

DR. ROBERT T. FEKETE

R&D Engineer – Mechanical & Software engineering, Psychology

SUMMARY

I possess more than 15 years experience in the field of interdisciplinary research and development (mechanical engineering, software engineering and psychology). I regularly use different CAD and simulation systems for engineering design. In addition, I am able to code in several programming languages. During my industrial and faculty career, I have been implementing and leading many R&D projects. I always strive to work creatively, practically and cooperatively. I need challenges, I can adapt to any kind of responsibilities and environments quickly and I gain new knowledge with pleasure. My aim is to perform real value-creating work with a multidisciplinary engineering team.

EDUCATION

PhD degree in Mechanical Engineering Sciences 2006 – 2009

Budapest University of Technology and Economics

Faculty of Mechanical Engineering

Department of Mechatronics, Optics and Mechanical Engineering Informatics

Filed of dissertation: proportional displays for automotive industry

M.Sc. degree in Industrial Design Engineering 2000 – 2005

Budapest University of Technology and Economics

Faculty of Mechanical Engineering

Field of thesis: design of medical measuring robot

B.A. degree in Behavioural Analyst Psychologist 2011 – 2014

Károli Gáspár University of the Reformed Church in Hungary

Field of thesis: leadership psychology of R&D engineering groups

EMPLOYMENT

Senior R&D and Software Engineer 2018 –

Medicontur Medical Engineering Ltd.

Responsibilities:

- Development of medical engineering instruments and methods
- Development and implementation of diagnostics software
- Design of correction filters for people with colour vision deficiency
- Coordination of the diagnostics unit as a team leader

University Lecturer 2017 –

Budapest University of Technology and Economics

Faculty of Mechanical Engineering

Department of Mechatronics, Optics and Mechanical Engineering Informatics

Responsibilities:

- Visualization and Presentation technics university course, giving lectures and leading seminars, taking responsibilities for the course, evaluating students
- Representation of the department in Unified Psychological Research Ethics Committee of Hungary, preparing ethical reviews



CONTACTS

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Skype: frt1981

PROFESSIONAL STRENGTHS

Software engineering, Applied IT
Inventive industrial product development
CAD and Simulation systems expertise
Human-centered product design
Coordination multidisciplinary fields
R&D project management
Education, Mentoring, Presentation
Psychology and Ergonomics knowledge
Quick learning ability and adaptability

SOCIAL STRENGTHS

Operative and Practical workstyle
Problem solving and Decision-making
Flexibility, Ability to work under pressure
Analytical skills, Prioritization
Interdisciplinary approaching
Creative and innovative thinking
Teamwork and cooperation
Positive and energetic attitude

TOP MOTIVATION FACTORS

Varied work and frequented challenges
Tasks that require creativity
Responsibilities and value creating
Opportunity for life-long learning
International environment, traveling

Senior Research and Development Expert**2017 – 2018***HungaroControl Hungarian Air Navigation Services Co.***Responsibilities:**

- disruptive R&D activity in the field of AI and system automatization
- coordinating contractual R&D activities with external partners
- preparing strategic development proposals
- coordinating of the R&D unit, resource allocation, distribution of tasks
- planning, implementing and evaluating human factors and HMI experiments
- optimisation of control systems, software ergonomics re-design
- managing international and national tender issues

University Senior Assistant Professor**2009 – 2017***Budapest University of Technology and Economics**Faculty of Mechanical Engineering**Department of Mechatronics, Optics and Mechanical Engineering Informatics***Responsibilities:**

- giving lectures and leading seminars, taking responsibilities for the course, evaluate students in the following university courses:
 - CAD systems, 3D modelling, simulation and animation
 - Applied engineering computer science, Software engineering
 - Elements of intelligent machines and systems, Artificial intelligence, Sensors and actuators
 - Measurement technology and statistics (in English)
 - Visualization and Presentation technics
 - Biomechatronic engineering modelling and simulation
 - Lighting and colour technology
- scientific research in the following fields:
 - Social-robotics, Ethorobotics, Behavioural modelling and simulation
 - Non-invasive blood glucose estimation, Pupillometry
 - Interdisciplinary engineering and Psychology
 - Transportation indicators, Human-machine-environment systems
 - User interface design, Ergonomics
- mechanical engineering, software engineering and project management roles in industrial and tender R&D projects:
 - smart insulin tracker system for blood glucose management
 - virtual ethorobotic agent for self-driving cars
 - online control of mobile robots for e-laboratory system
 - autonomous explorer mobile robot for social robotics experiments
 - pupillometry equipment to measure direct and consensual light reflex
 - precision mechanical equipment for retina observation for experiments
 - control software for a windscreen production line
 - system analysis of mechatronic equipment of automated storey car park
 - 3D reconstruction system for autonomous robot navigation
 - heart rate variability measurement procedure design for experiments
 - proportional vehicular displays development and analysis

