

## SIAM Student Chapter Final Report for 2016–2017 Academic Year (1 of 4)

*Student Chapters receiving funds from SIAM are required to submit a final report of activities and finances by the end of academic year. Please complete final report, sign and submit to SIAM office by June 30, 2017. Please attach separate sheets of paper if additional space is needed.*

Date of report: August 28, 2018  
Student Chapter: Charles University in Prague Chapter of SIAM  
Chapter Web site: http://siam.cuni.cz/en/  
Chapter Facebook Page: https://www.facebook.com/PragueSIAMSC  
Chapter Twitter Handle: @SIAMSCPrague  
Faculty Advisor: Josef Málek and Zdeněk Strakoš

Please check Chapter listing on SIAM Web site [www.siam.org/students/chapters/current.php](http://www.siam.org/students/chapters/current.php) and report any changes below or email revisions to [snell@siam.org](mailto:snell@siam.org).

New officers: president, vice president, secretary and treasurer

### Demographic of Chapter Membership

		Departments			
Member type		Mathematics	41	Gender	
Undergraduates	30	Applied Mathematics	23	Male	58
Graduate Members	40	Physics	8	Female	19
Faculty Members	7	Computer Science	2	<b>Total Members</b>	<b>77</b>
<b>Total Members</b>	<b>77</b>	Statistics	2		
		Other	1		
		<b>Total Members</b>	<b>77</b>		

### Report on Chapter Election

Date of Election: June 13, 2017 to elect officers to serve term from July 1, 2017 to June 30, 2018. Please provide office, name & email address of all officers elected to serve.

President: Petr Pelech, petr.pelech@gmail.com  
Vice President: Erika Maringová, maringova@karlin.mff.cuni.cz  
Secretary: Jakub Hrnčtř, hrncir.jakub@gmail.com  
Treasurer: Dominik Vach, dominikvach@seznam.cz  
Webmaster: Petr Lukáš, luk.p@post.cz

## Chapter Highlights

### Seminar SIAM SC

Since the foundation of the Student Chapter at the Charles University in Prague, we have organized a regular seminar following the goal to attract both students and teachers. Although most of the speakers consisted of Ph.D students and alumni, speakers from various scientific and industrial institutions were invited as well.

In the last school year in order to make the seminar even more interesting we have decided to focus the seminar on highly attractive topics presented by very good speakers. This scenario required to make the date of the seminar more flexible. As before the seminars are held in the students-friendly atmosphere with breakfast-beverages and coffee served at the beginning and some time for formal as well as casual discussion is reserved after the lectures. As the outcome of this rearrangement we have gained an increasing attendance and positive responses to the seminar as a place to share internal/external knowledge and meet various students across the whole faculty.

**Josef Málek** – Navier-Stokes equations and one million dollars

**Jaroslav Hron** – Introduction to the Faculty computer cluster

**Marek Netušil** – Multiscale Modelling of Aortic Media

**Tomáš Gergelits** – Introduction to Uncertainty Quantification

**Karel Túma** – Augmented Lagrangian method: inequality constraints

**Jiří Vejražka** – Oscillations of bubbles in contaminated and uncontaminated liquids

**Jan Blechta** – Git it good

## Report on Chapter Activities

*Please provide complete description of all Chapter activities, including details on number & type of meetings with approximate number of attendees, name of invites speaker(s) & topic of presentation, contests, awards, field trips, etc. (Please attach a separate sheet of paper if additional space is needed.)*

TITLE OF EVENT OR PRESENTATION: Meeting with Candidates Applying for a Research Grant  
 DATE OR EVENT OF PRESENTATION: October 19, 20 & 24, 2016 NUMBER OF PARTICIPANTS:  $\approx 3 \times 10$   
 SPEAKER, INSTITUTIONAL AFFILIATION: Students of the Faculty of Mathematics and Physics

EVENT DESCRIPTION OR PRESENTATION OF ABSTRACT: The Chapter helped prospective candidates to apply for a research grant within the Grant Agency of the Charles University especially designed to fund student research. Members of the Chapter and other students who already received the support gave the prospective candidates advice what points to stress and what not to forget in their application. The event was organized in cooperation with the Academic Senate of the Faculty of Mathematics and it consisted of three meetings (for students of Mathematics, Computer Science, and Physics).

TITLE OF EVENT OR PRESENTATION: Writing my Bachelor's Thesis in L<sup>A</sup>T<sub>E</sub>X  
 DATE OR EVENT OF PRESENTATION: November 26, 2016 NUMBER OF PARTICIPANTS:  $\approx 25$   
 SPEAKER, INSTITUTIONAL AFFILIATION: Students of the Faculty of Mathematics and Physics and the Faculty of

EVENT DESCRIPTION OR PRESENTATION OF ABSTRACT: The Chapter organised a one-day long workshop for students of mathematics, physics and informatics focused on L<sup>A</sup>T<sub>E</sub>X typesetting and its use for writing a thesis. Since there is a L<sup>A</sup>T<sub>E</sub>X template for bachelor's and diploma thesis provided by the Faculty of Mathematics and Physics, we decided to help students to grasp the basics of L<sup>A</sup>T<sub>E</sub>X.

