


INFORMAȚII PERSONALE



Gellért Zsolt KISS

 Kogălniceanu st. 1/213, 400084 Cluj-Napoca (România)

 +40749072778

 zsolt.kiss@phys.ubbcluj.ro

 <http://atom.ubbcluj.ro/zsoltgkiss/>

 Skype zsolti_g_kiss

Sexul Masculin | Data nașterii 25/05/1987 | Naționalitatea română , maghiară

POZIȚIA

Doctorand și asistent de cercetare la Universitatea Babeș-Bolyai Cluj-Napoca (<http://phys.ubbcluj.ro>), Facultatea de Fizică, Asistent Cercetare INCDTIM Cluj-Napoca (www.itim-cj.ro)

EXPERIENȚA PROFESIONALĂ

01/11/2012–Prezent

Asistent de Cercetare și Doctorand

Universitatea Babeș-Bolyai Cluj-Napoca, Facultatea de Fizică, Cluj-Napoca (România)
<http://atom.ubbcluj.ro/laser>

- Proiect: PN-II-ID-PCE-2011-3-0192 / contract nr. 162/2011
- calculări numerice ab-initio. Scrierea a unor simulări pe calculator pentru a investiga interacțiunea dintre pulsurilor laser intense și ultrascurte cu sisteme atomice și moleculare, prin rezolvarea ecuației lui Schrödinger dependentă de timp (Time-Dependent Schrödinger Equation, TDSE)
- conducător de laborator de fizică atomică, moleculară și nucleară pentru studenții de la fizică (licență), chimie, geologie, inginer chim. (laborator fizică generală) și master didactic. Seminar de fizică nucleară, atomică.

02/12/2015–Prezent

Asistent Cercetare

INSTITUTUL NAȚIONAL DE CERCETARE-DEZVOLTARE PENTRU TEHNOLOGII IZOTOPICE ȘI MOLECULARE (I.N.C.D.T.I.M.), Cluj-Napoca (România)
<http://www.itim-cj.ro/PNCDI/ru185/index.htm>

- Proiect: PN-II-RU-TE-2014-4-0425

EDUCAȚIE ȘI FORMARE

2006–2009

Licență în Fizică (BSc); Specializarea: Fizică-informatică

■ Activități în perioada a celor 3 ani de licență

(BSc studies) :

- Guest student at the University of Szeged (Hu); NYIFFF Physics competition at Balaton/HU (3rd place); Member of College of Physics Cluj. Visiting field trips: Debrecen (Hu) ATOMKI (cyclotron, PET, Van de Graaff); Solar Physics Observatory (Nápfizika Observatórium); Nuclear Power Stations of Cernavodă (Ro) and Paks (Hu); CERN etc.

■ Premiul I.

Transylvanian Scientific Conference of Students (E-TDK Erdélyi-Tudományos Diákköri Konferencia, 2010)

- Titlul studiului științific: **The Ionization of The Hydrogen Atom in Intense Laser Field**
- Scientific advisers: prof. Dr. Ladislau NAGY / drd. Sándor BORBÉLY (Babeș-Bolyai University)

■ Examenul de licență

- 2 Iulie 2009

- Titlul tezei de licență: The Ionization and Excitation of The Hydrogen Atom in Laser Fields
- **Nota: 9.67 (din 10)**

2010–2012 **Master (MSc) în Fizică, Fizică Computațională (în engleză) la Universitatea Babeș-Bolyai Cluj-Napoca**

- **În timpul studiilor de master au fost obținute următoarele competențe:**
 - Solid state physics (**9**); Atomic molecular physics (**10**); Theoretical physics completion (quantum mechanics supplement + linear response functions; **10**); The basics of Spectroscopy (RMN, RES, XPS, IR-spectroscopy, Raman sp., Uv-Viz absorpțion; Fluorescence sp.; **9**). Scientific methods and research methods (**9**); Simulation of spectrums (**8**); Symbolical calculations (Mathematica – Two-body problem assay; **10**); Nanostructures (Talk: STM and Spin Polarized-STM; **8**); Calculation of molecular properties (**10**); Vibrational methods in biomedical applications (**10**); Numrical calculations in atomic physics (**10**); Stochastic simulation methods in statistical physics (**9**); Ab initio, DFT, TDDFT (**7**);
- **Diplomă, examenul de Master - 3 Iulie 2012**
 - Media generală: **9.33** (din 10)
 - Titlul tezei de master: **Numerical solution of the time-dependent Schrödinger equation in momentum space**
 - **Nota obținută: 10** (din 10)

2012–Prezent **Studii de doctorat în fizică atomică și moleculară**

Universitatea Babeș-Bolyai, Cluj-Napoca (România)

