

# Curriculum Vitae

## Imre Ferenc Barna

Phd. in Physics

### Current Position:

Research Associate

Wigner Research Center of

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### Personal:

Born: November 13. 1972 in Budapest

Nationality: Hungarian

Foreign Languages: English, German

Marital Status: married, one daughter

### Studies:

Physics Student:	1991 - 1997	Technical University of Budapest
Exchange Student:	1996	Justus-Liebig Universität Giessen, Tempus Grant
MSc. Exam:	1997	Technical University of Budapest
PhD Student:	1998 - May 2002	Justus-Liebig-Universität Giessen, Germany (group of Prof. W. Scheid & N. Grün)
PhD Exam:	May 2002	Justus-Liebig-Universität Giessen, Germany

### Working Experience:

Research Assistant:	1998	Central Chemical Research Institute in Budapest
Postdoc Scientist: Complex	June 2002 - June 2004	Max-Planck-Institute for the Physics of Systems Dresden (group of Prof. J.M. Rost)
Postdoc Scientist:	July 2004 - July 2005	Institute for Theoretical Physics, Vienna Univ. of Techn. (group of Prof. J. Burgdörfer)
Research Associate:	August 2005 - May 2013	Atomic Energy Research Institute, Budapest
Research Associate:	from June 2013 - till now	Wigner Research Center, Hungarian Academy of Sciences Budapest
Research Associate: half position	from June 2012 - till now	ELI-ALPS, Szeged

## Research Activities: (past and present)

- Nuclear Physics:** Localisation of nonlocal potentials  
**Atomic Physics:** Ionisation of helium in collisions with any kind of charged particles  
. Photoionisation of helium in short XUV laser pulses  
. and coherent control  
**Statistical Physics:** Bouncing ball billiard  
**Hydrodynamics:** Two-Phase flows (in water and in mercury)

*Atomic Physics:* Proton Wake Field Acceleration of Electrons

*Mathematical Physics:* Self-similar solutions of partial differential equations of flows  
till 7 June 2019, I have 42 publications in regular peer-reviewed journals  
and a book chapter with about 220 citations

## Teaching Experience:


- giving tutorials to students in different courses (classical mechanics, classical electrodynamics and quantum mechanics) in english or german language between 1999 - 2002 in Giessen
- supervising an undergraduate student during her Master's Thesis in 2001
- Teaching one seminar electrodynamics at the Szeged University
- Teaching biophysics to veterinary students at the Szent Istvan University at Budapest in German language from 2008 till today  
Script: <http://www.kfki.hu/~barnai/univet>
- Teaching one semester basic physics at the Miklos Zrinyi Military Academy at Budapest in 2011
- supervising Mr. András Pocsai under his Master Thesis in 2014 - 2015
- right now he is my Phd. Student, investigating the ionization of Rb atoms

## Grants/Invited Talks/Honors:

- 1996 One year Tempus Grant at the Justus Liebig University in Giessen  
1998 One year DPG Grant in the first Year in the Phd  
'Relativistische Effekte in der Chemie und in der Physik'  
1999-2003 BAT IIa/2 Hessische Landesstelle an der Justus Liebig Universitaet, Giessen  
2001 December Invitation to MIPPKS Dresden (Inviter Prof. J.M. Rost )  
2003 January Invitation for a talk to ATOMKI Debrecen (Inviter Dr. B. Sulik)  
2004 March Invitation for a talk to TU Vienna (Inviter Prof. J. Burgdörfer)  
2004 September Invited speaker at the 8<sup>th</sup> FIAC workshop ATOMKI  
Debrecen, Hungary  
2006 October Invited speaker at the workshop in Ljubljana about WAHA  
modelling, (Inviter: Dr. Iztok Tiselj)  
2008 February Invited speaker at the PANS-III International Seminar School Advanced  
Pulsed Neutron Sources Workshop Dubna, Russia  
2008 June Invited speaker in the Oak Ridge National Laboratory, USA  
Topic: Shock-waves in mercury  
2009 May Invited speaker in the JPARK JSNS Laboratory, Tokai, Japan,  
Topic: Shock-waves in mercury  
2010 December Writing a referee study for US Department of Energy for an Early  
Career Model proposal Topic: Cavitation in mercury  
2012 October Writing a critical study for the V3 Venture Capital Management Ltd.  
about a Cavitation Equipment

## Computer Skills:

- basic knowledge of using UNIX/LINUX/Windows operating systems
- more than ten years practical experience with programming language Fortran 77
- practical knowledge of Latex Editor, Mathematica, Maple, Gnuplot, xmgrace, Power Point

A handwritten signature in blue ink that reads "Imre f. Barna". The signature is written in a cursive style and is placed on a light blue rectangular background.

Imre F. Barna

7. June 2019, Budapest