

# CURRICULUM VITAE

## Richard Wohlfart

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### Particulars

**Name:** Richárd Wohlfart  
**Born:** April 5, 1970, Esztergom, Hungary  
**Workplace:** Department of Applied Mechanics, Budapest University of Technology and Economics (BME)  
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### Degree

1994 MSc in Mechanical Engineering  
Technical University of Budapest (degree no.: 171/1994)

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### Studies

1997–1994 PhD studies in Mechanical Engineering  
Technical University of Budapest, final exam: 1997

1994-1989 University studies  
Technical University of Budapest, Faculty of Mechanical Engineering

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### Languages

**English** Intermediate level state language exam in English (no.: A018698/1993)  
**German** Elementary level language exam in German, BME (no.: 78/1996)

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### Places of work and positions

2006- Sole proprietor

2000-2006 Digicon Electronic Bt. – development engineer

2000- Budapest University of Technology and Economics (BME), Faculty of Mechanical Engineering, Department of Applied Mechanics – research engineer

1997–2000 Hungarian Academy of Science (MTA), Continuum Mechanics Research Group – research assistant

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## Research projects

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2019-23	FORTH, EUROSTARS (NEMZ: 2019-2.1.2-NEMZ-2019-00005) – research engineer
2020-21	ProExcer, ERC POC – research engineer
2016-	MTA-BME Lendület Human Balancing Research Group – research engineer
2014-	ERC Syren - Stability Islands: Performance Revolution in Machining (Project ID: 340889) – research engineer
2011-2012	EVRYON project (FP7-ITC-2007.8.5 #231451) (BME) – research engineer
2010-2012	TET_08_SG_STAR COSMOSYS (Hungarian-Singaporean project) – research engineer
2007-2010	'Autonomous Collaborative Robots to Swing and Work in Everyday Environment - ACROBOTER', FP6 contract n° 045530 (BME) – research engineer

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## Major works and developments

- Electronic trap system (Szent István University, former University of Gödöllő)
- Data collection system (Hortobágy National Park)
- Insect pin counter (Hungarian Natural History Museum)
- Radiotelemetry system for tracking of *Microtus oeconomus* (Hungarian Natural History Museum, Comenius University)
- VHF transmitters for deers (Szent István University, former University of Gödöllő)
- VHF transmitters for hedgehogs (Urban Nature Research Group, Eötvös Loránd University)
- VHF transmitters for falcons and hawks (The Hungarian Ornithological and Nature Conservation Society)
- FR-4000 radiotelemetry receiver
- VHF transmitters for *Sicista* (Hungarian Natural History Museum, Eötvös Loránd University, University of Pécs)
- VHF transmitters and automated radiotelemetry system for monitoring the area usage of tits (*Parus Major*) after nesting season (University of Pannonia)
- Automated radiotelemetry system for the tracking of Giant African Swallowtail butterflies in Liberia's Nimba Mountains (Revír Nonprofit Ltd.)
- Automated radiotelemetry system for the tracking of bats in Liberia's Nimba Mountains (Revír Nonprofit Ltd.)
- Automated radiotelemetry system for the tracking of ground squirrels relocated to Kisoroszi (Revír Nonprofit Ltd.)
- Artificial bustard eggs for measuring and collecting temperature, humidity etc. data (Great Bustard Reserve of Dévaványa)
- Trap system for the capturing of deers (Szent István University, former University of Gödöllő)
- Live catch trap for small mammals with IoT control (Hungarian Natural History Museum, University of Pécs)
- VHF transmitters for Hungarian meadow viper (Hungarian Ornithological and Nature Conservation Society)
- Automated radiotelemetry system for the tracking of *Microtus oeconomus* (Constantine the Philosopher)

University in Nitra)

• Automated radiotelemetry system for the tracking of *Microtus oeconomus* (Comenius University Bratislava)

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## Conference papers

Wohlfart, R., Az impulzusgerjesztés alkalmazása a modálanalízis mérés technikájában, VII. Magyar Mechanikai Konferencia. Miskolc 1995. augusztus 29-31.

Wohlfart, R., Application of Impulse Excitation in Experimental Modal Analysis Measurement Techniques, 12th Danubia-Adria Symposium on Experimental Methods in Solid Mechanics. Sopron, Ungarn 05.10.1995-07.10.1995

Wohlfart, R., Investigation of the Brush of an Electric Micromotor by Modal Analysis, 13th Danubia-Adria Symposium on Experimental Methods in Solid Mechanics. Rajecské Teplice, Slowakei 26.09.1996-28.09.1996

Wohlfart, R., Az IPC eljárás és alkalmazásának lehetőségei a rádiós adatátvitelben. Előadás és bemutató. BME Elektrotechnika Tanszék. (1996)

Szabó, Gy., Kocsis, L., Thamm, F., Szántó, P., Wohlfart, R., Mike, A., Implantátum felépítmény csavarrögzítésének statikus és dinamikus vizsgálata (Előzetes Tanulmány), Fogorvosi Konferencia Budapest 1998. augusztus 26-30.