2010–2015 **Alte studii, școli de vară și training schools**

- **Studii de master (Fizică / Modulul de astrofizică)** la Eötvös Loránd University (ELTE), Budapesta, Ungaria (2009, interviul de admitere 82 puncte din 100).
 - Au fost finalizate următoarele cursuri (în lb. Maghiară): Physics laboratories: AFM, Liquid scintillation spectrometry, 1-crystal X ray diffraction, Gamma spectroscopy, IR spectroscopy, SEM, TEM (**4** of **5**); Star systems' Dynamics (**5**); Astrophysics observational methods (**5**); Vizualization (talk: *Vizualization of diffractions*; **5**); Atomic and molecular physics (good); Extragalactical astrophysics II. (**4**); Astrophysics seminar (talk: *Cosmological simulations*; **5**); Gravitational-waves (Project: *The generation of gravitational waves* – hu: “*Gravitációs hullám kontra időben változó newtoni gravitációs tér*” (hu); **3**) etc..
- **Circuits and Electronics 6.002x** with passing **grade of A**. A course of study offered by **MITx**, an online learning initiative of MASSACHUSETTS INSTITUTE OF TECHNOLOGY, through **edX**, the online learning initiative of Harvard University and MIT.
- **Summer University for Plasma Physics and Fusion Research** at „Max-Planck-Institute für Plasmaphysik” - IPP, Garching (München) 2012, September 17 – September 21, 2012
- **Autumn School on Laser Dynamics**, Bolyai Institute, University of Szeged, 24-28 of September 2014, Szeged, Hungary
- **1st Training School of COST Action CM1204**
 - XUV/X-ray light and fast ions for ultrafast chemistry (XLIC) Zaragoza, Spain
 - **Module 1.** March 9-13, 2015: School on Molecular Excited States
 - **Module 2.** March 16-20, 2015: School on New Computational Methods for Attosecond Molecular Processes (Lecturers: M. Ivanov, F. Martín, A. Scrinzi, O. Smirnova, A. Castro, L. Argenti...)

07/2015–09/2015 **Erasmus Plasament**

Universitatea din Szeged, Szeged (Ungaria)

COMPETENȚE PERSONALE

Limba(i) maternă(e) maghiară

Alte limbi străine cunoscute

	ÎNȚELEGERE		VORBIRE		SCRIERE
	Ascultare	Citire	Participare la conversație	Discurs oral	
română	C2	C2	C1	C1	C2
Bacalaureat					
engleză	B2	B2	B2	B2	B2
Cambridge FCE					
franceză	B1	B1	A2	A2	A2

Niveluri: A1 și A2: Utilizator elementar - B1 și B2: Utilizator independent - C1 și C2: Utilizator experimentat
 Cadrul european comun de referință pentru limbi străine

Competențe organizaționale/manageriale

- Membru în grupuri organizatoare de conferință:
 - as **student president** at the National Conference of Scientific Students' Associations: Physics/ Mathematics/ Geography (in Hungarian: Országos Tudományos Diákköri Konferencia Fizika/Földrajz/Matek, OTDK FiFöMa) 15-18 April 2015, Cluj-Napoca (Kolozsvár), Romania (<http://otdk.ubbcluj.ro>)
 - am ajutat în organizarea conferinței internaționale **4th annual meeting of the COST Action CUSPFEL**, Cluj, Romania, 21-23 March 2012

Competențe dobândite la locul de muncă

- Membru în juriuri sau în comisii organizatorice în câteva competiții de liceu sau facultate:
 - Erdélyi Tudományos Diákköri Konferencia, 2015, Cluj-Napoca,
 - Concurs multidisciplinar "Bolyai Farkas" pentru elevii din liceu, 2015, Tirgu Mures,
 - MIFIZ, 2013, Cluj-Napoca

Competență digitală

- Programare în:
 - Mathematica, FORTRAN90, C, C++, C# (databases handling), Pascal, Java Octave, LaTeX, Kile, Linux –Shell, Gaussian (elementary), MPI parallel programming, Python (elementary)
 - web programming: PHP (elementary) + HTML
 - MS Office

Permis de conducere A, B

INFORMAȚII SUPLIMENTARE

 Membru Collegium Talentum www.collegiumtalentum.com

Activități de cercetare

- Cu grupul de cercetare al domnului profesor dr. Ladislau NAGY, Babeș-Bolyai University, membru în Cost Actions CM1204 (<http://xlic.qui.uam.es/>) și MP1203 (<http://www.cost-mp1203.eu/>)
- In English: Researching the interaction of atoms/molecules with external electromagnetic fields using *state of the art* theoretical models, and by writing numerical simulations for the implementation of these models.

