

SIAM Student Chapter Prague: Final Report 2022/2023

October 1, 2024

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 6, 2023 Chapter members elected the following officers to serve term from July 1, 2023, to June 30, 2024.

President:	Jakub Cach
Vice President:	Jana Brunátová
Secretary:	Martin Vejvoda
Treasurer:	Anna Minarovičová
Webmaster:	Jakub Fara

Chapter highlights

Student Workshop on Applied Mathematics (SWAM)

Date: November 17-19, 2022

Attendance: 50

Thanks to financial help from a Student MINI-grant (awarded by 4EU+ Alliance, applicant Jana Brunátová), we were able to organize a workshop on applied mathematics which took place at Charles University in November 2022 and was co-organized by students from the *Heidelberg Chapter of SIAM* and the *University of Copenhagen Association of PhD Students*. The purpose of this workshop was to bring graduate students studying applied mathematics in natural sciences, engineering, and mathematics together and create an environment to share ideas from different perspectives and to enable easier communication with researchers for possible interdisciplinary international collaborations.

We invited 11 speakers (6 of them were from abroad). Our grant covered the accommodation and transportation expenses of 10 students, and 7 other students were able to get funding from their home institutions. The rest of the participants were from Prague (CU or CTU). 35 students registered for the whole workshop and some of the graduate students and researchers from CU attended some of the talks without registration. In our opinion, the main aim of the workshop was fulfilled. Most of the students took the opportunity to talk with experienced researchers during coffee breaks or at the conference dinner. From the feedback form, it is clear that many students are considering future collaboration with someone they met at the workshop.

Further reading about SWAM:

- [Event at our webpage](#)
- [Conference booklet \(pdf\)](#)
- [Article in Faculty News](#)

Report on other Chapter activities

I'm gonna write it in \LaTeX !

Date: December 3, 2022

Attendance: 45

The Chapter organized a one-day workshop focused on \LaTeX typesetting and its use in writing mathematical texts, 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.

Changes in the character and structure of the course we made last year seemed to improve this workshop, thus we kept all of them – the workshop was held online; both students and lecturers worked in an online editor Overleaf; and we focused on general typesetting in \LaTeX instead of focusing on writing a bachelor's thesis.

Meeting with candidates applying for a university research grant

Date: October 20, 2022

Attendance: 100

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. This annual event has a huge impact on the competition, as the quality of the applications has improved significantly since we started organizing it. This year, the seminar was organized by Jan Hrabovský and took place in lecture hall M1. Firstly, Jan explained the basic rules and tips on how to write a research proposal. After that, one ex-member of the Grant Agency evaluation committee gave a talk on what should a successful application include and, on the other hand, what are the most common mistakes. Finally, we showed successful applications from the past years and helped with answering questions from the audience. The seminar was attended by cca 100 students.

SIAM SC seminar

Since the foundation of the Student Chapter at Charles University, we have organized a regular seminar with the aim of offering 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.

This year, all seminars were held in-person in Karlín.

The Six-Vertex Model with a Non-Standard Boundary Condition (Mikuláš Zindulka)

Date: November 2, 2022

Attendance: 11

Mixed finite element formulation for data-driven approach to diffusion problems (Adriana Kuliková)

Date: December 14, 2022

Attendance: 22

How to predict a traffic jam? (Lukáš Vacek)

Date: February 28, 2023

Attendance: 15

Opportunities in space industry

Date: May 4, 2023

Attendance: 19

SIAM SC Prague works on establishing bonds between the academic sphere at the university and business. In May, we and ESA BIC (European Space Agency Business Incubator Centre) organised a meeting with two inspiring start-ups, ECOTEN Urban Comfort and UptimAI, both incubated by ESA BIC, where we learned about how space technologies such as satellite images can be used in business over multiple fields.

Modelling trip

Date: May 10, 2023

Attendance: 23

SIAM SC organised a traditional Modelling trip, revived after the COVID restrictions. Every age category from first-year undergraduate students to doctoral students to professors participated. We visited Prokopské údolí and Dívčí hrady, where we saw a herd of Przewalski's horses and a random snake.

Business meeting

Date: June 6, 2023

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). Finally, we elected a new committee that shall serve in the academic year 2023/2024.

Promotion of our Chapter

Interview for the Forum Magazine

In July 2022, Jana Brunátová and Martin Sýkora gave an interview about our Chapter for the Forum Magazine. We talked about how and why we became members of our Chapter, what are our recurring activities and about the Student Workshop on Applied Mathematics. Full text (in Czech only) can be found [here](#).

Podcast z Matfyzu

In March 2023, Martin Sýkora and Ondřej Kincl talked about our Chapter in an episode of the podcast called *Podcasty z Matfyzu*. We described what brought us to the chapter, mentioned our main activities such as the Student Workshop on Applied Mathematics and \LaTeX course and explained that even though a majority of our members are doctoral students, we are open to younger students interested in applied mathematics as well.

The podcast (in Czech only) is available [here](#).