

Martin Vaněk

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PROFESSIONAL EXPERIENCE

HEAD ORGANIZER / EXECUTIVE DIRECTOR @ FYKOS **OCT. 2021 – NOV. 2024**

- Leading a group of ~60 students organizing major non-profit educational events in physics for high-school students – e.g., Fyziklani (~1200 participants from 22 countries in person in Prague), and Physics Brawl Online (online, over 6000 participants from 80 countries)
- Experience with leadership, (project) management, community building, running a non-profit, educating and lecturing, outreach, communication with high-ranking officials of companies and governments, etc.
- Various other roles in FYKOS since September 2019

OPERATIONS + INSTRUCTOR @ EUROPEAN SUMMER PROGRAM ON RATIONALITY **SUMMER 2022, 2023, AND 2024**

- Ten-day camps for highly talented young students (~16-20 years old) teaching various valuable skills from mathematics and applied rationality to Artificial Intelligence
- Operations at ESPR camp 2022; operations and lectures at the related Program on AI and Reasoning (PAIR) 2023; invited instructor (lectures and teaching) at PAIR 2024

GIVING WHAT WE CAN AMBASSADOR FOR PRAGUE **SEP. 2021 – JAN. 2023**

- A community-building and outreach volunteer role
- Organizing several outreach events and meetups, notably three Giving Games

EDUCATION

CUNI MFF, THEORETICAL PHYSICS MGR. **2022 – PRESENT**

- Master's of Theoretical Physics at the Faculty of Mathematics and Physics, Charles University (CUNI MFF), Prague, Czech Republic
- Grade average 1.00 (best possible)

CUNI MFF, PHYSICS Bc. **2019 – 2022**

- Physics Bachelor at CUNI MFF
- Graduated Summa Cum Laude with a grade average of 1.00 (best possible)

ACADEMIC PROJECTS

INTERNSHIP @ EPFL – STATISTICAL PHYSICS OF AUTOENCODERS **MAR. – MAY 2024**

- Three months paid internship at the “Statistical Physics of Computation” laboratory of École Polytechnique Fédérale de Lausanne under prof. Lenka Zdeborová

OPTIMIZATION OF THE PERFORMANCE OF FUEL-CELL STACKS USING AN ULTRASONIC HUMIDIFIER **2021 – 2022**

- Bachelor thesis at the Department of Surface and Plasma Science (DSPS), CUNI MFF

RESEARCH OF HYDROGEN FUEL CELLS AT THE DSPS CUNI MFF **2 WEEKS, 2021**

- Summer project grant awarded by the Department of Surface and Plasma Science, CUNI MFF

BEAM ALIGNMENT IN THE COMPASS EXPERIMENT, CERN **1 WEEK, 2021**

- A week-long project in-person in CERN with the Department of Low-Temperature Physics, CUNI MFF

SELECTION OPTIMIZATION OF B-HADRONS IN THE ATLAS EXPERIMENT IN CERN **~4 MONTHS, PART TIME, 2020**

- Data analysis in ROOT/C++ and Python at the Institute of Particle and Nuclear Physics, CUNI MFF

CONFERENCES, EVENTS, ETC.

EXPEDITION TO SOUTHEAST ASIA

MAR. 2023

- Month-long journey for promoting educational activities at institutions in Southeast Asia, including meetings at institutions such as the Ministry of Education, Science and Technology of Nepal or the Honorary Consulate of the Czech Republic in Nepal; during preparations also Embassies of India, Malaysia, or Vietnam in Prague.

PRESENTED AT

- #ČESKObudoucnosti (Czechia for Future) 2024 – invited panelist and speaker (regarding educational events)
- International Conference of Physics Students (Philippines, Sep. 2023, presented work on Hydrogen fuel cells)
- Expo of Physics Teachers' Ideas (Czechia, 2021 and 2023, presented educational activities of FYKOS)
- Competitive Expo of Significant Acts in Physics Outreach (Czechia, 2021 and 2023, won the prize “Significant Act in the Popularization of Physics (and Mathematics)” for presenting the educational events of FYKOS)

FURTHER PARTICIPATED AT

- Effective Altruism Global Conferences (EAGxOxford 2022, EAGxPrague 2022, EAG London 2022 and 2023, EAGxBerlin 2024)
- Conference on Technologies and Long-Term Future of Humanity (Prague, Jul. 2024)
- Workshop: From Machine-Learning Theory to Driven Complex Systems and back (Lausanne, May 2024)
- Human Aligned AI Summer School (Prague, 2022)

OTHER SKILLS AND INTERESTS

SKILLS

- Programming: Python, C++, web development (HTML, CSS, PHP, Nette...), basics of ML in PyTorch
 - I built the website <https://akvankova.cz> and the vast majority of <https://fykos.org>
 - Did side projects from scrapping websites to fine-tuning LLMs for translating physics problems

INTERESTS

- Reading educational non-fiction
- Running, calisthenics
- Optimizing long-term sustainable productivity

November 2024