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# Sciex Scholarship Fund

## Data, Portraits and Success Stories



**Czech Republic**



**Sciex Scholarship Fund**  
**Data, Portraits**  
**and Success Stories**

**Czech Republic**



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## Introduction



As part of the SCIEX Scholarship Fund, 91 scientists (doctoral students and post-doctoral researchers) from the institutions in the Czech Republic have been awarded grants of a total value amounting to 7 million CHF. The generous Swiss enlargement contribution made it possible for these promising researchers to do a residency at a Swiss university or research institutions. Experience gained at different research institutes is often a prerequisite for an academic career; development of not only individual skills of scientists, but also of networking potential of the scholarship holders and institutions involved.

Seven of the Swiss Higher Education Institutions are listed in the 2015 Times Higher Education Ranking of the world's top 150 universities, ETH Zurich ranked as 9th best university in the world according to this ranking. Excellent science, promotion of academic exchange and development of new approaches to research are therefore the other important values added to the Sciex mobility.

The programme makes an important contribution to strengthening the research competence of the countries involved and promotion of the Swiss model of efficient partnership among educational and research institutions and industry. Tailor made education, creative job offers and sustainable economic growth in Switzerland are to be perceived as sufficient proofs of the success of the Swiss model.

I would like to congratulate the Sciex fellows and other actors involved on the immense success to be derived not only from their individual stories included in this publication and wish the research teams to draw a long time inspiration from the mutual experience gained under the contribution of Sciex.

**Iva Tatarková**  
*Director*  
*Dům zahraniční spolupráce*  
*Centre for International Cooperation in Education*



**J. E. Markus-Alexander  
Antonietti**  
**Swiss ambassador to CZ**

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*The Scientific Exchange Programme  
is a win-win situation for both  
countries, the Czech Republic  
and Switzerland.*

The Scientific Exchange Programme “Sciex NMS<sup>ch</sup>”, also called Scholarship Fund is an important part of the Swiss-Czech Cooperation Programme which itself is part of the Swiss Contribution to the reduction of economic and social disparities in the enlarged European Union. The Swiss people have decided on this Programme in a public vote in 2006. The Scholarship Fund offers an opportunity to further strengthen the cooperation and partnership between our scientific communities. Soon after the beginning of the transition of the Czech Republic to a pluralistic democracy and free market economy, Switzerland promoted scientific cooperation through the SCOPES programme. Switzerland’s success and future development are based and depend to a large extent on its knowledge and innovation capacities. Hence, we recognize the strategic importance of education, science, research and development for our country and act accordingly. And we attach equal importance to this field in our international relations and cooperation.

Thanks to the Scholarship Fund, 91 fellowships allowed doctoral and post-doctoral students from the Czech Republic to conduct scientific research activities for periods of 6 to 24 months in Switzerland thus exceeding the original goals. I am confident that the contacts, partnerships and networks enhanced by the Scholarship Fund will

contribute to an even stronger focus on research and innovation as well as to well qualified and motivated human resources. Furthermore, it is a promising base for a closer and intensified bilateral relationship in the fields of science, research and innovation which, I trust, will continue after the end of the Fund. It is also expected to contribute to strengthen our European and international networks.

I thank all parties involved: the Czech Ministry of Finance, the Czech Ministry of Education, Youth and Sports, the Intermediate Body – swissuniversities (formerly the Rectors’ Conference of the Swiss Universities - CRUS), all involved universities and research institutes, the mentors and, of course, the participating young scientists. Switzerland considers the Scholarship Fund in the Czech Republic a success for both its results and its organisation. The closing event on the 25th October 2015 in Zurich, Switzerland, was yet another opportunity for networking, a key element for success also in the future.

**H. E. Markus-Alexander Antonietti**  
*Ambassador of Switzerland to the Czech Republic*



**Aude Pacton**  
**CRUS / swissuniversities**

As part of the Swiss Enlargement Contribution, the Scientific Exchange Programme (Sciex-NMS<sup>ch</sup>) aims at contributing to the reduction of economic and social disparities in the enlarged European Union through fostering the scientific capacities of researchers in the New EU Member States (NMS) and promoting sustainable research partnerships between the ten NMS and Switzerland.

A total amount of approximately 46 million Swiss Francs has been earmarked for the duration 2009 to 2016. Altogether, 10 calls have been conducted and a total of 545 Sciex Fellows have been granted over the entire runtime of the Sciex Programme.

The Sciex Programme provided generous funding and offered a unique opportunity for doctoral and postdoctoral students from the New EU Member States first to boost their scientific career, second to develop new capacities and search in a new scientific environment with optimal research and working conditions, and, finally, to gain international experience and extend their scientific networks. Furthermore, through these research placements, institutional partnerships were enhanced and sustainably established.

The Czech Republic was the second largest partner within the Sciex Programme after Poland – with a total budget of 7 million Swiss Francs and a total of 91 granted projects (allocated within the 6 different calls in which the Czech Republic has participated).

The projects were gender-balanced and mainly conducted by Doctoral Candidates (50 vs. 41 by PostDocs). The granted projects were developed in all scientific fields – the most represented fields were Basic Biological Research (44 projects), Engineering Sciences (16 projects) and Chemistry (13 projects). A total of 7 projects were granted in the Human and Social Sciences. Approximately 50% of the projects had a duration of 12 months.

swissuniversities, the Rectors' Conference of Swiss Universities, is proud of having been in charge of the management of the Sciex Programme and of being part of this success story.

**Aude Pacton**  
*Sciex Programme Manager – swissuniversities*



# Basic Information and Statistic

# 1.



## About Dům zahraniční spolupráce

**Dům zahraniční spolupráce (DZS)** is a semi-budgetary institution, established by the Ministry of Education, Youth and Sport of the Czech Republic, performing tasks involved with ensuring educational, training and other relations with foreign countries under the instructions of the ministry. The DZS has more than thirty years of history. The original purpose for which it was established - providing study and research exchanges for officially nominated grantees on the basis of international agreements, and activities associated with this, is still applicable today, although its name has undergone a number of minor changes.

The last changes occurred in 2012 and in October 2013, when part of the activities of the defunct Institute for Information in Education and of the National Youth Agency and Eurodesk became affiliated with DZS. On 1 October 2013, the Dům zahraniční spolupráce acquired its current name (originally the Centre for International Services), which better captures the scope and character of its activities.

The DZS develops activities of the following character and in the following fields:

- ▶ activities of organizational character;
- ▶ activities of study character (studies of foreigners in the Czech Republic);
- ▶ activities in the field of implementation of European educational and other international educational programmes;
- ▶ activities in the field of implementation of international programmes focused on cooperation in science and technology;
- ▶ activities in the field of collection and distribution of information;
- ▶ other activities (e.g. promotion of the Czech higher educational system abroad).

The activities and programmes administered by the DZS are aimed at both individuals, students, teachers, directors of all types of schools and other professionals, and institutions and companies involved in education and local authorities and, last but not least, also the Ministry of Education, Youth and Sport. In 2014 the DZS has been awarded a Czech National Award for Corporate Social Responsibility (CSR).

As for the examples of programmes administered by the DZS:

- ▶ Academic Information Agency (AIA)
- ▶ AKTION Czech Republic – Austria
- ▶ American Science Information Agency (AMVIA)
- ▶ Central European Exchange Programme for University Studies (CEEPU)
- ▶ EEA and Norway Grants
- ▶ Erasmus+
- ▶ Eurodesk
- ▶ European Schoolnet
- ▶ Programme to support the Czech cultural heritage abroad
- ▶ The Sciex scholarship Fund (Sciex-NMS<sup>th</sup>)
- ▶ Studies for foreigners in the Czech Republic
- ▶ Study in the Czech Republic
- ▶ Teachers of European schools

As for the the Sciex Scholarship Fund (Sciex-NMS<sup>th</sup>), the DZS has fulfilled its role of the Coordination Body, which included contribution to the publicity of the programme and its respective calls, providing information on the conditions for potential applicants in the Czech Republic, participation at the formal check of the proposals submitted, coordination of the evaluation process in the Czech Republic and last but not least collection of the available information on the long-term success of the fellowships.



# About The Scientific Exchange Programme

**The Scientific Exchange Programme (Sciex-NMS<sup>ch</sup>)** was part of the Swiss Contribution to the New Member States (NMS) of the European Union and aimed at contributing to the reduction of economic and social disparities in the enlarged European Union through fostering the scientific capacities of researchers in the NMS and promoting sustainable research partnerships between the ten NMS and Switzerland.

The Scientific Exchange Programme was launched in 2009 for the period of years 2009-2016. As part of the Programme, it was possible to apply for grants for the implementation of research programmes in all academic disciplines.



The main goal of the programme was to establish scientific partnerships, which were aimed at:

- ▶ Developing individual researchers' capacities (human capital);
- ▶ Fostering scientific progress and innovation (scientific prospects); and
- ▶ Establishing or enhancing networks between researchers (networking).

The Scientific Exchange Programme (Sciex-NMS<sup>ch</sup>) provided:

- ▶ Research fellowships for junior researchers from the ten NMS to pursue their research in cooperation with Swiss researchers in Swiss research institutions and
- ▶ Short-term research visits for senior researchers of granted.

Who was supported?

- ▶ Doctoral candidates enrolled in a Czech home institution could have applied for a Sciex doctoral candidate fellowship.
- ▶ Researchers with a doctoral degree employed at an eligible Czech home institution could have applied for a Sciex post-doc fellowship.
- ▶ Senior Researchers from both countries support the Fellows as partner mentors.

Duration: 2009 – 2016

- ▶ In the period of years 2009 – 2014 there were 91 projects with Czech participation supported during the pilot phase and 5 calls launched.
- ▶ The last projects were completed until October 31, 2015.
- ▶ The administrative closing of the Sciex programme was conducted in 2016.



## SCIEX 2009 – 2014


### Total numbers

including Pilot phase



**250**   
NUMBER OF  
PROJECTS  
SUBMITTED

**91**   
NUMBER OF  
PROJECTS  
APPROVED

**40**   
NUMBER OF  
FEMALE  
FELLOWS  
(PROJECTS  
APPROVED)



# SCIEX 2009 – 2014

## Home institutions

























 NUMBER OF  
PROJECTS  
SUBMITTED





 NUMBER OF  
PROJECTS  
APPROVED



Charles University in Prague	73	26	
Czech Academy of Sciences	64	32	
Czech Technical University in Prague	35	9	
Masaryk University, Brno	19	7	
University of Chemistry and Technology, Prague	18	2	
University of South Bohemia in České Budějovice	3	1	
Technical university of Liberec	4	1	
University of West Bohemia, Pilsen	4	2	
University of Ostrava	1	0	
Technical University of Ostrava	4	1	
University of Economics, Prague	5	0	
University of Pardubice	2	0	
Mendel University in Brno	1	1	
University of Defence, Brno	1	0	
Brno University of Technology	6	1	
University of Life Sciences Prague	4	3	
Palacký University Olomouc	3	1	
University of J. E. Purkyne	1	0	
Transport Research Centre (CDV)	1	0	
Crop Research Institute	1	1	

