Curriculum Vitae

PERSONAL INFORMATION

József Konczer

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https://konczer.github.io/

https://www.linkedin.com/in/józsef-konczer-25290189/

Date of birth 21/02/1989

Nationality Hungarian

Citizenship Slovak

WORK EXPERIENCE

2023- **Senior Research Engineer**

Imagination Technologies Ltd https://www.imaginationtech.com/

- Developing hardware-conscious ML algorithms
- As a member of the AI Research team

Business or sector Computer Software, Electronics engineers

2020-2022 **Consultant**

Wolfram Research, Inc. https://www.wolfram.com/

- Developing Game Theory functionality
- As a member of the Machine Learning Group
- Related public materials:
  - Language Design in Wolfram Language [Game Theory] Part 1 and Part 2
  - Introducing Game Theory (WTC 2021 presentation)

Business or sector Computer Software

2020-2023 **Researcher**

HELORO s.r.o. https://www.heloro.sk/en

- Research and development in the field of Energetics
- Innovating waste heat recovery methods using Thermoelectric Generators (TEG)

Business or sector Energy Sector

2020 June, July **Teaching Assistant**

2020 Wolfram Summer School https://education.wolfram.com/summer-school/

- Helping for students in various computational based projects
- Answering questions regarding Theoretical Physics

Business or sector Education

2018-2022 **Module leader**

Milestone Institute http://milestone-institute.org

- Teaching and preparing course material for
  - Data Science, Thermodynamics, Mechanics,
  - PAT-ENGAA test preparation, Chaos and Order

Business or sector Education

2017-2020 **Mentor**

Milestone Institute http://milestone-institute.org

- Interdisciplinary education

Business or sector Education

2013-2016 **Assistant research fellow**

Institute for Particle and Nuclear Physics, Wigner Research Centre for Physics, Hungarian Academy of Sciences http://www.rmki.kfki.hu/en/home

- Performing numerical simulations in integrable quantum field theories
- Understanding AdS/CFT

Business or sector Research

2012, 2009 fall **Demonstrator**

Budapest University of Technology and Economics (BME), Hungary; Faculty of Natural Sciences http://www.bme.hu/

- Teaching Physics II (electrodynamics and modern physics) for 3rd year BSc students of BME Faculty of Electrical Engineering and Informatics

Business or sector Education

EDUCATION AND TRAINING

2013- **PhD**

Eötvös Loránd University (ELTE), Hungary; Institute for Theoretical Physics

- Theme: Integrable methods in the AdS/CFT correspondence
- Supervisor: Dr. Zoltán Bajnok
- Principal subjects: Particle physics, Integrable (quantum field) theories, conformal field theories, AdS/CFT duality
- The Doctoral Pre-Degree Certificate (Absolutorium) gained in 2017

2010-2013 **MSc in Theoretical Physics** Excellent with highest honours

Budapest University of Technology and Economics (BME), Hungary; Faculty of Natural Sciences

- Thesis: Integrable methods in gauge and string theories
- Supervisor: Dr. Zoltán Bajnok
- Principal subjects: Statistical physics, Particle physics

2007-2010 **BSc in Physics** Excellent

Budapest University of Technology and Economics (BME), Hungary Faculty of Natural Sciences

- Thesis: Fisher information in quantum mechanics
- Supervisor: Prof. Dénes Petz
- Principal subjects: Theoretical Physics, Information Theory

1999-2007 **Final examination** Excellent

Selye János Gimnázium, Slovakia

PERSONAL SKILLS

Mother tongue Hungarian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C1
	IELTS Academic, 2020 June: Listening 8.5, Reading 8.0, Writing 6.5, Speaking 7.0, Overall Band Score 7.5				
Slovak	C1	C1	B2	B2	C1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- grew up in multicultural environment
- good in international communication
- able to work in team
- open to new challenges and new knowledge

Organisational / managerial skills

- leadership (for two years president of Eugene Wigner College for Advanced Studies)
- member of student government on the faculty of natural sciences for one year in 2010
- experience in organisation (organiser in Hungarian Nuclear Societies Young Generation Network in 2010)

Technical skills and competences

- experience in measuring with scientific instruments

Computer skills

- Programming skills: C, C++, Python, bash, HTML, Matlab, Wolfram Language (Mathematica)
- Development tools: GIT, CVS, Perforce
- Intermediate level user of office applications: Word, Excel, PowerPoint and LibreOffice
- Advanced level user of typesetting application: LaTeX
- Intermediate level user of photo editor applications: Inkscape, GIMP
- Linux, Mac OS and Windows user skills

