

PERSONAL INFORMATION

Botond Molnár



 str. Bisericii nr. 5, 520014 Sfântu Gheorghe (Romania)

 0040-367-405819  0040-723-707347

 molnar.botond@phys.ubbcluj.ro

Sex Male | Date of birth 05/06/1986 | Nationality Hungarian, Romanian

WORK EXPERIENCE

02/10/2017–Present

Teaching Assistant

Babeş-Bolyai University
Mihail Kogălniceanu street 1, 400084 Cluj-Napoca (Romania)
www.cs.ubbcluj.ro

01/01/2016–Present

Physicist

Romanian Institute of Science and Technology
str. Cireşilor nr. 29, 400487 Cluj-Napoca (Romania)
www.rist.ro

05/10/2014–02/10/2017

Teaching associate professional

Babeş-Bolyai University
Mihail Kogălniceanu street 1, 400084 Cluj-Napoca (Romania)
www.cs.ubbcluj.ro

01/11/2011–31/10/2014

Research assistant

Hungarian Physics Department, Babeş-Bolyai University
Mihail Kogălniceanu street 1, 400084 Cluj-Napoca (Romania)
www.phys.ubbcluj.ro

21/02/2011–21/11/2011

Software engineer

FRSGlobal Romania SRL. - a Wolters Kluwer Financial Services Company
Brâncuşi Street 74-76, Cluj-Napoca (Romania)
www.frsglobal.com

10/2009–11/2010

Software developer

SC. eMedWare SRL.
Onisifor Ghibu street 14, Cluj-Napoca (Romania)
www.emedware.eu

09/01/2009–20/06/2009

Box Officer

SC. Odeon Cineplex SRL.
Maria Rosetti street 49A, 3rd floor, Bucharest, Cluj-Napoca (Romania)
www.odeoncineplex.ro

EDUCATION AND TRAINING

2011–21/10/2016

PhD

Babeş-Bolyai University, Cluj-Napoca (Romania)

Continuous-Time Dynamical Systems for Solving Constraint Satisfaction Problems

Scientific conductor: Dr. Prof. Zoltán Néda

Scientific advisor: Dr. Mária Ercsey-Ravasz

2008–2010 Master in Physics

Babeş-Bolyai University, Cluj-Napoca (Romania)

Correlation clustering on frustrated networks studied with a stochastic renormalization method

Scientific conductor: Dr. Prof. Zoltán Néda

2005–2008 Bachelor's degree in Physics

Babeş-Bolyai University, Cluj-Napoca (Romania)

Optimal clusterization of frustrated networks studied with a stochastic renormalization method

Scientific conductor: Dr. Prof. Zoltán Néda

1993–2005 Bacalaureate exam

"Székely Mikó" Secondary School, Sfântu Gheorghe (Romania)

Specialization in Mathematics and Computer Science

2001–2004 Piano player degree

School of folk arts, Sfântu Gheorghe (Romania)

- piano playing techniques

- general music theory

- general music history

PERSONAL SKILLS

Mother tongue(s) Hungarian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
Romanian	C2	C2	C2	C2	C2
English	C2	C2	C2	C2	C2
German	C2	C2	B2	B1	B2
Chinese	A2	B1	A1	A2	B1
French	A2	A2	A1	A1	A2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
 Common European Framework of Reference for Languages

Organisational / managerial skills

Leadership: from 2008 acting as a musical director of the Visszhang Students' Choir and Symphony Orchestra which has around 70-80 member

Organization skill gained during the school years when we were organizing several cultural events, like theater performances, exhibitions and continued in the Visszhang Cultural Association organizing cultural events, concerts, tours of the Visszhang Students' Choir and Symphony Orchestra and international collaborations, choir festivals.

Job-related skills

Teaching experience

Starting from 2011 - Electricity and magnetism, seminar, Faculty of Physics, Babeş-Bolyai University

Starting from 2014 - Introduction in programming, laboratory, Faculty of Mathematics and Computer Science, Babeş-Bolyai University

Starting from 2015 - Operating systems, laboratory, Faculty of Mathematics and Computer Science, Babeş-Bolyai University

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Digital skills - Self-assessment grid

Operating systems: MS-DOS, Windows family, Linux, Mac OS X

Programming languages: C, C++, C#, VB, Java, JavaScript, ActionScript, Mono, Fortran

Developer tools: XCode, Microsoft Visual Studio, Eclipse, Geany, MonoDevelop, MatLab, Wolfram Mathematica,

Hardware knowledge: advanced hardware knowledge (assemble, disassemble, troubleshooting, repairs)