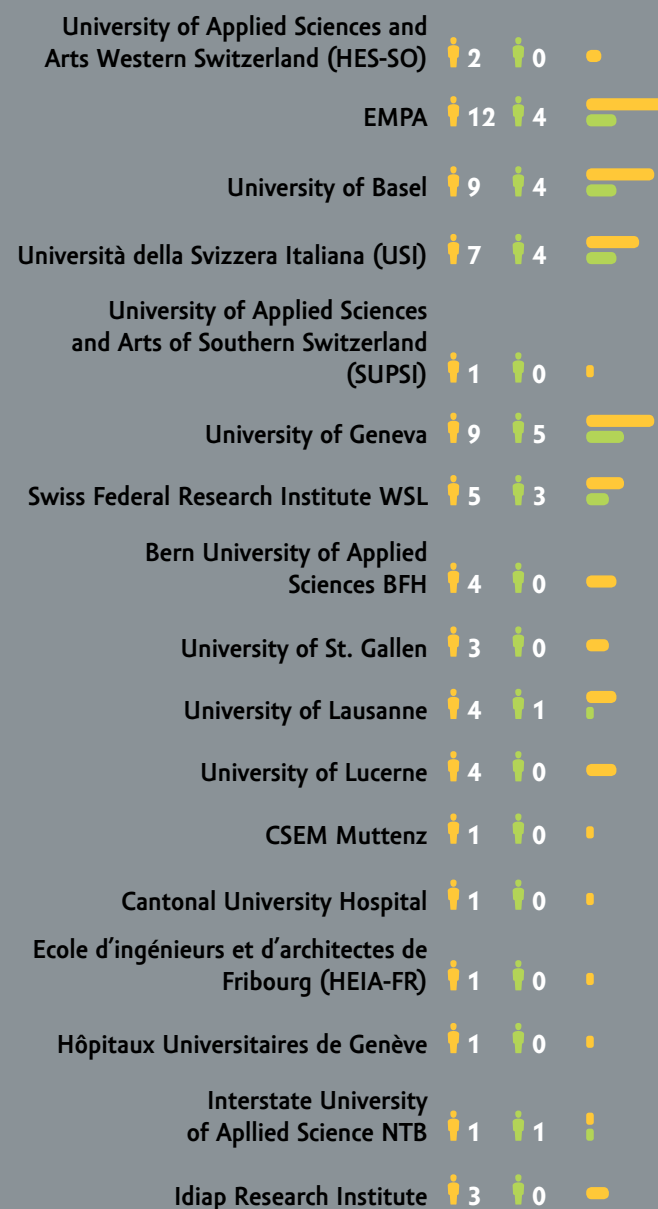
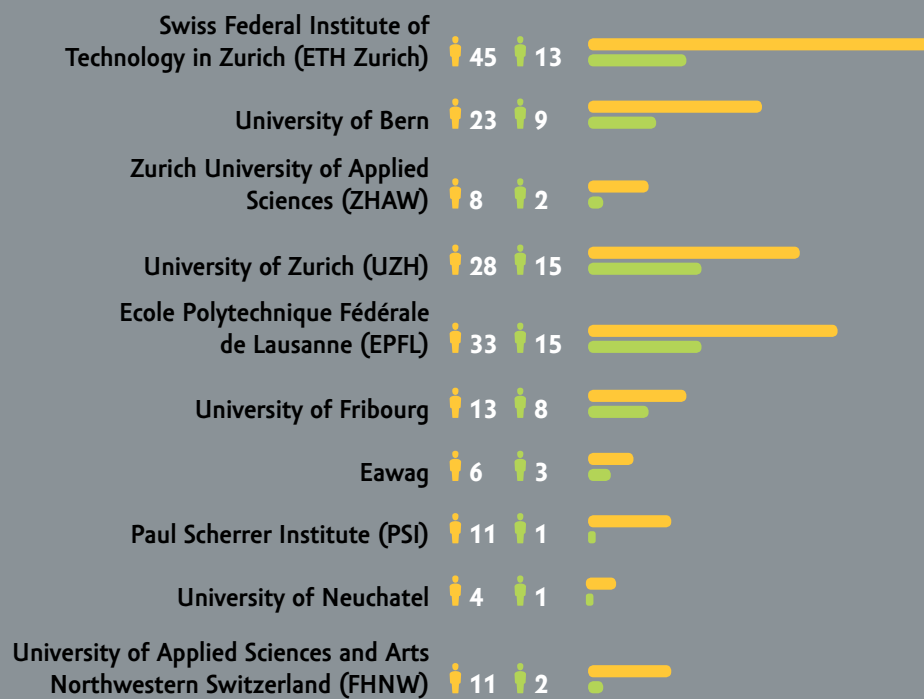
# SCIEX 2009 – 2014

## Host Institutions





**NUMBER OF PROJECTS SUBMITTED**



**NUMBER OF PROJECTS APPROVED**



# SCIEX 2009 – 2014 Docs/Postdocs Fellows

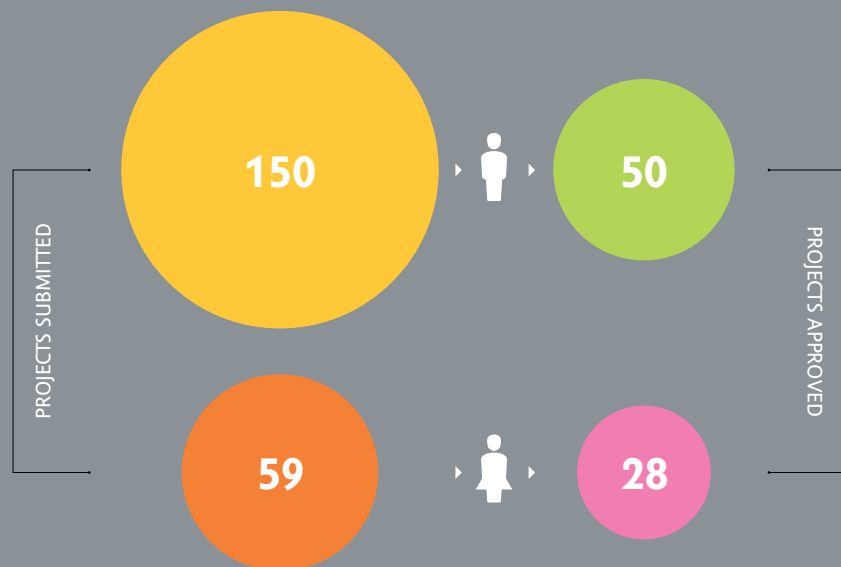


## Docs

150	50	59	28
NUMBER OF PROJECTS SUBMITTED	NUMBER OF PROJECTS APPROVED	NUMBER OF PROJECTS SUBMITTED	NUMBER OF PROJECTS APPROVED

### Total numbers

### Female Fellows

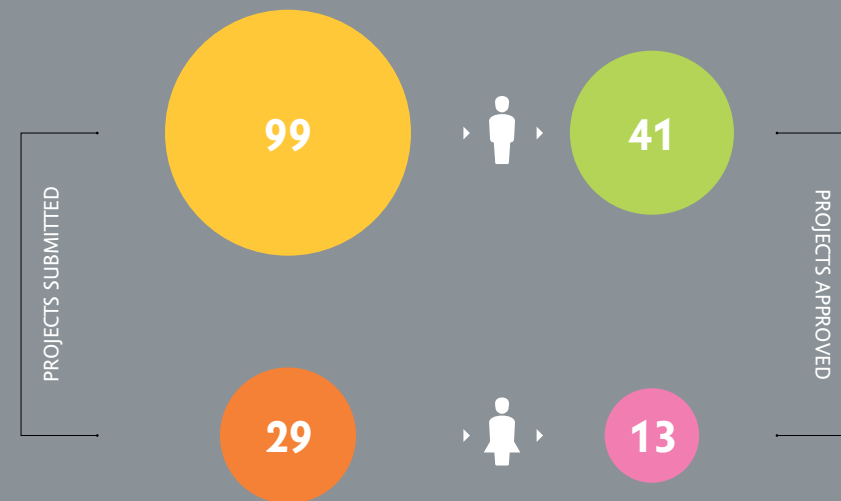


## Postdocs

99	41	29	13
NUMBER OF PROJECTS SUBMITTED	NUMBER OF PROJECTS APPROVED	NUMBER OF PROJECTS SUBMITTED	NUMBER OF PROJECTS APPROVED

### Total numbers

### Female Fellows



# SCIEX 2009 – 2014

## Research Fields in Numbers



### Number of projects submitted

167 

FIELD  
MATHEMATICS,  
NATURAL – AND  
ENGINEERING  
SCIENCES

38 

FIELD  
HUMAN  
AND SOCIAL  
SCIENCES

45 

FIELD  
BIOLOGY  
AND  
MEDICINE

### Number of projects approved

61 

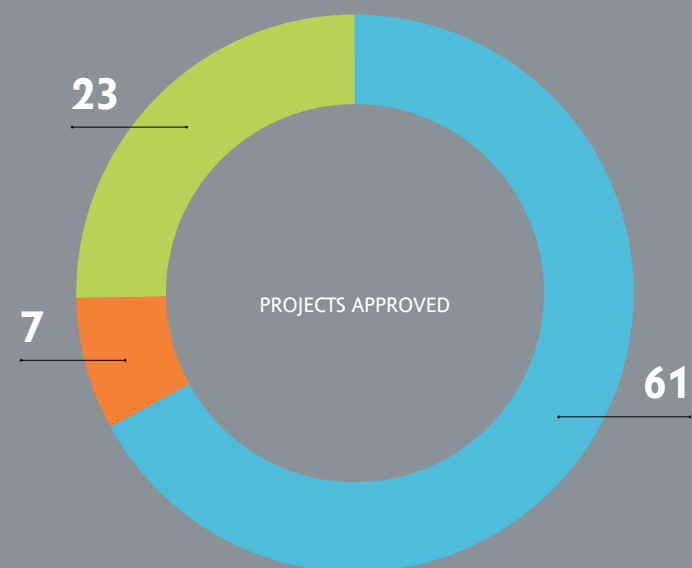
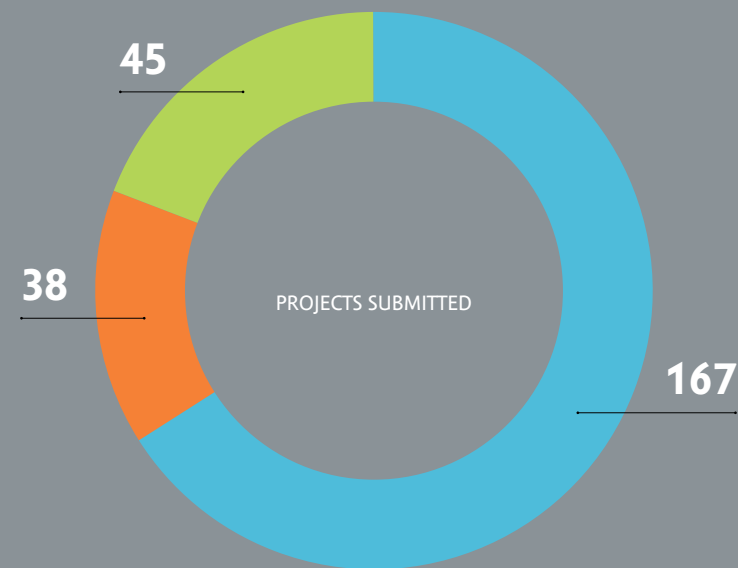
FIELD  
MATHEMATICS,  
NATURAL – AND  
ENGINEERING  
SCIENCES

7 

FIELD  
HUMAN  
AND SOCIAL  
SCIENCES

23 

FIELD  
BIOLOGY  
AND  
MEDICINE





## Profiles of the SCIEX fellows

# 2.



# Mathematics, Natural and Engineering Sciences

## Mathematics



29

## Mathematics, Natural and Engineering Sciences

Mathematics	29
Engineering Sciences	32
Environmental Sciences	41
Earth Sciences	46
Astronomy, Astrophysics and Spatial Sciences	48
Chemistry	49
Physics	56

## Human and Social Sciences

Philosophy, Psychology, Educational Science and Religious Sciences	62
Legal and Social sciences, Economics	64
History	65

## Biology and Medicine

Clinical Medicine	66
Basic Medical Sciences	67
Environmental Sciences	68
Basic Biological Research	69
General Biology	76

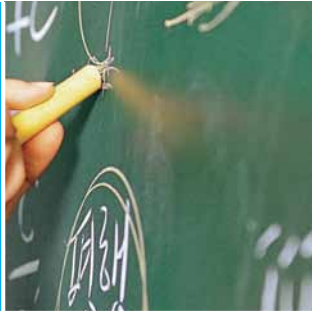
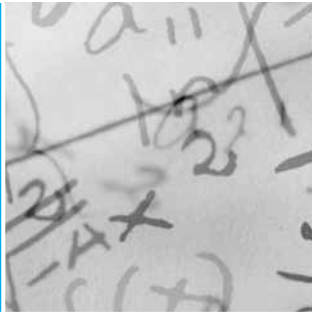
<b>Radka Sabolová</b>	Finite sample properties of statistical procedures Charles University in Prague, Faculty of Mathematics and Physics	
from 1. 9. 2011 to 29. 2. 2012	University of Geneva, Econometrics	33 589,37 CHF (grant spent)
<b>Ondřej Kreml</b>	Transport phenomena in continuum fluid dynamics (TraFlu) Czech Academy of Sciences, Institute of Mathematics	
from 1. 10. 2012 to 30. 9. 2013	University of Zurich, Institute of Mathematics	95 338,57 CHF (grant spent)





