CV of Ferenc Márkus

Personal data

Name	Ferenc Márkus
Position	Associate professor
Current institution	Department of Physics, Budapest University of Technology and Economics 1111 Budapest, Budafoki út 8 Hungary
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Phone	+36 1 463 41 82
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Date of birth	05.06.1961

Education

1985	MSc degree in physics, Kossuth Lajos University, Debrecen, Hungary
1991	dr. univ. in Physics, Budapest University of Technology, Budapest, Hungary
1997	PhD in Physics, Budapest University of Technology and Economics, Hungary

Employment

1985-1987	TMB Scholar	Department of Experimental Physics, Kossuth Lajos University, Debrecen, Hungary
1987-	Associate professor	Department of Physics, Budapest University of Technology and Economics, Hungary

Awards and prizes

Research interest

- Transport processes on different scales
- Lagrangian description
- Field theory of dissipative processes
- Quantized descriptions
- Lorentz invariant propagations
- Dynamic phase transitions

Teaching activity

- Physics 1 (mechanics, thermodynamics) (BSc course for electrical engineering)
- Physics 2 (electrodynamics, wave optics, special relativity, quantum mechanics) (BSc course for electrical engineering)

- Engineering physics (mechanics, electrodynamics) (BSc course for mechanical engineering)
- Transport processes (MSc, PhD course for physicist, electrical engineering, chemical engineering)
- Classical and quantum dynamics (MSc course for physicist, special course)

Students supervised

- Msc students: András Szegleti (2019), Anna Békési (2018), György Kocsis (2015), Erika Győry (2014), Miklós Horváth (2011)
- BSc students: András Szegleti (2017), Gábor Juhász (2017), Áron Balla (2013), Erika Győry (2012), György Kocsis, (2011), Tibor Szőllősi (2010), Gábor Matulik (2010), Péter Ivanics (2010)
- Student Scientific Circle: András Szegleti (2018/19), Erika Győry (2013), Áron Balla (2012)

Memberships and professional service

- 1987- Member of the Roland Eötvös Physical Society
- 2003- Member of the Public Law Association of the Hungarian Academy of Sciences
- 2006 - Editor of Open Physics
- 2015- Member of the Faculty Council of Faculty of Electrical Engineering and Informatics

Grants, fellowships, projects

1993-1995	Grant: OTKA F7369 (supervisor)
1993-1994	Fellowship: DAAD, Department of Theoretical Physics, TU Berlin
1995	Fellowship: Swiss Federal, Department Physiology, University of Bern
1996-1998	Grant: OTKA F19017 (supervisor)
1998	Grant: OMFB
2003-2005	Project: Samsung SDI Hungary (supervisor: Prof. Dr. Péter Deák)
2008-2010	Grant: NKTH MX-20 Hungarian-Mexican governmental cooperation (supervisor)
2009-2010	Project: PPG Pittsburgh Industries (USA) (supervisor: Prof. Dr. Péter Richter)
2010-2013	Project: TÁMOP-4.2.1/B-09/1/KMR-2010-0002 (supervisor: Prof. Dr. György Mihály)
2012	Project: PPG Pittsburgh Industries (USA) (supervisor: Dr. Ferenc Réti)
2011-2013	Project: Finite element simulation for the development of digital holographic meter (supervisor: Dr. Ferenc Gyímesi)
2016-2020	OTKA 119442 (supervisor: Prof. Dr. Balázs Dóra)

Invited talks

Languages

English (master)

Scientific impact (as of 06/2019)

37 papers in refereed journals
2 book chapters
Total number of independent citations: 251
IF: 51.038
H-index: 8
Complete list of publications: https://m2.mtmt.hu/gui2/?type=authors&mode=browse&sel=10000791

Five selected publications

1. Szőllősi T, Márkus F, „*Searching the laws of thermodynamics in the Lorentz-invariant thermal energy propagation equation*" Phys. Lett. A (2015).
2. Győry E, Márkus F, „*Size dependent thermal conductivity in nano-systems*" Thin Solid Films **565C** 89-93 (2014).
3. Márkus F, Gambár K, „*Heat propagation dynamics in thin silicon layers*" Int J. Heat and Mass Trans. **56** 495-500 (2013).
4. Vázquez F, Márkus F, Gambár K, „*Quantized heat transport in small systems: A phenomenological approach*" Phys. Rev. E **79** 031113 (2009).
5. Vázquez F, Márkus F, „*Size effects on heat transport in small systems: Dynamical phase transition from diffusive to ballistic regime*" J. Appl. Phys. **105** 064915 (2009).