Szabó, Gy., Kocsis, L., Szántó, P., Thamm, F., Wohlfart, R., Mike, A., Torque stability for single-tooth abutment screw after simulated function. Turku 1998. aug. 26.

Wohlfart, R., Mikromotor áramszedő keféjének dinamikai vizsgálata MTA kutatócsoportok beszámolója, 1999. Budapest BME

Szabó, Gy., Kocsis, L., Thamm, F., Szántó, P., Wohlfart, R., Mike, A., Effect of apically positioned screw joint for abutment fixation 24th Annual Conference European Prosthodontic Association, Groningen (2000)

Szabó, Gy., Kocsis, L., Thamm, F., Szántó, P., Wohlfart, R., Mike, A., Aspects of mechanical integration in implant-abutment screw joint 25th Annual Meeting Prague (2001)

Szabó, Gy., Kocsis, L., Thamm, F., Wohlfart, R., Mrs. Kocsis, M., Mike, A., Static and dynamic investigation of the strength and durability of screw-fastened dental prostheses Alpok-Adria (2001)

Szabó, Gy., Kocsis, L., Thamm, F., Szántó, P., Wohlfart, R., Mike, A., Comparative assessment of opening torque in implant abutment screw joint JDR, San Diego (2002)

Thamm, F., Szabó, Gy., Kocsis, L., Wohlfart, R., Mrs. Kocsis, M., Mike, A., "Static and dynamic investigation of the strength and durability of screw-fastened dental prostheses", Gépészet 2002. 2002. május 30-31.

Gubányi A., Wohlfart, R., Horváth, Gy., Development and application of the Automatic Radiotelemetry System (ARS) - an overview of radiotelemetry. Fauna Pannonica 2007 (FAPA 2007). Symposium on Conservation and Genesis of the Fauna of the Carpathian Basin, Kecskemét, Hungary, 29 November - 1 December, 2007. Abstracts, p. 30.

Gubányi, A., Wohlfart, R., Horváth, Gy., Alternative radio tracking and biotelemetry methods for small and meso mammals 26 THMUSTELIDCOLLOQUIUM 28 - 31 August 2008 – Budapest

Gubányi, A., Wohlfart, R., Alternative Radio and Biotracking methods for mammals BioDivGrid 2008 Distributed Sensing and Collective Intelligence in Biodiversity Monitoring CWI, Amsterdam, 3-5 December 2008

Insperger, T., Wohlfart, R., Turi, J., Stepan, G., Balancing using accelerometers and equations with advanced arguments, IFAC TDS, Praga

Ficsor, J. [et al.] Feasibility Study: The Rehabilitation of Szigetköz Reach of the Danube, February 2010, Budapest, Background Paper for Discussion with the Slovak Party

Gyimóthy, D., Toth, A., Wohlfart, R., Jurak, M., " Lightweight Electromechanical Tool Changer with Integrated Power and Signal Interfaces for Service Robot Applications", Proceedings of the 4th Asia International Symposium on Mechatronics (AISM2010), pp.165-174, Singapore (Singapore), 15-18 December 2010.

Insperger, T., Wohlfart, R., Stépán, G., Turi, J., Sietetett argumentumú egyenletek egy egyensúlyozási problémában, XI. Magyar Mechanikai Konferencia, Miskolc-Egyetemváros, 2011. 08. 29. – 2011. 08. 31.

Tóth, A., Bojtos, A., Wohlfart, R., Danos, L., Danos, T., Biomechatronic design of hip and ankle modules of a wearable robot assisting gait at the elderly. International Society for Prosthetics and Orthotics 6th Central European Regional Conference, Nyíregyháza, Hungary, 25-26-27 August, 2011. Abstract was published: Rehabilitáció 2011;21(2-3):171-172. – oral presentation + citable abstract

Tóth, M., Füleki, B., Wohlfart, R., Kondor, T., Roaming on a small space: the movement patterns of Northern white-breasted hedgehog (*Erinaceus roumanicus* Barrett-Hamilton, 1900) on urban habitats, Budapest, 85th Annual Meeting of the German Society for Mammalian Biology (Deutsche Gesellschaft für Säugetierkunde e.V.), Luxembourg, 13th-17th September 2011

Ficsor, J. [et al.]: Élőhely-szimulációs modell a szigetközi hullámtér tájleptékű rehabilitációs megoldásaira. VII Magyar Természetvédelmi Biológiai Konferencia, Debrecen, 2011. november 03. - 2011. november 06.