Other skills

- diving (one ★ diver since 2013 at CMAS), paragliding, waveboarding, roller skating,
- Hobby drawing

Driving licence

- Category B since 2008

ADDITIONAL INFORMATION

Publications

- A. Hegedus, J. Konczer. Strong coupling results from the numerical solution of the quantum spectral curve. arXiv:1604.02346 **JHEP 1608 (2016) 061**, 2016
- Z. Bajnok, F. Buccheri, L. Holló, J. Konczer and G. Takacs. Finite volume form factors in the presence of integrable defect. hep-th 1312.5576 ***Nucl.Phys. B882 (2014) 501-531***, 2014

Popular articles

- József Konczer, Botond Sánta, PhD., Ing. Jozef Konczer st., Ing. Tomáš Potásch, Ing. Ignác Havran, Ing. Lajos Csonka. Priemyselný výskum a vývoj inovačných technológií pre oblasť energetiky. ATP Journal 10/2022, str. 36 **year XXIX, ISSN 1335-2237**, 2022

Conferences and Internacional courses

- *Wolfram Virtual Technology Conference*, Virtual Champaign IL, 18 – 21 October 2021
- *Eastern European Machine Learning Summer School*, Virtual Budapest Hungary, 7-15 July 2021
- *2020 Wolfram Summer School,* Virtual, June , July, 2020
- *Crunch Conference* (data engineering & data analytics), Budapest, Hungary 29-31 October, 2018 (as technological representative of Wolfram Research)
- *2016 Wolfram Summer School,* Waltham, MA, 19 June-8 July, 2016
- *Young Researchers Integrability School* Durham, United Kingdom 6-10 July, 2015
- *Gauge-string duality and its application bilateral project* Krakow, Poland 4-24 May, 2015
- *Summer School on String Theory and Holography* Lisbon/Porto, Portugal 14 - 26 July, 2014
- *Integrability in Low Dimensional Quantum Systems* Tihany, Hungary 30 June - 4 July 2014
- *Finite-size Technology in Low Dimensional Quantum Systems (VII)* Budapest, Hungary 16 – 27, June 2014
- *Japanese-Hungarian bilateral exchange project* Tokyo, Japan 29 November – 16 December 2013
- *Wigner 111 Scientific Symposium* Budapest, Hungary 11-13 November 2013
- *Spring School on Superstring Theory and Related Topics* held at ICTP-Trieste, Italy 18-26 March 2013
- *Mathematica School in Theoretical Physics: Advanced Topics in Conformal Field Theory* held at ICTP-Trieste, Italy 11-16 March 2013
- *Theoretical Physics School on Quantum Gravity* University of Szeged, Hungary 27-31 August 2012
- One week course *Introduction to Symbolic Computation for Engineers* in Universidad Politecnica de Madrid (ATHENS programme 2012)
- One week course *On Quanta, Chaos and Daemons* in Ecole des Ponts ParisTech (ATHENS programme 2011)
- *Mini-Workshop on "Spin and Quantum Transport"* Humboldt-Universität, Berlin 25-26 May 2011
- *Information Geometry and its Applications III* University of Leipzig, Germany 2-6 August 2010

Honours and awards

- 1st place on NYIFFF physics team competition as a member of "*TBA...*" team in 2013
- 3rd place on Rudolf Ortvay Competition in Physics in 2010
- Bronze Medal at the 38th International Physics Olympiad in Isfahan, Iran in 2007
- Honourable Mention at the 37th International Physics Olympiad in Singapore in 2006

Memberships

- 2013-2017 Member of MTA Lendület Holographic Quantum Field Theory Group
- 2011- Member and for two years president of BME Eugene Wigner College for Advanced Studies
- 2009- Member of Hungarian Nuclear Societies Young Generation Network

Presentations

- *Introducing Game Theory* on *Wolfram Virtual Technology Conference*, Virtual Champaign IL, 18 – 21 October 2021
- *Finite volume form factors of the defect scaling Lee-Yang model* on *Integrability in Low Dimensional Quantum Systems* Tihany, Hungary 30 June - 4 July 2014
- *Egzaktul megoldható kvantumtérelméletek* on DOFFI Balatonfenyves, Hungary 12-15 June 2014
- *Form factors of the defect scaling Lee-Yang model* on ELFT Részecskefizikai Szeminárium Budapest, Hungary 9. October 2013
- Participation on a workshop about Communicating with young people on PIME conference in Brussels, Belgium in 2011.