

SIAM Student Chapter Prague: Final Report 2021/2022

June 30, 2022

This document serves for internal purposes of the Chapter only and should be perceived as an overview of the Chapter activities in the past year extending the information filled out in the Final Report online form provided by SIAM.

Report on Chapter elections

On June 28, 2022 Chapter members elected the following officers to serve term from July 1, 2022 to June 30, 2023.

President:	Martin Sýkora
Vice President:	Ondřej Kincl
Secretary:	Sunčica Sakić
Treasurer:	Jana Trdlicová
Webmaster:	Jakub Fara

Chapter highlights

I'm gonna write it in \LaTeX !

Date: February 26, 2022

Attendance: 52

The Chapter organized a one-day workshop focused on \LaTeX typesetting and its use in writing mathematical text, in particular a bachelor thesis or a lab report. We helped the students become familiar with the basics of \LaTeX and introduced them to the template for the bachelor's thesis provided by the Faculty.

There were three innovations in the course this year: Firstly, the focus was shifted from the bachelor's thesis to general typesetting and the event was promoted among wider range of students. This change led to a higher attendance than in previous years. Secondly, the course was held online due to the pandemic. On the one hand, this decreased the level of "interactivity" and the number of questions asked, on the other hand, it also allowed for the desired higher capacity of the course. Lastly, instead of using downloaded \LaTeX and an offline editor we moved to Overleaf which eliminated all the usual technical problems with outdated versions of \LaTeX and was perceived positively.

Report on other Chapter activities

We have started a [YouTube channel](#). We moved the three visiting lecturer programme videos from the last year to our new channel, and we recorded each online (and hybrid) seminar this year.

Furthermore, Jana has (successfully) applied for a [Student Mini-grant](#) from the 4EU+ Alliance. The aim is to organize a Student Workshop on Applied Mathematics in November 2022 together with the Heidelberg Student Chapter of SIAM and the University of Copenhagen Association of PhD Students, and possibly start a long-term collaboration with the above-mentioned associations.

Meeting with candidates applying for a research grant

Date: October 14, 2021

Attendance: 105

The Grant Agency of Charles University supports PhD students with their own research grants; however, the competition is tough. Every year, successful applicants from our Chapter, in cooperation with the Academic

Senate of the Faculty, organize a meeting where we provide potential applicants with advice on how to write a competitive grant application. Also, we invite the vice deans and ex-members of the Grant Agency evaluation committee to help us highlight the important parts of the process. In fact, this annual event has a huge impact on the competition, as the quality of the applications has improved significantly since we started organizing it.

An official online meeting (co-organised by OGAP and Jan Hrabovský) was attended by cca 100 students. The other part, an informal in-person meeting, was attended by five more students interested in further discussions.

SIAM SC seminar

Since the foundation of the Student Chapter at Charles University, we have organized a regular seminar with the aim to offer talks that are widely accessible to both students and teachers. Most of the speakers are PhD students who try to introduce their field of research to an audience which is not particularly familiar with the subject. The seminars are supposed to be held in a friendly atmosphere, with beverages and pizza served at the beginning. Ample time for formal and casual discussions is reserved during the seminar. Unfortunately, only the last seminar was held in person due to the pandemic situation.

Quirky Materials and How to Describe Them (Vít Průša)

Date: December 6, 2021

Attendance: 21

Simulating Inviscid Fluids with Smoothed Particle Hydrodynamics (Ondřej Kincl)

Date: January 3, 2022

Attendance: 11

Moment equations for a polytropic gas reproducing adjustable transport coefficients (Vladimir Djordjić – RWTH Aachen University)

Date: March 2, 2022

Attendance: 6

(Not) Finitely Tractable PCSPs (Kristina Asimi)

Date: April 13, 2022

Attendance: 11

Visiting lecturer programme

The visiting lecturer programme was a hybrid lecture since professor Scott is from the USA. The in-person part of the seminar was held in the lecture hall K1 with the help of the Department of Numerical Mathematics (doc. Hnětynková, doc. Kučera and RNDr. Lukáš Vacek). Small refreshments and beverages were served.

A Modern Approach to Simulating Flight (L. Ridgway Scott)

Date: May 19, 2022

Attendance: 39

Guest lecture

This guest lecture was held online since the speaker was unable to come to Prague. The original idea was to organize a lecture on cognitive biases and argumentation fallacies. However, we realized that it might be better to start with a more general topic regarding how the human brain works, and in the future, we would like to continue with another guest lecture focusing more on the biases and fallacies.

The Brain: Can We Trust It? (Matouš Brunát – Faculty of Biomedical Engineering of CTU)

Date: May 11, 2022

Attendance: 15

Day of Doctoral Students

Date: May 29, 2022

Attendance: 40

Each year, the mathematical section of the Faculty of Mathematics and Physics, Charles University, organizes a Day of Doctoral Students – a conference where PhD students present their research to a broad audience. Specially, all graduate students as well as faculty members from various mathematical departments are invited to participate and learn about the research of our PhD students. There were 25-minute presentations of PhD students of mathematics and our Chapter assisted with the organization.

Business meeting

Date: June 28, 2022

Attendance: 10

We first reviewed and evaluated the activities of the Chapter in the past year and discussed the future development of the Chapter. Then, we briefly mentioned the courses we would like to organize in the next academic year, for example FEniCS course (under the leadership of Jiří Malík). Recently, we were asked to give an interview for the Forum Magazine about our Chapter (Martin and Jana will participate during the summer). Finally, we elected a new committee that shall serve in the academic year 2022/2023.