Network/Infrastructure: HTTP, TCP/IP, infrastructure knowledge (building, configuring, troubleshooting, repairs)

Database: Access, MySQL, ORACLE

Multimedia: Avid Sibelius, Adobe Creative Suite, Corel Suite, Propellerhead Reason, Steinberg Cubase, Steinber Nuendo, 3DSMax

Web programming: HTML, CSS, JavaScript, angularJS, JQuery, XML, DOM, PHP

Other: SVN, FireBug, SeleniumHQ

ADDITIONAL INFORMATION

Publications

2014 **Proc. of 14th IEEE International Workshop on Cellular Nanoscale Networks and their Applications (CNNA)** – Analog dynamics for solving max-SAT problems

2014 **Proc. of 14th IEEE International Workshop on Cellular Nanoscale Networks and their Applications (CNNA)** – A CNN SAT-solver robust to noise

2014 **EPL** 106(4):40002 – Robust optimization with transiently chaotic dynamical systems

2013 **PLOS One PONE-D-13-07186R2 10.1371** – Asymmetric Continuous-Time Neural Networks Without Local Traps for Solving Constraint Satisfaction Problems

2012 **Proc. of 13th IEEE International Workshop on Cellular Nanoscale Networks and their Applications (CNNA)** – Continuous-time Neural Networks Without Local Traps for Solving Boolean Satisfiability

2009 **Journal of Physics A: Math. Theor.** 42 – Correlation clustering on networks

Projects

SyBil-AA Horizon 2020

Modeling and validating disease state networks in human and animal brains for understanding pathophysiology, predicting outcomes and improving therapy

Project manager: Dr. Raul Mureşan

Starting Research Grant of the Romanian Government

Abordarea problemelor de optimizare prin sisteme dinamice cu timp continuu: dificultatea optimizarii ca haos transient

Project manager: Dr. Mária Ercsey-Ravasz

- Conferences**
- 2014 talk at the **14th IEEE CNNA2014** conference in Notre Dame, IN, USA
 - 2012 talk at the **13th IEEE CNNA2012** conference in Torino, Italy
 - 2010 plenary talk at the **3rd Yalta Optimization Conference** in Yalta, Ukraine
 - 2009 Special Prize in **Complex Systems Physics Section of the 29th National Students' Scientific Conference** in Szombathely, Hungary
 - 2008 presentation at the **Rodosz Conference** in Cluj
 - 2008 presentation at the **Fall Scientific Conference organized by the Science Department of Transylvanian Museum Society** in Cluj
 - 2008 1st prize in **Physics Section of the 11th Transylvanian Students' Scientific Conference** in Cluj
 - 2008 presentation at the **Eötvös Conference** in Budapest, Hungary
 - 2007 presentation at the **Fall Scientific Conference organized by the Science Department of Transylvanian Museum Society** in Cluj
 - 2007 presentation on the „**Körmöczi János**” **Physics Day** in Cluj
 - 2007 presentation at the **Physics Department of Hungarian University Federation of Cluj**
 - 2007 Special prize in **Pedagogy Section of the 10th Transylvanian Students' Scientific Conference**
 - 2004 presentation at the **Physics Department of Hungarian University Federation of Cluj**
- Other Scientific Achievements**
- 2014 summer school at **GEFENOL, IFISC on Statistical Physics of Complex and Small Systems**, Palma de Mallorca, Spain
 - 2013 scientific visit at **Beth Israel Deaconess Medical Center – A teaching hospital of Harvard Medical School, Boston, MA, USA**
 - 2013 scientific visit at **University of Notre Dame, IN, USA**
 - 2013 scientific visit at **Pázmány Péter Catholic University, Budapest, Hungary**
 - 2012 scientific visit at **University of Notre Dame, IN, USA**
 - 2009 summer school at **IPP Summer University on Plasma Physics and Fusion Research in Max Planck Institut**, Greifswald, Germany
 - 2007 professional practice at the **Atomic Power Plant**, at Paks, Hungary
 - 2005 scientific visit at **CERN** (Geneva, Switzerland), **ILL** and **ESRF** (Grenoble, France)
- Memberships**
- 2008-2009 member of **Physics Department of Hungarian University Federation of Cluj**
 - 2007-2008 member of **Pedagogy Department of Hungarian University Federation of Cluj**
 - 2007-2008 member of **Physics Department of Hungarian University Federation of Cluj**
 - 2006-2007 member of **Physics Department of Hungarian University Federation of Cluj**

 - 2006-2007 member of **Pedagogy Department of Hungarian University Federation of Cluj**