# Mathematics, Natural and Engineering Sciences Mathematics


30

<b>Petr Siegl</b>	<b>Spectral Operators in Mathematical Physics (SpOMp) Czech Academy of Sciences, Nuclear Physics Institute</b>	
from 1. 3. 2013 to 28. 2. 2014	<b>University of Bern, Mathematical Institute</b>	<b>99 059,32 CHF</b> (grant spent)
<b>Martin Plešinger</b>	<b>Preconditioned Krylov subspace methods for large-scale model reduction (KryMoR) Technical University of Liberec, Faculty of Mechatronics</b>	
from 1. 7. 2010 to 30. 6. 2011	<b>ETH Zurich, Department of Mathematics</b>	<b>95 137,53 CHF</b> (grant spent)

# Mathematics, Natural and Engineering Sciences Mathematics



31

<b>Robert Cimrman</b>	<b>Mechanical modelling of plant growth (MMPG) University of West Bohemia in Pilsen, Department of Mechanics</b>	
from 1. 9. 2010 to 28. 2. 2011	<b>University of Fribourg, Department of Mathematics</b>	<b>47 731,40 CHF</b> (grant spent)



# Mathematics, Natural and Engineering Sciences Engineering Sciences

32

<b>Martina Plačková</b>	Relationship between <i>Pichia pastoris</i> cell physiology and secretion of heterologous penicillin G acylases (PEGAS) Czech Academy of Sciences, Institute of Microbiology	
from 1. 10. 2014 to 31. 10. 2015	Zurich University of Applied Sciences ZHAW, Life Sciences and Facility Management (LSFM)	70 997,10 CHF (grant spent)

<b>Lukáš Kurilla</b>	Structurally Informed Interactive Design (SIID) Czech Technical University in Prague, Faculty of Architecture	
from 1. 9. 2014 to 31. 8. 2015	ETH Zurich, Department of Architecture	56 955,80 CHF (grant spent)

# Mathematics, Natural and Engineering Sciences Engineering Sciences



33

<b>Lukáš Dvořák</b>	Industrial wastewater treatment by membrane bioreactor technology University of Chemistry and Technology, Prague, Department of Water Technology and Environmental Engineering	
from 1. 10. 2009 to 31. 12. 2010	University of Applied Sciences Northwestern Switzerland (FHNW)	80 542,00 CHF (grant spent)

<b>Michal Drábek</b>	Information Technologies in Future Transport Economy (ITFTE) Czech Technical University in Prague, Faculty of Transportation Sciences	
from 1. 10. 2010 to 30. 9. 2011	ETH Zurich, Department of Civil, Environmental and Geomatic Engineering	60 430,39 CHF (grant spent)



# Mathematics, Natural and Engineering Sciences Engineering Sciences

34

<p><b>Martin Řeřábek</b></p>	<p><b>Compression of Holographic Visual Information (CHVI)</b> <b>Czech Technical University in Prague, Department of Electrical Engineering</b></p>	
<p>from <b>1. 9. 2010</b> to <b>29. 2. 2012</b></p>	<p><b>Ecole Polytechnique Fédérale de Lausanne (EPFL), School of Engineering, Electrical Engineering Institute</b></p>	<p><b>96 970,81 CHF</b> (grant spent)</p>
<p><b>Petr Libič</b></p>	<p><b>Measurement &amp; Modeling of Garbage Collector Impact on Observed Application Performance (MeMo)</b> <b>Charles University in Prague, Faculty of Mathematics and Physics</b></p>	
<p>from <b>1. 7. 2010</b> to <b>31. 12. 2010</b></p>	<p><b>Università della Svizzera italiana (USI), Faculty of Informatics</b></p>	<p><b>29 386,11 CHF</b> (grant spent)</p>

# Mathematics, Natural and Engineering Sciences Engineering Sciences



35

<p><b>Lenka Maierová</b></p>	<p><b>Inter-individual Lighting Preferences of Office Occupants</b> <b>Czech Technical University in Prague, Faculty of Civil Engineering</b></p>	
<p>from <b>15. 6. 2011</b> to <b>14. 12. 2012</b></p>	<p><b>Ecole polytechnique fédérale de Lausanne (EPFL), School of Architecture, Civil and Environmental Engineering</b></p>	<p><b>93 093,10 CHF</b> (grant spent)</p>
<p><b>Lukáš Marek</b></p>	<p><b>Productive and Efficient dynamic Analysis through aspect-oriented domain-specific Languages (PEARL)</b> <b>Charles University in Prague, Faculty of Mathematics and Physics</b></p>	
<p>from <b>1. 6. 2011</b> to <b>31. 5. 2012</b></p>	<p><b>Università della Svizzera italiana (USI), Faculty of Informatics</b></p>	<p><b>64 171,12 CHF</b> (grant spent)</p>



## Mathematics, Natural and Engineering Sciences Engineering Sciences

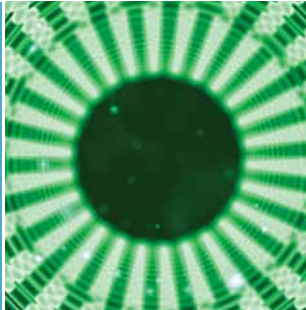

36

<b>Luděk Strouhal</b>	Quantification of the climate change impacts on hydrological processes in small catchments <b>Czech Technical University in Prague, Dept. of Irrigation, Drainage and Landscape Engineering</b>	
from <b>1. 11. 2011</b> to <b>30. 4. 2012</b>	<b>University of Zurich, Department of Geography</b>	<b>33 606,50 CHF</b> (grant spent)
<b>Lubomír Bulej</b>	Dynamic Analysis for distributed systems (DYNASTY) <b>Charles University in Prague, Faculty of Mathematics and Physics</b>	
from <b>1. 7. 2012</b> to <b>31. 12. 2012</b>	<b>Università della Svizzera italiana (USI), Faculty of Informatics</b>	<b>55 163,50 CHF</b> (grant spent)

## Mathematics, Natural and Engineering Sciences Engineering Sciences



37

<b>Eva Kedroňová</b>	Plasma Modification of Electrospun Polymer Micro and Nano Fibers (PlasmaESP) <b>Masaryk University, Brno, Faculty of Science</b>	
from <b>1. 9. 2012</b> to <b>28. 2. 2013</b>	<b>Empa, Materials meet Life</b>	<b>35 296,00 CHF</b> (grant spent)
<b>Andrej Podzimek</b>	WORkLoad analysis and consolidation for Datacenters (WORLD) <b>Charles University in Prague, Faculty of Mathematics and Physics</b>	
from <b>1. 5. 2013</b> to <b>31. 10. 2014</b>	<b>Università della Svizzera italiana (USI), Faculty of Informatics</b>	<b>96 007,00 CHF</b> (grant spent)



## Mathematics, Natural and Engineering Sciences Engineering Sciences

38

<b>Kateřina Šimková</b>	Size and morphology tuning of solidified nanosuspensions of poorly water-soluble drug substances for lung zone targeting (LungPowder) University of Chemistry and Technology, Prague, Faculty of Chemical Technology	
from 1. 7. 2013 to 31. 12. 2014	University of Applied Sciences and Arts Northwestern Switzerland (FHNW), School of Life Sciences	<b>93 545,00 CHF</b> (grant spent)
<b>Tomáš Lukeš</b>	Super-resolution Optical Fluctuation Imaging of Mitochondrial Networks (MitoSOFI) Czech Technical University in Prague, Faculty of Electrical Engineering	
from 15. 7. 2014 to 14. 7. 2015	Ecole Polytechnique Fédérale de Lausanne (EPFL), STI-IMT	<b>61 112,96 CHF</b> (grant spent)

## Mathematics, Natural and Engineering Sciences Engineering Sciences



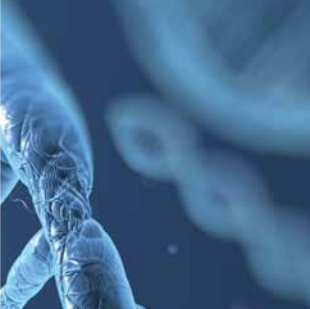
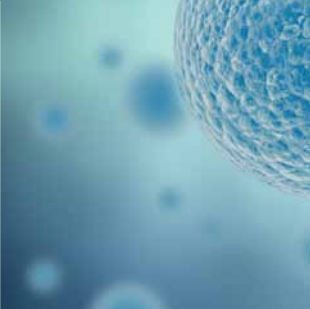
39

<b>Kseniya Illkova</b>	Acoustic Emission of Plasticity In Cast Aluminium Charles University in Prague, Faculty of Mathematics and Physics, Department of Physics of Materials	
from 1. 11. 2014 to 31. 10. 2015	Ecole Polytechnique Fédérale de Lausanne (EPFL), Institute of Materials / School of Engineering	<b>98 746,01 CHF</b> (grant spent)
<b>Petra Kochová</b>	Investigating the mechanical properties of plant cells using MEMS technology (IMPPC) University of West Bohemia in Pilsen, Department of Mechanics, Mechanics of Microstructure	
from 1. 9. 2010 to 28. 2. 2011	University of Bern Institute of Plant Sciences	<b>50 560,72 CHF</b> (grant spent)



## Mathematics, Natural and Engineering Sciences Engineering Sciences

40

<b>Martina Pravečková</b>	PCBs – Identification of reductive dehalogenase genes and bacterial species involved in the reductive dechlorination of polychlorinated biphenyls in river sediments <b>Czech Academy of Sciences, Institute of Microbiology</b>	
from <b>1. 1. 2010</b> to <b>31. 12. 2010</b>	<b>Ecole polytechnique fédérale de Lausanne (EPFL), GR-CEL</b>	<b>64 375,00 CHF</b> (grant spent)
<b>Michala Čadová</b>	Modelling cartilage mechanics and mechanobiology (MCOMM) <b>Czech Technical University in Prague, Department of Mechanics, Biomechanics and Mechatronics</b>	
from <b>1. 10. 2010</b> to <b>30. 9. 2011</b>	<b>University of Zurich, Center for Dental and Oral Medicine</b>	<b>61 166,25 CHF</b> (grant spent)

## Mathematics, Natural and Engineering Sciences Environmental Sciences



41

<b>Lucia Sekulová</b>	Aboveground and belowground feedbacks for nutrient acquisition in fens: responses to climate change (NUTRIF) <b>Masaryk University, Department of Botany and Zoology</b>	
from <b>1. 9. 2011</b> to <b>31. 8. 2012</b>	<b>Ecole Polytechnique Fédérale de Lausanne (EPFL), Institut of Environmental Engineering (IIE)</b>	<b>60 293,70 CHF</b> (grant spent)
<b>Lucia Sekulová</b>	ENZYFEN – Enzymatic activity in upper peat layer and mineral layer of fens: responses to climate change <b>Masaryk University, Department of Botany and Zoology</b>	
from <b>1. 10. 2012</b> to <b>31. 3. 2013</b>	<b>Polytechnique Fédérale Lausanne (EPFL), Institute of Environmental Engineering (IIE)</b>	<b>47 925,70 CHF</b> (grant spent)



# Mathematics, Natural and Engineering Sciences Environmental Sciences



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<p><b>Pavel Příbyl</b></p>	<p>Bioprospecting and selection of algae for high value products (BIOSAP) Czech Academy of Sciences, Institute of Botany, Department of Plant Ecology</p>	
<p>from 1. 3. 2012 to 31. 8. 2012</p>	<p>Zurich University of Applied Sciences (ZHAW), Life Sciences and Facility Management</p>	<p>50 879,85 CHF (grant spent)</p>
<p><b>Michal Jeníček</b></p>	<p>Snowmelt runoff modelling in mountain environments under changing climate conditions (SnowClim) Charles University in Prague, Faculty of Science</p>	
<p>from 1. 9. 2012 to 28. 2. 2013</p>	<p>University of Zurich, Department of Geography</p>	<p>48 151,80 CHF (grant spent)</p>