Articole și conferințe științifice

- **Transylvanian Conference of Scientific Students' Associations (in Hungarian: Erdélyi Tudományos Diákköri Konferencia, E-TDK) – 2009 May, Cluj-Napoca, Romania**
 - **1st prize** – Physics section – Title of work: (in Hungarian) *A hidrogénatom fotoionizációja intenzív lézertérben* ("Photoionization of The Hydrogen Atom In Intense Laser Field")

- **S. Borbély, G. Zs. Kiss, L. Nagy, Central European Journal of Physics 8 (2010) 249**
 - The Excitation and Ionization of the Hydrogen Atom In Strong Laser Fields
- **National Conference of Scientific Students' Associations (in Hungarian: Országos Tudományos Diákköri Konferencia, OTDK) – 2011 April, Nyíregyháza, Hungary**
 - **4th place** Quantum mechanics section (**Special award**)
- **G.Zs.Kiss, L.Nagy, K.Tókési, S.Borbély, Anual Report 2011, Institute of Nuclear Research of the Hungarian Academy of Sciences**
 - Iterative Solution of The Time-Dependent Schrödinger Equation
- **Conference 4th anual meeting of the COST Action CUSPFEL, 21-23 March 2012, Cluj, Romania**
 - **Poster:** Solving the TDSE by Using Levin's Integration Method (G.Zs.Kiss, S.Borbély, L.Nagy)
- **Conf. 44th ON THE EUROPEAN GROUP ON ATOMIC SYSTEMS, 9-13 July 2012, Göthenburg**
 - **Poster:** Iterative Solution of The Time-Dependent Schrödinger Equation (S.Borbély, G.Zs.Kiss, L.Nagy)
- **Conference in Hungarian: 'A fizika, matematika és művészet találkozása az oktatásban, kutatásban' (Encounter between physics, mathematics and art in education and research), 15-18 August 2012, Tîrgu-Mures, Romania.**
 - **Talk (hu):** „Intenzív lézerterek és anyag közötti kölcsönhatásának elméletitanulmányozása”
- **Conference: "PHYSICS CONFERENCE TIM-12" organized by the West University of Timisoara, 27-30 November 2012, Timișoara, Romania**
 - **Talk:** "The Numerical Solution of The Time-Dependent Schrödinger Equation for Atoms in Intense Laser Fields"
- **Conference–COST MP1203 – 4-5 April 2013, Paris** Scientifickick-off meeting COST MP1203 - Advanced Spatial and Temporal X-ray Metrology
- **Kiss Gellért-Zsolt, et al., Conference proceeding (in Hungarian): "A fizika, matematika és művészet találkozása az oktatásban, kutatásban"/ ELTE Természettudományi Kar (2013)**
 - **Title:** *Numerikus módszerek intenzív lézertér és atomok közötti kölcsönhatás elméleti tanulmányozására*
- **Conference attendance – COST MP1203 – Paris, 4th and 5th of April 2013**
 - Scientific Kick-off meeting
- **Conference– COST CM1204 – Madrid, 11-13 November 2013** First general meeting - XUV/X-raylight and fast ions for ultrafast chemistry
 - **Poster:** "Ionization of The H_2^+ Molecule by Ultrashort EUV/XUV Laser Pulses" (G.Zs.Kiss, A. Tóth, S. Borbély, L. Nagy)
- **G.Zs.Kiss, S. Borbély, L.Nagy, AIP Conf. Proc. 1564, (2013) 78**
 - Momentum Space Iterative Solution of the Time-Dependent Schrödinger Equation
- **Conference / work shop: Autumn School on Laser Dynamics, Bolyai Institute, University of Szeged, 24-28 of September 2014, Szeged, Hungary**
 - **Poster:** "Photionization of Atoms and Molecules (H_2^+) Irradiated with Ultrashort and Strong Laser Pulses" (G.Zs.Kiss, A.Tóth, S.Borbély, L.Nagy)
- **Conference: "PHYSICS CONFERENCE TIM-14" organised by the West University of Timisoara, 27-30 November 2012, Timișoara, Romania**
 - **Poster:** "Numerical Method for The Investigation of H_2^+ Molecule In External XUV Laser Field"
- **Conference for PhD students, Pécs, Hungary, 7 March 2015**
 - **Talk:** (in Hungarian) "Intenzív, ultrarövid lézertér és anyag közötti kölcsönhatás során fellépő kvantumos jelenségek tanulmányozása"
- **Conference: Workshop 2015: "Photon and fast Ion induced Processes in Atoms, MOleculesand Nanostructures" (PIPAMON), Debrecen, 24-26 March, 2015**
 - **Poster:** "Investigationof the H_2^+ molecule by strong, ultrashort laser pulses"
- **G.Zs.Kiss, S. Borbély, L.Nagy, AIP Conf. Proc. 1694, (2015) 200171**
 - An efficient numerical discretization method for the study of the H_2^+ in intense laserfields