TITLE OF EVENT OR PRESENTATION: Manage references with JabRef  
 DATE OR EVENT OF PRESENTATION: November 30, 2016 NUMBER OF PARTICIPANTS: 7?  
 SPEAKER, INSTITUTIONAL AFFILIATION: Marie Kubínová & Tomáš Gergelits

EVENT DESCRIPTION OR PRESENTATION OF ABSTRACT: Many younger graduate students struggle with a good organization of their bibTeX files. One piece of the reference manager software that is free, works natively with the bibTeX format, and is available for all platforms is JabRef. However, some users may find difficult starting from scratch or importing and polishing their current messy bibTeX file. We therefore organized a two-hour introductory course to help students understand how JabRef works, introduce the basic features and give them some tips on useful advanced functions.

TITLE OF EVENT OR PRESENTATION: Presentation karaoke  
 DATE OR EVENT OF PRESENTATION: December 12, 2016 NUMBER OF PARTICIPANTS: 40  
 SPEAKER, INSTITUTIONAL AFFILIATION: A Christmas party of the department of Mathematical Modeling

EVENT DESCRIPTION OR PRESENTATION OF ABSTRACT: There is an annual Christmas party held by students of Mathematical modeling. This academical year our Chapter contributed with a presentation karaoke contest. The committee prepared four different pseudo-scientific slide shows and during the evening we picked four volunteers whose task was to present to these slides without seeing them in advance.

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TITLE OF EVENT OR PRESENTATION: Field trip to Laboratory of biomechanics at the Faculty of Physical Education and Sport  
DATE OR EVENT OF PRESENTATION: April 27, 2017 NUMBER OF PARTICIPANTS: 7  
SPEAKER, INSTITUTIONAL AFFILIATION: Students of Faculty of Mathematics and Physics

EVENT DESCRIPTION OR PRESENTATION OF ABSTRACT: The Laboratory of biomechanics is focused on studies of a human body motion during variety of situations like sports, car accidents etc. using high-speed cameras and tensiometric devices. The laboratory also provides courts with forensic analyzes. Prague Chapter of SIAM organized a trip to this laboratory as a part of a growing collaboration between the Faculty of Mathematics and Physics and the Faculty of Physical Education and Sport.

TITLE OF EVENT OR PRESENTATION: Hike of the Department of Mathematical Modeling  
DATE OR EVENT OF PRESENTATION: May 17th, 2017 NUMBER OF PARTICIPANTS:  $\approx 30$   
SPEAKER, INSTITUTIONAL AFFILIATION: Department of Mathematical Modeling

EVENT DESCRIPTION OR PRESENTATION OF ABSTRACT: This May we organized a traditional hike of the Department of Mathematical Modeling. Approximately 30 students, foreign guests, researchers, and their families participated in a tour from Prague to Únětice brewery. This event is considered to be a good way how to bring students and employes of our Faculty together and get to know each other better. The trip was met with a great feedback from all participants.

TITLE OF EVENT OR PRESENTATION: Meeting with Undergraduate Students  
DATE OR EVENT OF PRESENTATION: May 25, 2017 NUMBER OF PARTICIPANTS:  $\approx 10$   
SPEAKER, INSTITUTIONAL AFFILIATION: Students of the Faculty of Mathematics and Physics

EVENT DESCRIPTION OR PRESENTATION OF ABSTRACT: As in the previous years several members of Prague Chapter of SIAM met with undergraduate students. The goal of this meeting was to provide students with information about study programs Mathematical and Computer Modelling in Physics and Engineering, and Numerical and Computational Mathematics.

TITLE OF EVENT OR PRESENTATION: Business Meeting  
DATE OR EVENT OF PRESENTATION: June 13, 2017 NUMBER OF PARTICIPANTS:  $\approx 20$   
SPEAKER, INSTITUTIONAL AFFILIATION: Chapter committee

EVENT DESCRIPTION OR PRESENTATION OF ABSTRACT: At the business meeting we reviewed and recalled the activities of the Chapter in the past year. In addition we elected a new committee that will serve in the academic year 2017/2018.

TITLE OF EVENT OR PRESENTATION: Week of Doctoral Students of the School of Mathematics, 2017  
DATE OR EVENT OF PRESENTATION: June 15, 2017 NUMBER OF PARTICIPANTS:  $\approx 25$   
SPEAKER, INSTITUTIONAL AFFILIATION: School of Mathematics of the Faculty of Mathematics and Physics

EVENT DESCRIPTION OR PRESENTATION OF ABSTRACT: Each year, the School of Mathematics of the Faculty of Mathematics and Physics organizes a Day of Doctoral Students, where the first-year doctoral students present their research topic to their colleagues. This year, we proposed to make the event more interactive by organizing a poster session, where also advanced student can present the progress they have made. This event is also meant as a presentation of possible research area for students considering pursuing doctoral studies at the Faculty

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TITLE OF EVENT OR PRESENTATION: SIAM SC Seminar

DATE OR EVENT OF PRESENTATION: monthly NUMBER OF PARTICIPANTS:  $\approx 12$

SPEAKER, INSTITUTIONAL AFFILIATION: Students of Faculty of Mathematics and Physics

EVENT DESCRIPTION OR PRESENTATION OF ABSTRACT: We held six seminars for students interested in topics from applied mathematics. For further information and a complete list of talks see the attached sheet “Chapter Highlights”.

## Detailed expenses