# Mathematics, Natural and Engineering Sciences Environmental Sciences




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<p><b>Volodymyr Trotsiuk</b></p>	<p>Life history of <i>Fagus sylvatica</i> and <i>Picea abies</i>: exploring and testing dendroecological methods (TreeLife) Czech University of Life Science, Prague, Forestry and Wood Sciences</p>	
<p>from 1. 9. 2013 to 31. 8. 2014</p>	<p>Swiss Federal Research Institute WSL Forest Soils and Siogeochemistry</p>	<p>59 355,00 CHF (grant spent)</p>
<p><b>Daniel Jančula</b></p>	<p>Proteomics in nanotoxicology - effects of cesium oxide nanoparticles on alga <i>Chlamydomonas reinhardtii</i> Czech Academy of Sciences, Institute of Botany, Department of Experimental Phycology and Ecotoxicology</p>	
<p>from 1. 5. 2014 to 31. 10. 2014</p>	<p>Eawag, Environmental Toxicology</p>	<p>46 358,90 CHF (grant spent)</p>



# Mathematics, Natural and Engineering Sciences Environmental Sciences

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<p><b>Hana Pevná</b></p>	<p>Analysis of the snowpack variability in mountain catchments: Assessing the influence of vegetation and topography on snowmelt runoff Charles University in Prague, Faculty of Science</p>	
<p>from 1. 9. 2014 to 31. 8. 2015</p>	<p>University of Zurich, Department of Geography</p>	<p>58 868,95 CHF (grant spent)</p>


<p><b>Renata Slavíková</b></p>	<p>Moving Organisms and Changing Environments (MOCE) Czech Academy of Sciences, Institute of Microbiology</p>	
<p>from 1. 1. 2015 to 30. 9. 2015</p>	<p>ETH Zurich, Environmental Systems Science</p>	<p>49 414,70 CHF (grant spent)</p>

# Mathematics, Natural and Engineering Sciences Environmental Sciences



45


<p><b>Hana Doležalová / Barošová</b></p>	<p>Composition of airborne brake wear debris particles and lung cell response in vitro – is there any correlation? (TOXBRAWE) Technical University of Ostrava, Nanotechnology Centre</p>	
<p>from 1. 11. 2014 to 31. 10. 2015</p>	<p>University of Fribourg, Adolphe Merkle Institute</p>	<p>57 859,76 CHF (grant spent)</p>


<p><b>Karolína Černá</b></p>	<p>Role of functional components of biodiversity in understanding soil processes in stressed ecosystems (TELL-US) Czech Academy of Sciences, Institute of Systems Biology and Ecology</p>	
<p>from 1. 3. 2012 to 28. 2. 2013</p>	<p>Swiss Federal Research Institute WSL, Ecosystem Boundaries Research Unite</p>	<p>97 168,65 CHF (grant spent)</p>





# Mathematics, Natural and Engineering Sciences Earth Sciences

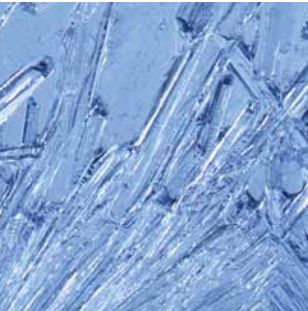
<b>Helena Munzarová</b>	<b>Anisotropic Teleseismic TOMographic Code (ATTOC)</b> <b>Czech Academy of Sciences, Institute of Geophysics</b>	
from <b>18. 3. 2013</b> to <b>17. 9. 2013</b>	<b>ETH Zurich, Department of Earth Sciences</b>	<b>31 622,65 CHF</b> (grant spent)

<b>Vojtěch Patočka</b>	<b>Thermochemical evolution of Mars and Venus: Influence of an elastic lithosphere (THEMELL)</b> <b>Charles University in Prague, Faculty of Mathematics and Physics</b>	
from <b>1. 10. 2014</b> to <b>30. 9. 2015</b>	<b>ETH Zurich, Department of Earth Sciences</b>	<b>59 000,00 CHF</b> (grant spent)

# Mathematics, Natural and Engineering Sciences Earth Sciences



<b>Jiří Vackář</b>	<b>Advanced Moment Tensor Inversion Code (AMTIC)</b> <b>Charles University in Prague, Faculty of Mathematics and Physics</b>	
from <b>1. 2. 2015</b> to <b>31. 7. 2015</b>	<b>ETH Zurich, Department of Earth Sciences</b>	<b>32 463,35 CHF</b> (grant spent)

<b>Roman Juras</b>	<b>Runoff formation during rain-on-snow events (ROROS)</b> <b>Czech University of Life Sciences Prague, Faculty of Environmental Sciences</b>	
from <b>1. 1. 2015</b> to <b>30. 6. 2015</b>	<b>WSL Institute for Snow and Avalanche Research SLF, Mountain Hydrology and Mass Movements</b>	<b>33 585,57 CHF</b> (grant spent)



## Mathematics, Natural and Engineering Sciences Astronomy, Astrophysics and Spatial Sciences

48

<b>Ivana Orlitová / Stoklasová</b>	<b>Understanding the origin of Lyman-alpha emission and absorption in galaxies (LyaGals) Czech Academy of Sciences, Astronomical Institute</b>	
from <b>1. 10. 2012</b> to <b>30. 9. 2013</b>	<b>University of Geneva Department of Astronomy</b>	<b>101 350,91 CHF</b> (grant spent)

## Mathematics, Natural and Engineering Sciences Chemistry




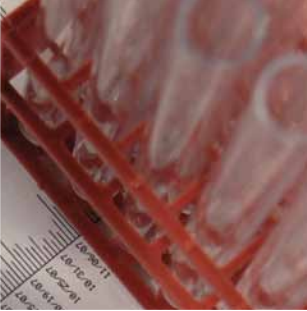
49

<b>Tomáš Šolomek</b>	<b>Mechanism of the Photoactivated Uncaging of Nitrobenzylbound Reactants (NIBEMECH) Masaryk University, Brno, Department of Chemistry</b>	
from <b>1. 4. 2011</b> to <b>31. 10. 2011</b>	<b>University of Fribourg, Department of Chemistry</b>	<b>35 347,45 CHF</b> (grant spent)
<b>Jiří Tauchmann</b>	<b>Water-Soluble Arene Ruthenium Complexes Containing Polar Ferrocene Ligands for Catalysis and Biological Activity Charles University in Prague, Faculty of Science</b>	
from <b>1. 8. 2011</b> to <b>31. 1. 2012</b>	<b>University of Neuchatel, Institut de Chimie</b>	<b>32 250,50 CHF</b> (grant spent)



# Mathematics, Natural and Engineering Sciences Chemistry



50

<b>Viliam Kolivoška</b>	Electron Transport in Nanoscale Host Guest Assemblies Czech Academy of Sciences, J. Heyrovsky Institute of Physical Chemistry	
from 1. 10. 2011 to 31. 3. 2013	University of Bern, Department of Chemistry and Biochemistry	144 735,80 CHF (grant spent)
<b>Petra Macíková</b>	Xenoglucocorticoids - exposure and effects Masaryk University, Faculty of Science, Research Centre for Toxic Compounds in the Environment (RECETOX)	
from 1. 10. 2011 to 30. 9. 2012	Eawag, Environmental Toxicology	59 522,25 CHF (grant spent)

# Mathematics, Natural and Engineering Sciences Chemistry




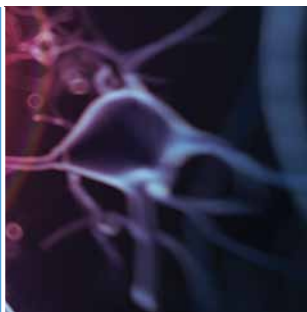
51

<b>Miroslav Šiša</b>	Lewis-Acid Catalyzed Inverse Electron-Demand Diels-Alder Reaction of Cinnolins – A New Entry for the Efficient Preparation of Steroids Palacky University Olomouc, Faculty of Sciences	
from 19. 9. 2011 to 18. 3. 2013	University of Basel, Department of Chemistry	136 610,69 CHF (grant spent)
<b>Aliaksei Vetushka</b>	Corrosion resistant self-assembled monolayers of functionalized dicarba- dodecaborane clusters on Au, Ag and Cu surfaces (CoSAMDoc) Czech Academy of Sciences, Institute of Physics	
from 1. 11. 2012 to 31. 10. 2013	EMPA, Swiss Federal Laboratories for Materials Science and Technology, Advanced Materials and Surfaces	94 585,90 CHF (grant spent)



## Mathematics, Natural and Engineering Sciences Chemistry

52

<b>Jakub Holovský</b>	<b>HeteroInterface Tests Stability (HITS)</b> Czech Academy of Sciences, Institute of Physics	
from 1. 10. 2012 to 30. 9. 2013	<b>Ecole Polytechnique Fédérale de Lausanne (EPFL), Photovoltaics and thin film electronics laboratory</b>	<b>96 352,35 CHF</b> (grant spent)
<b>Jaroslav Kočíšek</b>	<b>Isotopic effects in Dissociative Electron Attachment (IDEA)</b> Czech Academy of Sciences, J. Heyrovsky Institute of Physical Chemistry	
from 1. 10. 2013 to 31. 3. 2014	<b>University of Fribourg, Department of Chemistry</b>	<b>48 886,70 CHF</b> (grant spent)

## Mathematics, Natural and Engineering Sciences Chemistry




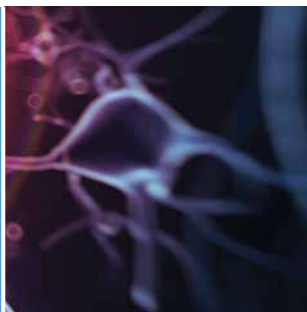
53

<b>Pavel Kadeřávek</b>	<b>Motions in Disordered Proteins (MoDiPro)</b> Masaryk University, Brno, National Centre for Biomolecular Research	
from 1. 6. 2013 to 31. 5. 2014	<b>Ecole Polytechnique Fédérale de Lausanne (EPFL), Institute of chemical sciences and engineering ISIC</b>	<b>95 389,10 CHF</b> (grant spent)
<b>Barbora Lásková</b>	<b>Electrochemical and spectroelectrochemical investigation of nanocrystalline TiO<sub>2</sub> anatase for solar cells (ESINA)</b> Czech Academy of Sciences, J. Heyrovsky Institute of Physical Chemistry	
from 1. 7. 2013 to 31. 12. 2013	<b>Ecole Polytechnique Fédérale de Lausanne (EPFL), Department of Chemistry</b>	<b>30 929,10 CHF</b> (grant spent)



## Mathematics, Natural and Engineering Sciences Chemistry

52

<b>Jakub Holovský</b>	<b>HeteroInterface Tests Stability (HITS)</b> Czech Academy of Sciences, Institute of Physics	
from 1. 10. 2012 to 30. 9. 2013	<b>Ecole Polytechnique Fédérale de Lausanne (EPFL), Photovoltaics and thin film electronics laboratory</b>	<b>96 352,35 CHF</b> (grant spent)
<b>Jaroslav Kočíšek</b>	<b>Isotopic effects in Dissociative Electron Attachment (IDEA)</b> Czech Academy of Sciences, J. Heyrovsky Institute of Physical Chemistry	
from 1. 10. 2013 to 31. 3. 2014	<b>University of Fribourg, Department of Chemistry</b>	<b>48 886,70 CHF</b> (grant spent)

## Mathematics, Natural and Engineering Sciences Chemistry



53

<b>Pavel Kadeřávek</b>	<b>Motions in Disordered Proteins (MoDiPro)</b> Masaryk University, Brno, National Centre for Biomolecular Research	
from 1. 6. 2013 to 31. 5. 2014	<b>Ecole Polytechnique Fédérale de Lausanne (EPFL), Institute of chemical sciences and engineering ISIC</b>	<b>95 389,10 CHF</b> (grant spent)
<b>Barbora Lásková</b>	<b>Electrochemical and spectroelectrochemical investigation of nanocrystalline TiO<sub>2</sub> anatase for solar cells (ESINA)</b> Czech Academy of Sciences, J. Heyrovsky Institute of Physical Chemistry	
from 1. 7. 2013 to 31. 12. 2013	<b>Ecole Polytechnique Fédérale de Lausanne (EPFL), Department of Chemistry</b>	<b>30 929,10 CHF</b> (grant spent)



