




Gellert Zsolt Kiss

DATE OF BIRTH:
05/1987

CONTACT

Nationality: Romanian

Gender: Male

 INCDTIM Cluj-Napoca | WIGNER
Research Centre Budapest, Don
ath st 67-103 Cluj-Napoca |
Konkoly-Thege Miklós st 29-33,
Building 1/38
Romania

 zsolti.g.kiss@gmail.com

zsolt.kiss@itim-cj.ro

kiss.zsolt@wigner.hu

 (+40) 749072778

LinkedIn: [https://
www.linkedin.com/in/kiss-
gellert-zsolt-84330561/](https://www.linkedin.com/in/kiss-gellert-zsolt-84330561/)

Whatsapp Messenger:
whatsapp

EDUCATION AND TRAINING

2019 - Babeş-Bolyai University, Cluj-Napoca, Romania

PhD in Physics

Title of the PhD thesis: Laser Induced Photoelectron Holography in Diatomic Molecules

Atomic, Molecular and Laser Physics. Developing parallel code based software to model on CPU clusters physical processes (i.e., ultrafast dynamics) that occur during the interaction between ultrashort laser light pulses and quantumphysical systems.

2012 - Babeş-Bolyai University, Cluj-Napoca, Romania

MSc in Computational Physics

Title of the MSc thesis: Numerical solution of the time-dependent Schrödinger equation in momentum space | grade 10 (of 10)

Acquired competences (programming and computational skills): Numerical Computations in Atomic Phys (C, C++), Symbolic Computation in Phys (Mathematica, MATLAB), Advanced Theoretical Atomic and Molecular Phys (Fortran), Object-Oriented Programming (Java, Python), Advanced Solid State Physics (DFT algorithms), Ab Initio Calculations in Solid State Phys (TDDFT, Octopus), Research Methodology and Drawing Up Scientific Papers (LaTeX), Spectra Simulations (Octave), Molecular Structure Simulation and Molecular Dynamics (MD algorithms), Nanostructured Materials, Computation of Molecular Prop., Vibrational Methods for Biomedical Applications (Gaussian), Methods of Stochastic Simulation in Statistical Phys. Interdisciplinary Applications (C)

2009 - Babeş-Bolyai University, Cluj-Napoca, Romania

BSc in Physics (Phys-Informatics specialization)

Title of the BSc diploma work: The ionization and excitation of the hydrogen atom in laser fields | grade 9.67 (of 10)

Selected Competencies: Numerical Methods and Simulation in Phys (C), Technical Optics, Electronic Data Acquisition and Processing (MATLAB), Computer Science, Electronics, Electrodynamics, Experimental Phys Modern Techniques, Laser Phys and Applications, Optical Phys, Quantum Mechanics, Sensor Systems and Instrumentation, Differential Eqs.. Mathematical Physics, Math. Analysis, Electricity and Magnetism, Mechanics and Acoustics, Databases (C#), Operating Systems (Linux, Shell scripts), Computer Networks and Administration (Java, PHP, JavaScript) Microprocessors and Semiconductor Memories

2012 Massachusetts Institute of Technology (edX, the online learning initiative of Harvard and MIT Univ)

Circuits and Electronics 6.002x (online course of MIT) grade A (the highest)

2006 - Theoretical Lyceum "Bolyai Farkas", Tîrgu Mureş, Romania

- **Baccalaureate (Mathematics and Informatics high school specialization) exam grade: 9.25**

WORK EXPERIENCE

04/2019 - CURRENT - Budapest, Hungary

- **Scientific Researcher**

Wigner Research Centre for Physics

12/2015 - CURRENT - Cluj-Napoca, Romania

- **Research asst**

INCDTIM Cluj-Napoca

11/2012 - 09/2019 - Cluj-Napoca, Romania

- **University research asst, PhD studies**

Babeş-Bolyai University of Cluj-Napoca

PROJECTS

09/2016 - 08/2019

- **Laser pulse propagation at relativistic intensities, ProPW (03-ELI /01.09.2016)**

https://www.itim-cj.ro/eli3/index_files/home_en.htm

10/2015 - 09/2017

- **Femtosecond pulse shaping to control attosecond pulse generation (UEFISCDI:PN-II-RU-TE-2014-4-0425)**

<https://www.itim-cj.ro/PNCDI/ru185/index.htm>

11/2012 - 09/2016

- **Interactiunile atomilor si moleculelor cu pulsuri laser si particule incarcate(PN-II-ID-PCE-2011-3)**

04/2019 - CURRENT

- **Ultranagy sebességű molekuláris és nanooptikai kapcsolók kutatása (VEKOP-2.3.2-16-2017-00015)**

<https://wigner.hu/ultragyors/>

2012 - 2017

- **COST Action CM1204 - XUV/X-ray light and fast ions for ultrafast chemistry (XLIC)**

International Collaboration between scientific research groups.