Csernák, G., Wohlfart, R., Zana, R., Magyar, B., Hénap, G., Stépán, G., Evaluation of Mechanical Contact Between Metallic Surface XXIV ICTAM, 21-26 August 2016, Montreal, Canada

Miklós Ákos, Takács Dénes, Wohlfart Richard, Porempovics Gabor, Molnar Tamas Gabor, Bachrathy Daniel, Toth Andras, Stepan Gabor: The Development of High Speed Virtual Milling Test. ASME 2017 Dynamic Systems and Control Conference. Tysons (VA), USA, 2017.10.10-2017.10.13. Paper DSCC2017-5217. 10 p. (58288.)

Miklós, Á., Takács, D., Wohlfart, R., Porempovics, G., Molnar, T. G., Bachrathy, D., Toth, A., Stepan, G., The Development of High Speed Virtual Milling Test. In: ASME 2017 Dynamic Systems and Control Conference New York (NY), Amerikai Egyesült Államok : American Society of Mechanical Engineers (ASME), (2017) Paper: DSCC2017-5217 , 10 p.

Magyar, B., Zana, R., Wohlfart, R., Csernak, G., Stepan, G., Measuring Modal Damping of a Multibody System with Dry Friction. 24th International Congress on Sound and Vibration, London, UK, 2017, 7p.

Magyar, B., Wohlfart, R., Zana, R., Csernak G, Stepan G, Detailed contact surface evaluation based on electric field potentials. PROCEDIA CIRP (CIRP ICME '16 - 10th CIRP Conference on Intelligent

Computation in Manufacturing Engineering), 62 pp. 323-328. , 6 p. (2017), DOI:  
<https://doi.org/10.1016/j.procir.2016.06.018>

Magyar, B., Csernák, G., Zana, R., Wohlfart, R., Stépán, G., Experimental and numerical modal analysis of dry friction-induced contact damping in assembled structures. In: Desmet, Wim; Moens, David; Pluymers, Bert; Rottiers, Ward (szerk.) Proceedings of ISMA2018 and USD2018 Leuven, Belgium : Katholieke Universiteit Leuven, Department of Mechanical Engineering, (2018) pp. 1863-1871. , 9 p.

Takacs, D., Wohlfart, R., Miklos A, Krajnyak, G., Toth, A., Stepan, G.: Ball shooting tests for identification of modal parameter variation in rotating main spindles. 8th CIRP Conference on High Performance Cutting: HPC 2018.

Miklós, Á., Bachrathy, D., Wohlfart, R., Takács, D., Porempovics, G., Tóth, A., Stépán, G., Hardware-in-the-loop experiment of turning. 8th CIRP Conference on High Performance Cutting: HPC 2018. Procedia CIRP 77 (2018) 675-678 p.

Prommer, M., Wohlfahrt, R., Tarján, B., Molnár, I. L., Zana, R., Jurák, M., Analysing Habitat Use of European Ground Squirrels (*Spermophilus citellus*) by Using Automatized VHF Tracking System. VII. EGSM 4th of October 2018.

Pere, B., Magyar, B., Csernák, G., Hénap, G., Wohlfart, R., Zana, R., Stépán, G., Szerkezetek száraz súrlódással történő csillapításának numerikus modellezése. In: Baksa, A.; Bertóti, E.; Kiss, L.; Szirbik, S. (szerk.) XIII. Magyar Mechanikai Konferencia: Az előadások összefoglalói. Miskolc-Egyetemváros, Magyarország : Miskolci Egyetem Műszaki Mechanikai Intézet (2019) 132 p. pp. 1-1. , 1 p.

Stepan, G., Beri, B., Miklos, A., Wohlfart, R., Bachrathy, D., Porempovics, G ; Toth, A., Takacs, D., On stability of emulated turning process in HIL environment. CIRP Annals 68 (1), pp. 405-408. , 4 p. (2019)

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## Journal papers

Wohlfart, R., Stépán, G., Die Anwendung der Impulsanregung in der Messtechnik der Modalanalyse, Österreichische Ingenieur und Architekt Zeitschrift 142 (1997) 453-458.

Szabó, Gy., Kocsis, L., Thamm, F., Szántó, P., Wohlfart, R., Mike, A., Abutment Screw after Simulated Function The International Journal of Prosthodontics (IF=1.164) (1999). 12.(5)

Szabó, Gy., Kocsis, L., Thamm, F., Szántó, P., Wohlfart, R., Mike, A., Implantációs műcsont rögzítésbiztosításának modellje Fogorvosi Szemle Vol. 92. pp.203-212. (1999)

Magyar, B.; Pere, B.; Csernák, G ; Zana, R.; Wohlfart, R.; Stépán, G., Experimental analysis and numerical modelling of contact damping, Journal of Sound and Vibration 484 Paper: 115544 , 13 p. (2020)

Magyar, B.; Wohlfart, R., Zana, R., Hénap, G., Csernák, G., Stepan, G., Evaluation of contact force distribution along a curve, based on measured electric potentials, Acta Mechanica (2020)