## Mathematics, Natural and Engineering Sciences Chemistry

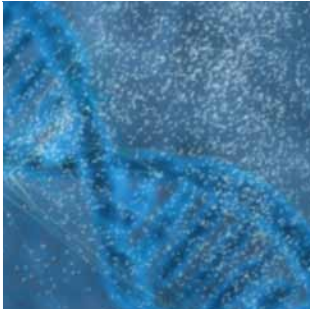
54

<b>Soňa Procházková</b>	<b>MRI Contrasts agents responsive to metal ions (RespCA)</b> <b>Charles University in Prague, Faculty of Science</b>	
from <b>1. 1. 2015</b> to <b>30. 9. 2015</b>	<b>Ecole Polytechnique Fédérale de Lausanne (EPFL), Institute of Chemical Sciences and Engineering</b>	<b>46 338,00 CHF</b> (grant spent)
<b>Beáta Vilhanová</b>	<b>Development of a toolkit for the heterogenization of Ru(II) half-sandwich catalysts for asymmetric hydrogenation</b> <b>University of Chemistry and Technology Prague, Faculty of Chemical Technology of Physical Chemistry</b>	
from <b>1. 10. 2014</b> to <b>30. 9. 2015</b>	<b>ETH Zurich, Institute for Chemical and Bioengineering/Light Source Paul Scherrer Institute</b>	<b>60 759,89 CHF</b> (grant spent)

## Mathematics, Natural and Engineering Sciences Chemistry



55

<b>Simona Bártová</b>	<b>Catalytic core assembly of a group II intron ribozyme studied by NMR (INTROdock)</b> <b>Czech Academy of Sciences, Institute of Microbiology</b>	
from <b>1. 9. 2014</b> to <b>31. 8. 2015</b>	<b>University of Zurich, Department of Chemistry</b>	<b>58 599,04 CHF</b> (grant spent)



**Mathematics, Natural  
and Engineering Sciences**  
Physics

56

<b>Přemysl Maršík</b>	THz ellipsometry with a femto-second laser Masaryk University, Department of Condensed Matter Physics Faculty of Science	
from 1. 12. 2009 to 31. 5. 2011	University of Fribourg, Department of Physics	143 474,15 CHF (grant spent)
<b>Daniel Renčíuk</b>	Atomic structure of biologically important DNA fragments (DNAstruct) Czech Academy of Sciences, Institute of Biophysics	
from 7. 5. 2012 to 6. 11. 2012	University of Zurich, Institute of Inorganic Chemistry	48 869,70 CHF (grant spent)

**Mathematics, Natural  
and Engineering Sciences**  
Physics



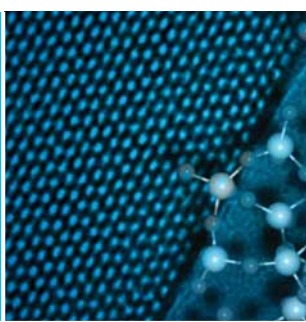
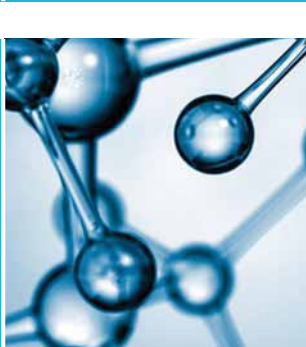
57

<b>Martin Drábik</b>	Exploring and Transfer of Plasma Nanocomposite Coatings for Sensor Applications (ExTraSens) Charles University in Prague, Department of Macromolecular Physics	
from 1. 8. 2011 to 31. 1. 2013	Empa, Materials meet Life	141 433,30 CHF (grant spent)
<b>Petr Ondřejkovič</b>	Piezoelectricity of nanotwinned ferroelectrics (NANODO1) Czech Academy of Sciences, Institute of Physics	
from 1. 9. 2012 to 28. 2. 2013	Ecole Polytechnique Fédérale de Lausanne (EPFL), Department of Materials	32 987,70 CHF (grant spent)



# Mathematics, Natural and Engineering Sciences Physics

58

<p><b>Vilgelmina Stepkova</b></p>	<p>Domain walls in complex BaTiO<sub>3</sub>/SrTiO<sub>3</sub> nanostructures (NANODO<sub>2</sub>) Czech Academy of Sciences, Institute of Physics</p>	
<p>from 15. 4. 2013 to 14. 10. 2013</p>	<p>Ecole Polytechnique Fédérale de Lausanne (EPFL), Department of Materials</p>	<p>34 561,45 CHF (grant spent)</p>
<p><b>Martin Nývlt</b></p>	<p>Novel iterative phase-retrieval approach for sensing the phase in in-vivo microtomography (NIPASIM) Czech Technical University in Prague, Faculty of Nuclear Sciences and Physical Engineering</p>	
<p>from 7. 5. 2012 to 6. 5. 2013</p>	<p>Paul Scherrer Institut, Synchrotron Radiation and Nanotechnology</p>	<p>60 216,15 CHF (grant spent)</p>

# Mathematics, Natural and Engineering Sciences Physics



59

<p><b>Dana Skácelová</b></p>	<p>Modification of metalloids and its oxides using atmospheric-pressure plasmas (MODMETOX) Masaryk University, Brno, Department of Physical Electronic</p>	
<p>from 1. 5. 2013 to 31. 10. 2013</p>	<p>Empa, Materials meet Life</p>	<p>33 003,03 CHF (grant spent)</p>
<p><b>Pavel Procházka</b></p>	<p>Large area graphene for devices (LaGraDe) Brno University of Technology, Faculty of Mechanical Engineering</p>	
<p>from 1. 7. 2013 to 31. 12. 2013</p>	<p>ETH Zurich, Department of Physics</p>	<p>29 171,92 CHF (grant spent)</p>





# Mathematics, Natural and Engineering Sciences Physics

60

<p><b>Martin Ledinský</b></p>	<p>Microcrystalline Silicon Optical and Electrical Quality (MISE Q) Czech Academy of Sciences, Institute of Physics</p>	
<p>from 1. 7. 2013 to 30. 6. 2014</p>	<p>Ecole Polytechnique Fédérale de Lausanne (EPFL), Photovoltaics and thin film electronics laboratory</p>	<p>98 334,10 CHF (grant spent)</p>
<p><b>Štěpán Stehlík</b></p>	<p>Microscopic electronic properties of diamond nanoparticles (MEDIAN) Czech Academy of Sciences, Institute of Physics</p>	
<p>from 1. 9. 2014 to 31. 8. 2015</p>	<p>University of Basel, Department of Physics</p>	<p>95 704,95 CHF (grant spent)</p>

# Mathematics, Natural and Engineering Sciences Physics



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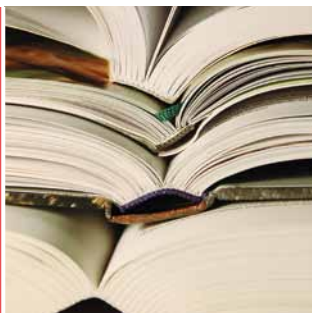
<p><b>Petr Pokorný</b></p>	<p>Simple and Flexible Interferometric Asphere Measurement Without Stitching Czech Technical University in Prague, Faculty of Civil Engineering</p>	
<p>from 1. 4. 2015 to 30. 9. 2015</p>	<p>Interstate University of Applied Science NTB, PWO</p>	<p>30 051,65 CHF (grant spent)</p>



## Human and Social Sciences

### Philosophy, Psychology, Educational Science and Religious Sciences

62

<b>Ota Gál</b>	Beauty as unity in multiplicity between Plato, the stoics and Plotinus (BUMPSP) Charles University in Prague, Faculty of Arts	
from 1. 3. 2014 to 31. 8. 2014	University of Fribourg, Department of Philosophy	32 431,80 CHF (grant spent)
<b>Marie Novotná</b>	Concepts of the body in Old Norse-Icelandic literature (BONIL) Charles University in Prague, Faculty of Sciences	
from 1. 2. 2015 to 31. 8. 2015	University of Zurich, German Department / Deutsches Seminar	37 500,25 CHF (grant spent)

## Human and Social Sciences

### Philosophy, Psychology, Educational Science and Religious Sciences



63

<b>Hana Oberpfalzerová</b>	Truth-Telling by War Victims as A Mechanism of Reconciliation in Bosnia and Herzegovina: A Case Study of the Initiative „My Story“ Charles University in Prague, Faculty of Social Sciences	
from 1. 10. 2014 to 31. 3. 2015	University of Zurich, Department of Psychology	32 879,30 CHF (grant spent)
<b>Vladimír Mikeš</b>	The Stoics' and Plotinus' concepts of person in relation to their ethics (SPCPRE) Charles University in Prague, Faculty of Arts	
from 1. 9. 2011 to 31. 8. 2012	University of Fribourg, Department of Philosophy	95 358,08 CHF (grant spent)



## Human and Social Sciences

### Legal and Social Sciences, Economics

64

<p><b>Josef Bernard</b></p>	<p>Local governments in small municipalities: local democracy and managing of tasks Czech Academy of Sciences, Institute of Sociology</p>	
<p>from 1. 1. 2014 to 31. 7. 2014</p>	<p>University of Zurich, Department of Political Science</p>	<p>55 149,12 CHF (grant spent)</p>

## Human and Social Sciences

### History



65

<p><b>Lucie Doležalová</b></p>	<p>Interpreting and Appropriating Obscurity in the Middle Ages: The Case of "Versus Maligni Angeli" (IAOMA) Charles University in Prague, Faculty of Arts</p>	
<p>from 1. 8. 2010 to 31. 1. 2011</p>	<p>University of Zurich, Mittellateinisches Seminar</p>	<p>49 305,77 CHF (grant spent)</p>
<p><b>Ondřej Matějka</b></p>	<p>Transnational history of Central European modernization in interwar period: case study on the Czechoslovak YMCA (THCEM) Charles University in Prague, Faculty of Social Sciences</p>	
<p>from 1. 10. 2014 to 31. 3. 2015</p>	<p>University of Geneva, Department of History</p>	<p>50 650,99 CHF (grant spent)</p>



## Biology and Medicine Clinical Medicine

66

<b>Lucie Slámová</b>	<b>Mechanisms of BCR/ABL leukaemogenesis (PhALL)</b> <b>Charles University in Prague, 2nd School of Medicine, Department of Paediatric Haematology and Oncology</b>	
from <b>1. 9. 2010</b> to <b>29. 2. 2012</b>	<b>University of Zurich, Division of pediatric Oncology Bone Marrow Transplantation Unit</b>	<b>93 706,15 CHF</b> (grant spent)

## Biology and Medicine Basic Medical Sciences





67

<b>Marta Nováková</b>	<b>Molecular clock measurement in humans</b> <b>Czech Academy of Sciences, Institute of Physiology</b>	
from <b>18. 6. 2012</b> to <b>17. 12. 2012</b>	<b>University of Zurich, Institute of Pharmacology and Toxicology</b>	<b>30 811,14 CHF</b> (grant spent)
<b>Erika Moravčíková</b>	<b>Tumour suppressor potential of BOK in non-small cell lung carcinoma tissues and cells (BoTuSuPo)</b> <b>Charles University in Prague, Hospital Bulovka and Third Faculty of Medicine</b>	
from <b>1. 7. 2014</b> to <b>30. 6. 2015</b>	<b>University of Bern, Medical Faculty</b>	<b>97 465,55 CHF</b> (grant spent)



## Biology and Medicine Environmental Sciences

68

<p><b>Petr Dostál</b></p>	<p>Traits of Rare And Invasive Terrestrial plant Species (TRAITS) Czech Academy of Sciences, Institute of Botany</p>	
<p>from 1. 11. 2010 to 31. 10. 2011</p>	<p>University of Bern, Department of Biology</p>	<p>97 526,53 CHF (grant spent)</p>
<p><b>Jan Pergl</b></p>	<p>Analysing Large-scale Invasion patterns using European Inventories – Update and Analysis of European Database of Alien Species (ALIEN) Czech Academy of Sciences, Institute of Botany</p>	
<p>from 1. 7. 2010 to 30. 6. 2011</p>	<p>University of Bern, Department of Biology</p>	<p>97 700,00 CHF (grant spent)</p>

