

Veronika Hendrychová

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EDUCATION

**Faculty of Nuclear Sciences and Physical Engineering,
Czech Technical University (FNSPE CTU)**

September 2020 - PRESENT

Third year of bachelor studies of Mathematics and Computer Science; weighted grade average 1,1

AWARDS

Scholarship of the Czech Literary Foundation

May 2023

Travel scholarship to cover the travel expenses of the Inria internship in Rennes, France

Merit Scholarship

June 2021

For excellent grades during 1st year of bachelor studies

“General Alois Liška Award”

June 2017

For excellent representation of Grammar-school Turnov during high-school studies

PUBLICATIONS

Hendrychová V., **“String Attractors”** – Bachelor thesis under Prof. Ľubomíra Dvořáková
(CTU, Czechia) and Dr. Karel Břinda (INRIA, France)

2022 - 2023

Newly discovered minimal attractors of special classes of words, formally proved them, and developed algorithms to work with them

Dvořáková L., Hendrychová V., **“String attractors of Rote sequences”**

2023

Published original results from bachelor thesis

WORK EXPERIENCE

Member of the leadership of FYKOS

December 2020 - PRESENT

- One of the principal organizers of FYKOS student group organizing several annual physics competitions and other educational events for high-school students on an international level
- Coordinated project management of these competitions
 - FYKOS Correspondence Competition - correspondence contest, ~ 200 participants, 6 rounds a year
 - FYKOS Camps - two week-long camps a year for the best participants of the Correspondence Competition
 - Fyziklani - in-presence physics competition in Prague, last year ~ 1200 participants from 21 countries
 - Physics Brawl Online - online physics competition, last year ~ 3900 participants from 62 countries
- Leader of the autumn week-school for 40 participants in 2022, coordinated 20 organizers
- FYKOS belongs to the Faculty of Mathematics and Physics, Charles University

IT developer of FYKOS

July 2020 - PRESENT

- Developing several static websites using Nette framework and dokuwiki
- Maintaining SQL database of participants and events and its web application
- Deploying and maintaining websites on server, handling redirecting to remote servers
- Designing scripts to simplify workflow
- Providing IT support for both organizers and participants of the competitions

Organizer of Science summer camps for children

July 2018 - PRESENT

- Annual two-week summer camp for 90 elementary school pupils with focus on education in science
- Creating and lecturing physics programs for children
- Organized by the Faculty of Science, Charles University

Database administrator and organizer of Science Week

March 2022 - July 2022

- One-week event for 150 high-school students, focused on popularization of and education in physics
 - Maintaining the database, communication with participants, and maintenance of the website on server
 - Organized by the Faculty of Nuclear Sciences and Physical Engineering, Czech Technical University
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PROJECTS

String Attractors – Project under Prof. Ľubomíra Dvořáková (CTU, Czechia)

2022 - PRESENT

and Dr. Karel Břinda (INRIA, France)

Discovered minimal attractors of new classes of words and developed algorithms to work with them

Constant Gap Sequences – Project under Prof. Ľubomíra Dvořáková (CTU, Czechia)

July 2021

Studied and gained insights in combinatorics on words

LEGO Robots Programming – Project under Dr. Lenka Kretschmerová (TUL, Czechia)

2016 - 2017

Assembled and programmed a robot with a temperature sensor using Lego MindStorms NXT and LabVIEW

INTERNSHIPS, CONFERENCES, COMPETITIONS

Internship at the Inria/IRISA Institute, Rennes – week-long stay at the institute including

March 2023

giving an invited lecture on “String attractors of infinite words” for the GenScale project team

Students’ Conference of the TIGR Research Group

2023, 2022

Given lectures on the topic of String Attractors

ScienCon – selected for science conference focused on choosing career path, organized by International Association of Physics Students in Poland

April 2022

Hands on CERN – selected for excursion to CERN after taking part in the seminar organized by FNSPE, CTU

November 2020

Moderator of the Physics Education session of “IAPS at a distance”

August 2020

Event of the International Association of Physics Students

FYKOS Physics Correspondence Competition

2018 - 2020

Two years of participation, both times 11th in my category

CERN HSSIP – selected among the best 24 high-school students from Czechia for two-week-long internship in CERN

June 2017

Czech Programming Olympiad – 1x regional round during high school

2019

Czech Physics Olympiad – 4x regional, 1x national round during high school

2016 - 2019

Czech Language Olympiad – 4x regional, 1x national round during high school

2016 - 2019

Spanish Language Olympiad – 1x regional round during high school

2016

LANGUAGES AND SKILLS

English – Level C2, CAE Certificate

Spanish – Level B2, self-estimated

French – Level A2, self-estimated

Skills – C++, Python, C#, PHP, HTML, Git, Nette, TeX, XML, MySQL, dokuwiki

KEY COURSES TAKEN

Mathematics – Calculus (4 semesters), Linear Algebra (2 semesters), Algebra, Discrete Mathematics (4 semesters), Differential Equations, Numerical Mathematics (2 semesters), Probability and Statistics, Complex Functions

Computer Science – Programming in C++ (3 semesters), Linear Programming, Introduction to Algorithms, Introduction to UNIX, Computer Graphics (2 semesters), Introduction to Java

Physics – Thermal and Molecular Physics, Mechanics, Electromagnetism, Waves and Optics