also, I was responsible for maintaining contact with the KIFÜ agency.

- *Researcher & Demonstrator at Óbuda University (2020-2023)*
  I taught the "Python in Practice" course in English to our students from Nairobi, Kenya. The aim of my research project is the application of autonomous systems (AI or FIS) in the drive control of scheduled buses equipped with electric twin-drives.
- *Embedded software developer at Dj Fody Event Technology (2012-2020)*
  Mainly staging software development using robust field buses for both embedded and desktop environments. Also software development, network deployment, operation, maintenance, and research simulation for corporate orders.
- *Informatics Intern at MOL Nyrt. (2014)*
  IT asset inventory tasks.

## Research accomplishment (portfolio link: ResearchGate)

- January 2024: IEEE SAMI and ICCECIP conferences:
  *Fuzzy-based Gear Shifting Algorithm for Twin-drive in MATLAB Simulink model*
- July 2023: IEEE INES conference (Nairobi, Kenya):
  *Challenges in Isokinetic Sampling for Gas and Particle Measurements: Testing Homogeneity and Handling Interruptions in Sampling*
- January 2023: IEEE SAMI symposium (Herl'any, Slovakia):
  *Development of a Drivecycle-based Twin Drive Control Procedure to Increase the Efficiency of Electric Motors*
- November 2022: IEEE CANDO EPE; KSC; TDK;
  April & May 2023: OTDK (Tirgu-Mures, Romania), MTDK (Timișoara, Romania):
  *Calculating the efficiency of an electric motor from the speed of the vehicle and the slope of the road*
- June 2022 & June 2023: ÚNKP conference:
  *Application of a self-learning system in drive control*
- April 2022: TDK & April 2023: OTDK conferences:
  *Using a modeled electric powertrain as a Reinforcing Learning environment*
- April 2022: TDK conference:
  *Virtual mapping of Human Movements using Gesture Recognition methods*
- November 2021: KSC; TDK & May 2022: MTDK & April 2023: OTDK:
  *Analysis of driving cycles and turns of scheduled buses to increase energy efficiency with intelligent shift control*
- November 2021: IEEE CANDO EPE conference:
  *Study of vehicle dynamic properties and gear shifting mechanism of electric vehicles*
- 2020: TDK & 2021: OTDK conferences:
  *Designing a network communication protocol for use in stage technology.*
  (Hardware interfacing and driver development skills also involved.)
- 2018: TDK & 2019: OTDK conferences:
  *From a microcontroller to the wide screen*
  (A lightweight video graphics adapter implementation.)

## Education

- *Electrical Engineering [EE] Bsc. / Currently in Mechatronics Msc.*
  Óbuda University Kandó Kálmán Faculty of Electrical Engineering
  Institute of Instrumentation and Automation (OE-KVK EKRI-MAT)
- *Telecommunications Informatics & Techicians*
  *ISCED-97 Level 4A & 5B*
  Budapest Technical Vocational Training Center
  Puskás Tivadar Telecommunication and Informatics Technical School

## Known technologies

- Programming languages:
  C, C++, Java, C#, Rust, Python, MATLAB, Scilab
- Development environments:
  - Microsoft Visual Studio (UWP, WPF, MAUI, ASP, Blazor, .NET Core, NUnit), PowerShell ISE, JetBrains IntelliJ IDEA and PyCharm
  - MathWorks Matlab Simulink, ESI Group Scilab Xcos
  - National Instruments LabVIEW, AMD Xilinx ISE Design Suite
  - STM32CubeIDE (Eclipse), Microchip Studio, Arduino IDE
- Electronics & networking:
  - Altium Designer, DesignSoft TINA, AutoDesk EAGLE and Fusion 360
  - WireShark, Cisco Packet Tracer, POSIX, Omada SDN
  - Active Directory, IIS, MMC, nVidia CUDA kernel development
  - ISO/IEC 8482 (RS-485), ISO 11898 (CAN), IEEE 802.3 (Ethernet)
- Tools:
  Git, LaTeX, UML, XML, XAML, Trello, Planner, Yakindu SCT, RPC, Gcode, GIS, MySQL, MongoDB, Selenium, Geogebra, Microsoft Office, ChatGPT

## Certificates

- CISCO Networking Academy:
  - CCNA 2: „Switching, Routing, and Wireless Essentials”
  - CCNA 1: „Introduction to Networks”
- udemy:
  - „Web Server IIS Mastery Course”
  - „Azure Devops Crash Course -Build CI/CD release pipelines”
- CognitiveClass.ai:
  - IBM PY0101EN: „Python 101 for Data Science”
- KMOOC:
  - „Pneumatics”, „Special Energy Sources”, „Program systems”
- Artifacial Intelligence Coalition „AI Challange”
- ECDL - European Computer Driving Licence
- Driving Licence: Category „B”
- English B2 Complex Language Exam