## Biology and Medicine Basic Biological Research



69

<p><b>Zuzana Musilová</b></p>	<p>Next generation sequencing and molecular evolutionary analysis in East African cichlid fishes (CICHLIDOMICS) Czech Academy of Sciences, Institute of Animal Physiology and Genetics</p>	
<p>from 1. 9. 2011 to 28. 2. 2013</p>	<p>University of Basel, Department of Environmental Sciences</p>	<p>139 128,30 CHF (grant spent)</p>
<p><b>Václav Gvoždík</b></p>	<p>SPECSKY - Speciation patterns in sky islands Czech Academy of Sciences, Institute of Animal Physiology and Genetics</p>	
<p>from 1. 9. 2012 to 31. 8. 2013</p>	<p>University of Basel, Department of Environmental Sciences</p>	<p>93 481,15 CHF (grant spent)</p>



## Biology and Medicine

### Basic Biological Research

70

<p><b>Daniel Sojka</b></p>	<p>Evaluating the specific roles of apicomplexan aspartic proteases – prospective protocols to study hostvector-pathogen interactions (DS-APA) <b>Czech Academy of Sciences, Biology Centre</b></p>	
<p>from <b>1. 10. 2012</b> to <b>30. 9. 2013</b></p>	<p><b>University of Geneva, Faculty of Medicine</b></p>	<p><b>97 697,49 CHF</b> (grant spent)</p>
<p><b>Lenka Ulrychová</b></p>	<p>Proteolytic enzymes and inhibitors of trematode parasite <i>Schistosoma mansoni</i> <b>Charles University in Prague, Faculty of Science</b></p>	
<p>from <b>1. 7. 2012</b> to <b>30. 6. 2013</b></p>	<p><b>University of Zurich, Institute of Parasitology</b></p>	<p><b>60 960,03 CHF</b> (grant spent)</p>

## Biology and Medicine

### Basic Biological Research



71

<p><b>Milan Řezáč</b></p>	<p>Testing the suitability of DNA barcoding for spiders (DECODE) <b>Crop Research Institute, Department of Biology</b></p>	
<p>from <b>1. 11. 2012</b> to <b>31. 10. 2013</b></p>	<p><b>University of Bern, Department of Biology</b></p>	<p><b>96 797,00 CHF</b> (grant spent)</p>
<p><b>Lukáš Rambousek</b></p>	<p>Impact of chronic inflammation on Reelin-mediated signaling and development of AD-like neuropathology (IRAD) <b>Charles University in Prague, 2nd Faculty of Medicine</b></p>	
<p>from <b>1. 1. 2013</b> to <b>30. 6. 2014</b></p>	<p><b>University of Zurich, Institute of Pharmacology and Toxicology</b></p>	<p><b>92 525,53 CHF</b> (grant spent)</p>



## Biology and Medicine

### Basic Biological Research

72

<p><b>Anna Dostálová</b></p>	<p>Insect epithelial immunity in relation to midgut protozoan parasites  <b>Charles University in Prague, Faculty of Science</b></p>	
<p>from  <b>1. 8. 2013</b>  to  <b>31. 7. 2014</b></p>	<p><b>Ecole Polytechnique Fédérale de Lausanne (EPFL), School of Life Sciences - Global Health Institute</b></p>	<p><b>92 224,25 CHF</b>  (grant spent)</p>
<p><b>Eliška Podgorná</b></p>	<p>Cultural selection and genetic diversity: Arylamine N-Acetyltransferase 2 (NAT2) polymorphism in the pastoral nomads of the African Sahel (SAHNAT)  <b>Czech Academy of Sciences, Institute of Archaeology</b></p>	
<p>from  <b>1. 9. 2013</b>  to  <b>31. 3. 2014</b></p>	<p><b>University of Geneva, Faculty of Science</b></p>	<p><b>39 170,35 CHF</b>  (grant spent)</p>

## Biology and Medicine

### Basic Biological Research



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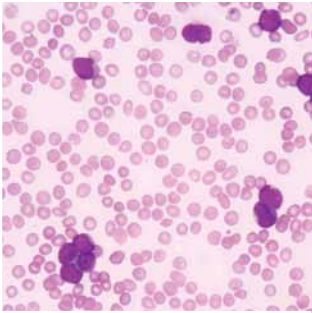

<p><b>Vendula Strádalová</b></p>	<p>Role of lipid-protein interactions in formation of plasma membrane microdomains (PM-DOMAIN)  <b>Czech Academy of Sciences, Institute of Experimental Medicine</b></p>	
<p>from  <b>1. 8. 2014</b>  to  <b>31. 7. 2015</b></p>	<p><b>University of Fribourg, Department of Biology</b></p>	<p><b>93 853,52 CHF</b>  (grant spent)</p>
<p><b>Darina Koubínová</b></p>	<p>Genetic consequences of the ecological island syndrome in myrmecophilic lycaenid butterflies (ECOISLAND)  <b>Charles University in Prague, Faculty of Science</b></p>	
<p>from  <b>1. 12. 2014</b>  to  <b>31. 10. 2015</b></p>	<p><b>University of Lausanne, Department of Ecology and Evolution</b></p>	<p><b>87 566,66 CHF</b>  (grant spent)</p>



## Biology and Medicine

### Basic Biological Research

74

<b>Barbora Šalovská</b>	<b>Phosphoproteomic Analysis of Irradiated Leukemic Cell Lines (PANILE)</b> Charles University in Prague, Faculty of Medicine in Hradec Kralove	
from 1. 1. 2015 to 31. 10. 2015	ETH Zurich, Department of Biology	50 548,19 CHF (grant spent)
<b>Štěpán Stočes</b>	<b>Gene expression profiling in intergeneric grass hybrids</b> Czech Academy of Sciences, Institute Experimental Botany	
from 1. 10. 2014 to 31. 7. 2015	ETH Zurich, Institute of Agricultural Sciences	51 355,50 CHF (grant spent)

## Biology and Medicine

### Basic Biological Research



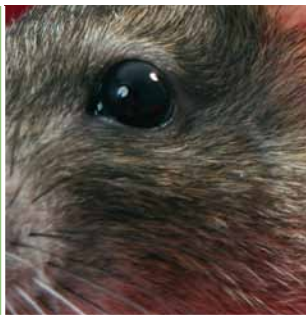
75


<b>Marián Hlavna</b>	<b>Development of a novel tissue culture model for degenerative disc disease (MODisc)</b> Mendel University in Brno, Department of Chemistry and Biochemistry	
from 1. 10. 2014 to 30. 9. 2015	ETH Zurich, Department of Health Science and Technology (D-HEST)	93 643,17 CHF (grant spent)
<b>Věra Bunešová</b>	<b>Investigation and exploitation of propionibacteria, bifidobacteria and lactobacilli naturally present in human breast milk (ProBifLac)</b> Czech University of Life Sciences Prague, Department of Microbiology, Nutrition and Dietetics	
from 1. 7. 2014 to 30. 6. 2015	ETH Zurich, Department of Health Sciences and Technology (D-HEST)	94 069,80 CHF (grant spent)





**Biology and Medicine**  
General Biology

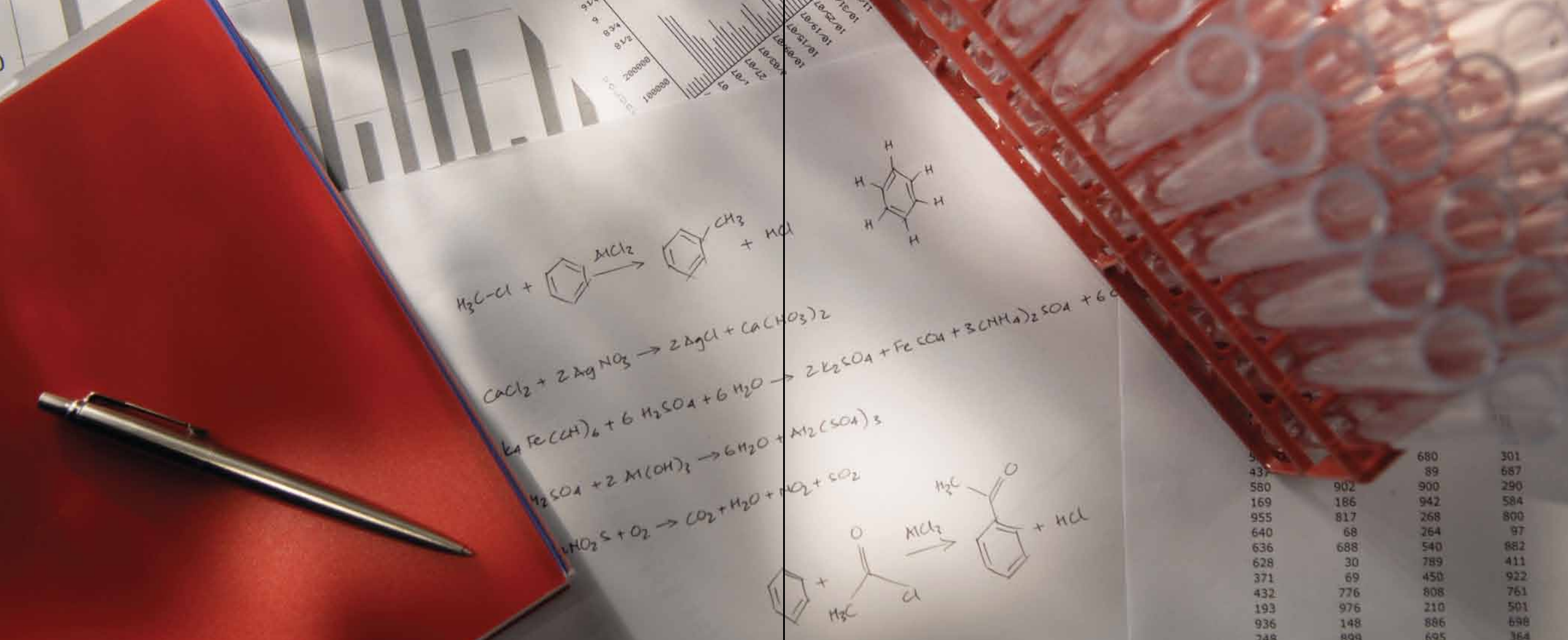
<p><b>Petra Lantová</b></p>	<p>Evolutionary mechanisms of complex social behaviour – generalized reciprocity in wild-type Norway rats <b>University of South Bohemia in České Budějovice, Faculty of Natural Sciences</b></p>	
<p>from <b>1. 6. 2011</b> to <b>30. 11. 2011</b></p>	<p><b>University of Bern, Institute of Ecology and Evolution</b></p>	<p><b>48 268,55 CHF</b> (grant spent)</p>

<p><b>Jan Klečka</b></p>	<p>Food webs in space: integrating metacommunity and food web research (FWiS) <b>Czech Academy of Sciences, Biology Centre</b></p>	
<p>from <b>1. 8. 2013</b> to <b>31. 7. 2014</b></p>	<p><b>Eawag: Swiss Federal Institute of Aquatic Science and Technology, Fish Ecology and Evolution</b></p>	<p><b>93 698,90 CHF</b> (grant spent)</p>

**Biology and Medicine**  
General Biology



<p><b>Zdeňka Svobodová</b></p>	<p>Transfer of insecticidal Cry proteins along the food chain (TRANSCRY) <b>Czech Academy of Sciences, Biology Centre</b></p>	
<p>from <b>1. 6. 2014</b> to <b>31. 3. 2015</b></p>	<p><b>University of Bern, Department of Biology</b></p>	<p><b>50 983,89 CHF</b> (grant spent)</p>



## Objectives and Achievements of the SCIEX projects

# 3.


On the following pages you can find results from the questionnaire, which was sent to the Czech SCIEX fellows. The questionnaire consisted of 15 questions. The aim was to evaluate the objectives and achievements of the SCIEX projects, fellows' scientific career before and after the SCIEX project and possible personal shift. For the purpose of this brochure we have chosen 5 the most significant questions answered by 61 fellows.