HONOURS AND AWARDS

2009

1st Prize in Physics section - Transylvanian Scientific Conference of Students (ETDK) – KMDSZ, Cluj-Napoca, Romania

2011

Special Award in Quantumphysics - National Scientific Students' Associations Conference (OTDK) – National Council of Student Research Societies - OTDT Hungary

2015

Collegium Talentum fellow

LANGUAGE SKILLS

MOTHER TONGUE(S): Hungarian | Romanian

English

Listening C1	Reading C1	Spoken production C1	Spoken interaction C1	Writing B2
------------------------	----------------------	-----------------------------------	------------------------------------	----------------------

French

Listening B1	Reading B1	Spoken production A2	Spoken interaction A2	Writing A2
------------------------	----------------------	-----------------------------------	------------------------------------	----------------------

DRIVING LICENCE

● Driving Licence: **A** / Driving Licence: **B**

ORGANISATIONAL SKILLS

● **Member in conference organizing committees, and in competitions' jury**

- as **student president** at the National Conference of Scientific Students' Associations, Physics/Mathematics/Geography section (15-18 April 2015, Cluj-Napoca, Romania)
- international conference: 4th anual meeting of the COST Action CUSPFEL (21-23 March 2012, Cluj-Napoca, Romania)
- jury member at the Transylvanian Scientific Conference of Students (ETDK) (28-30 April 2015, Cluj-napoca, Romania)
- jury member at Hu: "Mindennapok Fizikája (MIFIZ)" (En: Everyday Physics) competition for high school students (2015, Cluj-Napoca)
- jury and organiser committee member at the interdisciplinary competition "Bolyai-Farkas" (2015, 2016, 2017 | Tirgu-Mures, Romania)

PUBLICATIONS

- **Photoelectron holography of the H₂⁺ molecule**
G.Zs. Kiss, S. Borbély, A. Tóth, L. Nagy, Eur. Phys. J. D (2020) 74: 128
- **Efficient numerical method for investigating diatomic molecules subjected to intense laser fields**
G.Zs. Kiss, S. Borbély, L. Nagy, AIP Conf. Proc. (2017) 1916: 020010
- **Towards the full quantum dynamical description of photon-induced processes in D₂⁺**
A. Tóth, S. Borbély, G.Zs.Kiss, G.J. Halász, Á. Vibók, J. Phys. Chem. A (2016) 120: 9411
- **An efficient numerical discretization method for the study of the H₂⁺ in intense laser fields**
G.Zs. Kiss, S. Borbély, L. Nagy, AIP Conf. Proc. (2015) 1694: 200171
- **Momentum space iterative solution of the time-dependent Schrödinger equation**
G.Zs. Kiss, S. Borbély, L. Nagy, AIP Conf. Proc. (2013) 78: 1564
- **The excitation and ionization of the hydrogen atom in strong laser fields**
Centr. Eur. J. of Phys. (2010) 8: 249

CONFERENCES AND SEMINARS

- **03/09/2018 - 07/09/2018** - Internation conference ISCP-INDLAS, Alba-Iulia, Romania
- **Talk: Photon Induced Electron Dynamics in Diatomic Molecules by XUV Laser Pulses**
25/05/2017 - 27/05/2017 - TIM17 International Physics conference, Timisoara, Romania
- **Talk: Efficient Numerical Method for Investigating Diatomic Molecules in Ultrashort Laser Fields**
27/11/2012 - 30/11/2012 - TIM12 International Physics conference, Timisoara, Romania
- **Talk: The Numerical Solution of The Time-Dependent Schrödinger Equation for Atoms in Intense Fields**

HOBBIES AND INTERESTS

- **Photos, Online learnings, Documentaries, Sci-Fi movies, Volleyball, Basketball, Football, Trips**