





Pavel Hudec

 Seydlerova 2151/3, 158 00, Prague 5, Czech Republic

 phudec@connect.ust.hk  (420) 722 043 126  GitHub: posij118 Codeforces: posij118

Education

Hong Kong University of Science and Technology

Hong Kong

PhD in Computer Science and Engineering supervised by Prof Amir Goharshady

Sep 2021–Aug 2025

Research: Applying parameterization to solve a wide range of problems in diverse areas of computer science broadly related to program verification.

- Exploiting low treewidth of control-flow graphs of real-world programs to obtain faster algorithms for domain calculations in abstract interpretation.
- Using sparsity parameters such as treewidth and pathwidth to obtain faster algorithms for fundamental problems about MDPs.
- Extending recently developed parameterized algorithms for data packing and cache-conscious data placement to probabilistic programs.
- Researching novel sparsity parameters of control-flow graphs.
- Applying parameterization to speed up heuristics for SMT solving of specific theories.

Coursework: Type theory, Combinatorial optimization, Cryptography, Parametrized algorithms

TA experience: Introduction to Blockchain, Cryptocurrencies and Smart Contracts

- Grading assignments, giving comprehensive feedback to students.

Charles University in Prague

Prague, Czech Rep

Bc in General Mathematics

Sep 2018–Jul 2021

Coursework: Abstract algebra (including Model Theory and Universal algebra I), Algorithms and Combinatorics (Graph Algorithms II, Computational geometry II, Combinatorics and Graph Theory II)

Thesis: Topological properties of algebraic curves (supervised by Dr Jan Šťovíček)

GPA: 1.33 (1 – best, 4 – fail), 1 for the final exam.

Activities: Organizing mathematical correspondence seminars PraSe and iKSko for talented high school students

- Proposing, testing and proofreading problems, grading students' solutions, writing and proofreading model solutions.
- Giving lectures at camps and organizing them.
- Coordinated (graded, ensured fairness) at Middle European Mathematical Olympiad

Aug 2019

Awards

International Mathematical Olympiad;	Silver Medal;	3x Recipient	Jul 2016, Jul 2017, Jul 2018
International Olympiad in Informatics;	Bronze Medal		Sep 2018
International Mathematics Competition 2021;	First Prize		Aug 2021
International Mathematics Competition 2019;	First Prize		Aug 2019
ACM Collegiate Programming Contest Central European Regional Round;	Participant		Dec 2019
ACM Collegiate Programming Contest Central European Regional Round;	Participant		Dec 2018

Work Experience

Jane Street


Remote, London branch




Quantitative trading intern

Jul 2020–Sep 2020

- Examined relationship between volume traded and volatility of stocks over time.
- Used Python to fine-tune models for predicting volatility and beta models.
- Used Python to analyze data coming from a simulated stock exchange and based manual/automatic trading strategies on that.
- Participated in diverse mock trading scenarios.

Pavel Hudec

 Seydlerova 2151/3, 158 00, Prague 5, Czech Republic

 phudec@connect.ust.hk  (420) 722 043 126  GitHub: posij118 Codeforces: posij118

Skills

Web Development: HTML, CSS, Javascript (React, Redux, Node, Express, Mocha), PostgreSQL, Websockets.

Data Analysis: SQL, Python (Numpy, Pandas, Matplotlib, Sklearn).

Miscellaneous: Git / Terminal, Bloomberg Terminal, základy Scaly a MATLABu.

Languages

Czech (native), **English** (fully professional, TOEFL 107 / 120), **German** (intermediate – B1).

Conference participation

PLMW mentoring workshop @ PLDI

Jun 2021

VMW mentoring workshop @ CAV

Jul 2021

Fellowships and Stipends

Hong Kong PhD Fellowship Scheme 319,200 HKD / year + inflation

Sep 2021–Aug 2024

- The most prestigious Hong Kong PhD stipend disbursed by the Hong Kong government.
- Currently at less than 2% acceptance rate (200 recipients each year across all science fields).
- Additionally includes 13,300 HKD / year as a research-related travel allowance.

Red Bird Scholarship 40000 HKD

Sep 2021

- HKUST support for HKPFS awardees.

HKUST top up for HKPFS awardees: 319,200 HKD + inflation

Sep 2024–Aug 2025

Excellent study results stipend at Charles University 37,000 CZK total

Sep 2018–Jul 2021

Representation of Charles University at IMC 23,000 CZK total

Aug 2019–Aug 2021

Organizing correspondence seminar PraSe 55,350 CZK total

Nov 2018–Nov 2021

Praemium Bohemiae 90,000 CZK total

Dec 2016–Dec 2018

- Awarded to medal winners at international science olympiads.