512	680	301
437	89	687
580	902	290
169	186	584
955	817	800
640	68	97
636	688	882
628	30	411
371	69	922
432	776	761
193	976	501
936	148	698
248	899	364



1

**What was the main reason/motivation you applied for the SCIEX Scholarship Fund fellowship?**  
(more than one possible answer)

46  **38,3 %** **Develop individual researchers capacities**  
(human capital)

19  **15,8 %** **Foster scientific progress and innovation**  
(scientific prospects)

51  **42,5 %** **Establish or enhance networks between researchers**  
(networking)

4  **3,3 %** **Other**

2

Did the SCIEX fellowship help you establish/enhance your scientific career?

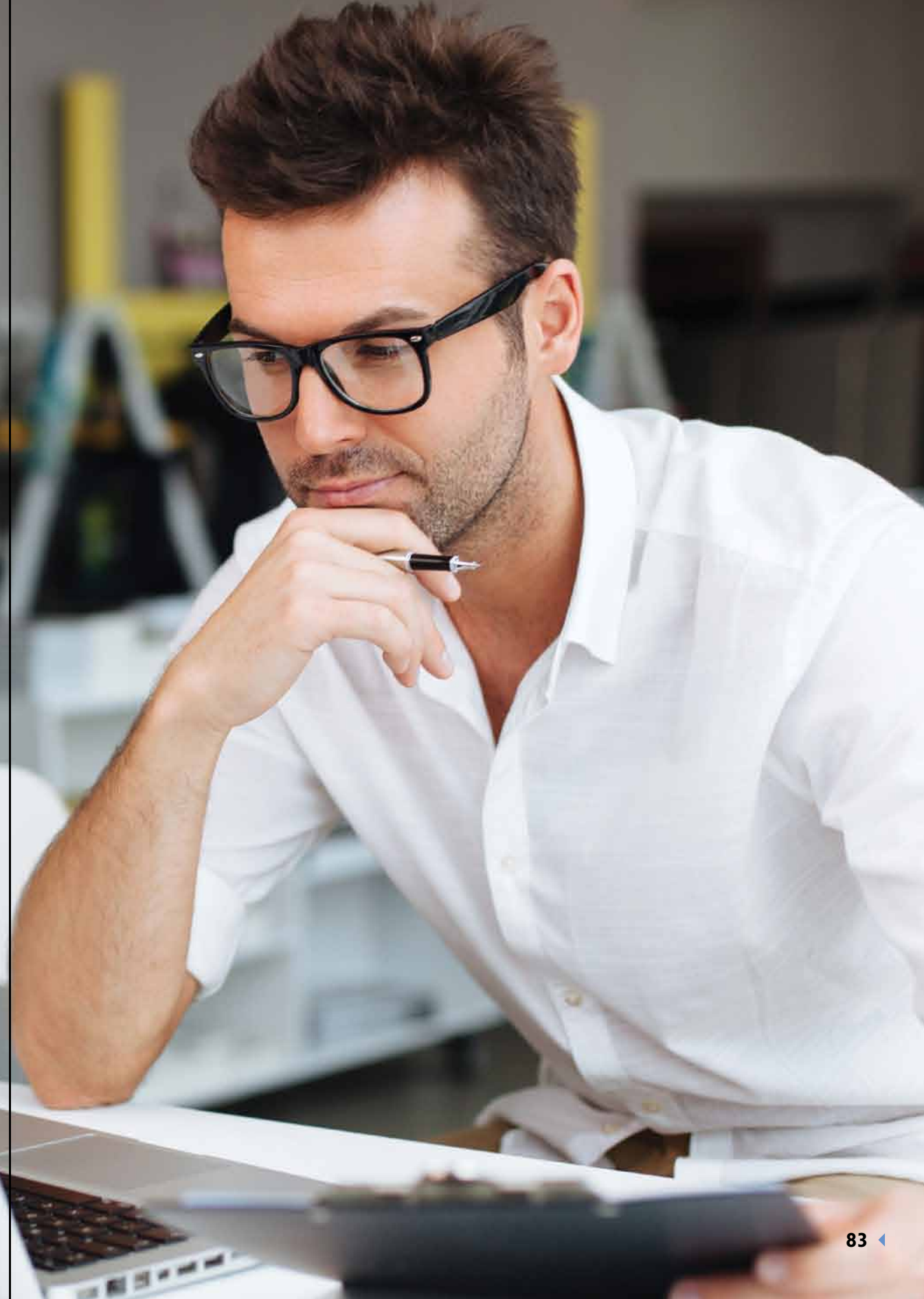
47  **77,1 %** Yes

9  **14,8 %** More likely yes

5  **8,2 %** Not applicable  
(not able to evaluate yet)


0  **0 %** Not really

0  **0 %** No






**3** In the case of the interinstitutional cooperation, it was a:

44  **72,1 %** New contact/new cooperation

17  **27,9 %** Already existing contact/cooperation

4 Did the SCIEX fellowship help you establish any follow-up project cooperation?

18  29,5 % Yes, with a Swiss partner

20  32,8 % Yes, the cooperation was extended by further partners


5  8,2 % No further cooperation was established

10  16,4 % Not able to evaluate, not aware of any other projects

8  13,1 % Other



5 Currently I am employed/engaged:

27  44,3 % At the original home institution engaged at the original working position

12  19,7 % At the original home institution at a different working position

5  8,2 % At a different workplace in CZ (but still within the academic/scientific field)


7  11,7 % Other

5  8,2 % In Switzerland at the original (SCIEX fellowship) host institution

1  1,6 % In Switzerland at a different workplace/institution

4  6,6 % Abroad (but still within the academic/scientific field)

0  0 % Abroad (in a different field)

0  0 % At a different workplace in CZ (in a different field)



## Czech SCIEX Success Stories

# 4.







**Martina Plačková**

**Zurich University of Applied Sciences ZHAW,  
Life Sciences and Facility Management  
(LSFM)**

Relationship between *Pichia pastoris* cell  
physiology and secretion of heterologous  
penicillin G acylases (PEGAS)



### **What do you consider as the best benefit of the SCIEX fellowship?**

SCIEX internship was a step forward in developing my skills and competences and has provided me with a considerable scientific gain. The time spent on this internship will likely be one of the most memorable and influential periods of my career, as it has definitely broadened my outlook on a potential occupation and specialization. Both personally and professionally, my future has been profoundly changed in a way that will likely only manifest itself many years down the road.

Under the supervision of Prof. Dr. Kovar, my colleagues have introduced me into many new methods and have been very supportive along the way into understanding and practical knowledge of an interesting field of bioprocess technology development.

But, being abroad was not only a scientific gain, but also a great opportunity to meet interesting people from different fields and of various specializations. This allowed me to share ideas and experience as well as to significantly enlarge my professional network.

### **What was the main reason you decided to apply for the SCIEX fellowship?**

In my home lab, I focus mainly on the molecular engineering of Penicillin G acylase enzyme with the aim of preparing a new catalyst which is better suited for the industrial usage. However, I realised a further step – the development of an optimal production strategy for my constructs – was imperative for the success of my project.

As the laboratory “Bioprocess Technology” of Prof. Dr. Karin Kovar specialises in the development of biotechnological production processes, my internship in Switzerland had been envisaged to enable me to extend the scope of my PhD project and, most importantly, to gain the respective competences.

Apart from the research-related arguments, studying or working abroad is, in my opinion, an essential element of a successful scientific career. Good scientist needs to be flexible and should be able to quickly adapt to any situation. Coming out of one’s comfort zone by moving abroad is one of the best ways how to train those abilities, since it means to deal with different environment, not to mention the language issues.

Moreover, every team is somehow special in the way of thinking about the experiments, data analyses or project troubleshooting, and for the self-development it is great to compare and potentially combine different approaches.

### **Would it have been different if you stayed in CZ?**

My current professional life is a direct consequence of the SCIEX fellowship, as it has generally helped me to sort out the direction of my further scientific interest. Furthermore, SCIEX had also provided me with the opportunity to make valuable contacts, which in turn have resulted in my upcoming internship at Technical University Graz (Austria), SCIEX project’s indirect partner, where I will continue with the ongoing project and where I shall learn more about the molecular background of the bioprocess development.

If not for the SCIEX internship, I would not have the chance to learn, develop, and achieve that much over such a short period of time. SCIEX has helped to solidify my desire to pursue a scientific career and showed me the importance of the scientific dialogue and cooperation.

### **What did you learn about Switzerland?**

#### **Is there anything that surprised you that you did not expect?**

In Switzerland, I was exposed to a completely different way of approaching science, laboratory management and collaboration. I was working in an environment whose academic standards were exceptionally high. However, my fellowship also made me realize that Czech scientists’ knowledge is on a par with that of their colleagues from Switzerland. Therefore, I now believe that a combination of both approaches is the best way for continuing in my carrier.

From the private side, I have to mention that I did not expect Swiss German to be so different from “normal” German and it partly made me fail in my plan of learning the language. But I still got to know this beautiful country, where the cliché about “Heidi picking flowers on the slopes of Matterhorn with grandfather eating Gruyères cheese while watching his Swiss watch” comes true. Between the cheese, peaks of Alps and aquamarine lakes, life in Switzerland is a true epicurean adventure.

### **What did you learn about yourself?**

While abroad, you have no one but yourself to depend on, so you get to know who you really are and what are your capabilities, and this internship has helped me to rely on my competences. If I want something, I need to be confident in myself and go after it. I learned that I am very flexible and can adapt very quickly to new circumstances. I have learned a new way of thinking, better organization of work and improved regularity. These skills can now be put to practice. My expectations were exceeded in almost every aspect and I am very grateful for this opportunity.



**Martina Plačková**

**Zurich University of Applied Sciences ZHAW,  
Life Sciences and Facility Management  
(LSFM)**

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physiology and secretion of heterologous  
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**Lukáš Kurilla**  
**ETH Zurich,**  
**Department of Architecture**

Structurally Informed Interactive Design (SIID)



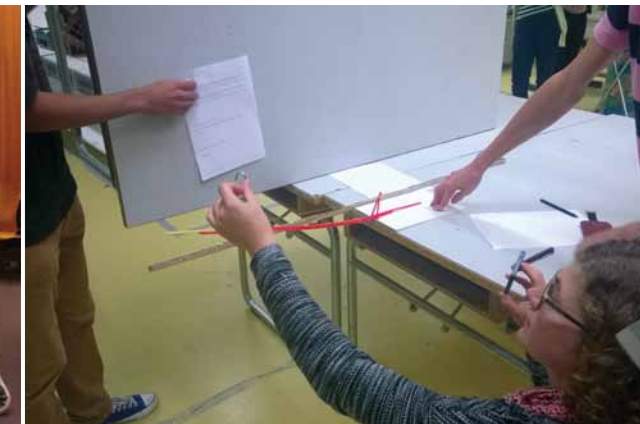
### **What do you consider as the best benefit of the SCIEX fellowship?**

The SCIEX fellowship was for me a big opportunity to work with many interesting people and become familiar with their innovative hi-level researches. It was also an opportunity to improve my soft research skills as well as to make progress in my doctoral thesis. I had a lot of fruitful discussions with my colleagues. Later we became good friends. I hope that our friendship will lead to further collaborations in the future.

### **What was the main reason you decided to apply for the SCIEX fellowship?**

The different approaches how to achieve a similar goal was the main reason why I applied for the fellowship with the Block Research Group (BRG) at ETH Zurich. My doctoral research aimed to develop a “Structural Evaluation Assistant” (SEA), a digital tool that supports designers’ decision-making through an interactive analytical feedback and train their structural intuition. The BRG has developed RhinoVAULT, a tool that emerged from research on structural form-finding to intuitively create and explore compression-only structures. Their goal is to share key aspects of their research in a comprehensible and transparent setup to let one not only create beautiful shapes but also to give the user an understanding of the underlying structural principles.

I have learnt a lot from comparing our different approaches. It helped me to clarify the topic of my doctoral thesis and extend my previous structural knowledge with the form-finding and optimization methods.



### **Would it have been different if you stayed in CZ?**

One of the goals of the tool I have been developing is to bridge a gap between architects and engineers. Therefore, getting a feedback from these two fields was crucial for me. Thanks to BRG researchers’ backgrounds diversity, it was possible to be in a daily contact with both fields. This helps me to improve a logic of the tool and made it more useful for the conceptual design phase.