CEO, Development Engineer**2014 –***Innoco Ltd.***Responsibilities:**

- administrative and organisational activities in connection with the firm
- organize and implementing orders
- coordinating partners (5-10 colleagues), resource allocation, conduct trainings
- development engineering, software engineering and engineering consultancy

PROFESSIONAL TRIPS**2016 and 2017**

Visiting professor

*Chuo University**Tokyo, Japan*

Coordination of our ethorobotics researches and discussions with international partner scientists

2016

Visiting professor

*UiT The Arctic University of Norway**Narvik, Norway*

Coordination of our mobile robotics researches, attending in the industrial engineering programme of the University

2007

University courses

*Technische Universität Ilmenau**Ilmenau, Germany***2006 and 2007**

University courses

*Silesian University of Technology**Gliwice, Poland***PROFESSIONAL MEMBERSHIPS****2015 –**

Unified Psychological Research Ethics Committee of Hungary

2014 –

International Commission on Illumination CIE, Division of Image Technology

2013 – 2017

Robotics & Ethorobotics Research Laboratory, Department of Mechatronics, Optics and Mechanical Engineering Informatics

PUBLICATIONS**List of my publications:**

<https://vm.mtmt.hu/www/index.php?AuthorID=10027614>

- 1 international patent
- 3 book chapters
- 16 peer-reviewed articles
- 24 conference articles

University Assistant Professor	2008 – 2009
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Budapest University of Technology and Economics

Faculty of Mechanical Engineering

Department of Mechatronics, Optics and Mechanical Engineering Informatics

Responsibilities:

- giving lectures and leading seminars, taking responsibilities for the course, evaluate students in university courses
- scientific research in different fields
- mechanical engineering, software engineering and project management roles in industrial and tender R&D projects

Development Engineer, Software Engineer	2005 – 2006
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Cytotech Ltd. (medical engineering office)

Responsibilities:

- mechanical engineering and software engineering in connection with a serology measuring robot equipment and its HMI
- negotiations with suppliers, implement orders

Software Engineer	2002 – 2005
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Garpex Ltd. (engineering office)

Responsibilities:

- administrative and organisational activities
- organize and implementing orders
- software engineering and webdesign

Building Services Engineering Assistant	2000 – 2001
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Hopferwieser Ltd. (building engineering office)

Responsibilities:

- revision of complex building engineering plans, editing of trail plans in AutoCAD
- preparing construction plans
- site analysis, review of implementation

Building Services Engineering Assistant	1999 – 2000
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Légszervíz 2000 Ltd. (ventilation engineering office)

Responsibilities:

- revision of air condition system plans, editing trail plans in AutoCAD
- site analysis, preparatory design

LANGUAGES

English

Active, advanced level (written and spoken)
(Intermediate exam, No: 712551)

Italian

(Basic exam, No: 1094917)

Hungarian

Native

COMPUTER SKILLS

Programming:

Python, C#, Java, C++, JavaScript, Visual Basic, Delphi, Pascal, HTML, CSS

CAE, CAD systems:

AutoCAD, Solid Edge, SolidWorks, ANSYS

Engineering simulation systems:

LabVIEW, Scilab, Matlab

Modelling systems:

Blender, 3d Studio Max

Graphics systems:

Photoshop, InDesign, CorelDraw, Inkscape

Office and presentation:

MS Office, Libre Office, Prezi

INTERESTS AND HOBBIES

Natural sciences, Green technologies

Medical engineering, Psychology

Autonomous vehicles, Future science

Artificial intelligence, Computer science

Sport, Gastronomy