I will also miss the rich library where you can find almost everything about architecture and engineering. Thanks to it many of my research questions were answered. Lastly, but not least, I will miss a Graphic Statics course. There are not many universities where you can learn it these days. This course gave me a different point of view on structural design. I suppose that it is important to teach Graphic Statics at architecture schools; this is why I want to help with its implementation into structural engineering classes at home university.

### **What did you learn about Switzerland?**

#### **Is there anything that surprised you that you did not expect?**

As an architect, I was positively surprised with the tradition to make a building mock-up in the 1:1 scale. The mock-up’s aim is not only to test technical details of the building, but also to analyse the urban visibility and give people an opportunity to comment the proposed design. I fall in love with the sophisticated planning system and a lovely small scale of Zurich city. The masterpiece of symbiosis of urban space with the nature. I am missing the forest which I daily go through on my way to the office or home.

### **What did you learn about yourself?**

I have learnt a lot about myself this year, but maybe the most important finding is that I would like to continue in my scientific career.



**Lenka Maierová**

**Swiss Federal Institute of Technology  
in Lausanne School of Architecture,  
Civil and Environmental Engineering**

Inter-individual Lighting  
Preferences of Office Occupants

### **What do you consider as the best benefit of the SCIEX fellowship?**

I got international experience and contacts. I have worked in interdisciplinary team in environment with high standards of research, access to the latest technologies, tools and experts.

### **What was the main reason you decided to apply for the SCIEX fellowship?**

To apply for SCIEX fellowship and work at EPFL was a challenge. Participation in the experimental study could add an extra value to my research. It was a opportunity to extend my knowledge to new field.

### **Would it have been different if you stayed in CZ?**

My PhD studies would have been much shorter than the seven years, which it finally took. I would have not extended my knowledge to a new discipline. I would have not discovered the scientific field in which I work at the moment and which I believe, will be my domain in future years.

### **What did you learn about Switzerland?**

#### **Is there anything that surprised you that you did not expect?**

In general I had the impression that people in Switzerland are more focused on the work/leisure time balance, on the quality of their life. They take care of their environment and develop really functional infrastructure for free time activities. On the other hand, many things are controlled by the local communities (limited opening times in stores), strict rules and regulations that make life difficult (shared laundry machines accessible only once in 15 days).

### **What did you learn about yourself?**

I had to find my limits, what I can manage and when I have to stop. I had to learn how to say "No".



**Luděk Strouhal**

**University of Zurich,  
Department of Geography**

Quantification of the climate change impacts  
on hydrological processes in small catchments



### **What do you consider as the best benefit of the SCIEX fellowship?**

There are two benefits I value most. First, I learned about how things are going at a sound research and educational institution in comparison to my home workplace and it established certain standard of quality I would like to reach. Second is the social aspect, I improved my English greatly and came to know international (not only Swiss) colleagues who were very inspirational.

### **What was the main reason you decided to apply for the SCIEX fellowship?**

First the reason was quite straightforward, as a Ph.D. student I was looking for an abroad university for a compulsory study stay and appropriate program for financing it. Luckily I came across the SCIEX call at that moment. But later from all the available offers SCIEX fellowship was most appealing to me due to high expected standard of host institutions, Switzerland's science prestige and height of the fellowship, which enabled to fully concentrate on the work and enjoy the life in quite expensive country.

### **Would it have been different if you stayed in CZ?**

Absolutely, that is out of question. Different environment, new insights, research procedures – that is all essential for a beginning scientist.



### **What did you learn about Switzerland?**

#### **Is there anything that surprised you that you did not expect?**

Even though I expected it, I was still surprised how organized every aspect of life in Switzerland is. With regard to Swiss people I have mixed experience. All of them are very polite and friendly although mostly reasonably distant at the first contact, but I met a few very open and warm people too.

#### **What did you learn about yourself?**

That I like science when done properly. That I love Swiss countryside and dislike rainy winter in Zurich. And that it is challenging for me getting to know new people and environment but that the final effect is really worth it.



**Michal Jeníček**

**University of Zurich,  
Department of Geography**

Snowmelt runoff modelling in mountain environments under changing climate conditions (SnowClim)



### **What do you consider as the best benefit of the SCIEX fellowship?**

I was working at the University of Zurich, Department of Geography in the Hydrology and Climate research group. It is difficult to summarize all benefits from this postdoc stay. In my opinion, the best benefit was that we established a new scientific cooperation which seems to be very effective and productive (we are working on joint projects and publications).

Additionally, other students from my current home department (Department of Physical Geography and Geoecology, Charles University in Prague) profit from this cooperation which brings them new experiences and research growth. After my postdoc stay, one phd student got a SCIEX support to work at the same department and another two phd students did short-term stages there over the last two years.

### **What was the main reason you decided to apply for the SCIEX fellowship?**

I am focused on the impact of climate and landscape changes on hydrological cycle, especially on floods and droughts. I am also focused on exploring the effect of snowpack changes on the spring and summer runoff and thus water availability. Thus, to apply for a position at the University of Zurich was a logical choice since the Hydrology and Climate group is one of the leading research group in the field of hydrology in Europe. I wanted to start a new cooperation with this department and learn something new. And I was very lucky to be a part of this group, because the group leader gave me a complete support and motivation to cooperate with all group members. This enabled me to get new skills and experiences; in my case mainly in hydrology modelling approaches, programming skills and new interesting experiences in the field (experimental research) which is the essential part of any geoscientific research.



### **Would it have been different if you stayed in CZ?**

This is rather theoretical question since I do not know what would happen if I did not work in Zurich. However, I can definitely say there would be significant difference. Since our cooperation with the University of Zurich is still ongoing by working on same research topics, this cooperation would not exist or at least it would not be so intensive as it is now.

### **What did you learn about Switzerland?**

#### **Is there anything that surprised you that you did not expect?**

I visited Switzerland many times before my stay at the University of Zurich. Thus, there was nothing substantial I would not expect. As for working experiences, differences between hydrology group in Zurich and in Prague are not very large as well. Thus for me personally, it was very interesting to see all those small differences in teaching process and study programs between both universities as well as the small details in organization of work in the group. It was a deep well of inspiration which I can hopefully bring to my home department in Prague now.

### **What did you learn about yourself?**

This is very difficult question since the process of learning and self-cognition is rather evolution process which could be hardly assigned to some specific living situation. During my postdoc stay in Zurich, I was concentrated mainly (but not only) on research. So, besides some specific skills I verified that the research on environmental processes and hazards especially in mountain areas is largely my hobby and I like to be a small piece in the scientific puzzle which explore these processes and try to face risks related to them.



**Hana Doležalová / Barošová**

**University of Fribourg,  
Adolphe Merkle Institute**

Composition of airborne brake wear debris particles and lung cell response in vitro – is there any correlation? (TOXBRAWE)

**What do you consider as the best benefit of the SCIEX fellowship?**

The best benefit of my Sciex fellowship was possibility to work at multicultural workplace, I could work with people with different cultural and working background, which helped me to see my Czech workplace from different perspective.

**What was the main reason you decided to apply for the SCIEX fellowship?**

The main reason of my decision to apply for the Sciex fellowship was the possibility to cooperate with very good group (professor) on such an interesting project.

**Would it have been different if you stayed in CZ?**

If I would stay in CZ, my research would probably continue peacefully without any possibility to move forward as much as it did in last year in Switzerland.

**What did you learn about Switzerland?**

**Is there anything that surprised you that you did not expect?**

I found the bureaucracy extremely complicated, I would expect it easier for foreign students. On the other hand I very much appreciate Swiss national pride.

**What did you learn about yourself?**

I can withstand much more than I expected, but I really love my home.



**Jiří Vackář  
ETH Zurich,  
Earth Sciences**

Advanced Moment Tensor Inversion Code (AMTIC)

**What do you consider as the best benefit of the SCIEX fellowship?**

Working in an international team and cooperating with scientists doing cutting-edge research.

**What was the main reason you decided to apply for the SCIEX fellowship?**

I wanted to stay abroad for some time and to move forward in my scientific carrier.

**Would it have been different if you stayed in CZ?**

I wouldn't be in contact with foreign researchers and I would be searching for another possibility to go abroad.

**What did you learn about Switzerland?**

**Is there anything that surprised you that you did not expect?**

I have traveled a lot, mainly to do hiking in Alps. Beside visiting different regions of Switzerland, I was surprised by top quality of public transportation, by foreigner-friendly municipal authorities etc.

**What did you learn about yourself?**

It's a bit personal, isn't it? Beside other, now I am thinking for post-doc position abroad, what I wasn't able to imagine before.



**Roman Juras**

**WSL Institute for Snow and Avalanche  
Research SLF, Mountain Hydrology  
and Mass Movements**

Runoff formation during  
rain-on-snow events (ROROS)



### **What do you consider as the best benefit of the SCIEX fellowship?**

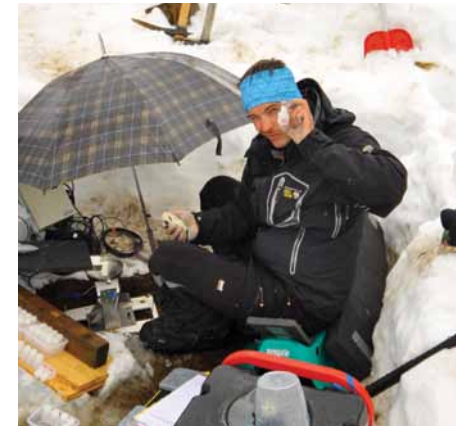
SCIEX fellowship allowed me to gain great scientific and personal experience from the top research institute in Europe concerning snow science. Meeting the best scientist in this field and be part the research team was very beneficial to me.

### **What was the main reason you decided to apply for the SCIEX fellowship?**

The main reason to apply was to enhance my PhD thesis by new data. These data was very difficult to gather in my home country, mainly because of missing sufficient scientific background in snow hydrology. Motivation was also joining the scientific team, which I had already knew. Beside the scientific reason I was interested in Swiss mountains and skiing.

### **Would it have been different if you stayed in CZ?**

Definitely! As I mentioned above. In the Czech Republic we do not have developed scientific background in snow hydrology. I was also able to fully focus only on my measurements without any distraction by other duties.



### **What did you learn about Switzerland?**

#### **Is there anything that surprised you that you did not expect?**

I have learned that Switzerland has very nice countryside and nature as such. Unfortunately I did not have so much time to travel and visit many other places. My positive experience is, that Swiss people are very open and kind. If I should say something negative, so Switzerland is very expensive. Even more, than I expected. Local dialect was quite difficult to understand.

#### **What did you learn about yourself?**

I have learnt that I am able to cooperate with professional scientific team. I have also learned that I am able to solve technical and scientific problems appearing unexpectedly during the field campaigns.





**Ivana Orlitová / Stoklasová**  
**University of Geneva,**  
**Department of Astronomy**

Understanding the origin of Lyman-alpha emission and absorption in galaxies (LyaGals)



**What do you consider as the best benefit of the SCIEX fellowship?**

Chance to work at a prestigious university, with excellent researchers.  
New contacts, new collaborations, excellent science.

**What was the main reason you decided to apply for the SCIEX fellowship?**

To work abroad, in new collaborations, broaden my experience and work on new topics.

**Would it have been different if you stayed in CZ?**

Through the SCIEX project, I got involved in a new scientific topic, which is among the drivers of present-day astronomy. I have learnt interesting physics, our work has led to new exciting discoveries about the Universe and to numerous publications. I joined a large international collaboration, through which I learnt using leading astronomical facilities such as the Hubble Space Telescope.  
None of this would have happened without SCIEX. I would not have entered the same field of astronomy - the contact to the people was the essential part.

**What did you learn about Switzerland?**

**Is there anything that surprised you that you did not expect?**

The Swiss seem to be extremely nice and helpful. This holds also for the scientific environment that I have been in contact with: despite its competitiveness, it is very open, collaborative, friendly and respectful.

**What did you learn about yourself?**

I have learnt that I am capable of contributing scientifically to a high-level international team. And that I can lead an international project.



**Viliam Kolivoška**

**University of Bern  
Department of Chemistry  
and Biochemistry**

Electron Transport in Nanoscale  
Host Guest Assemblies



### **What do you consider as the best benefit of the SCIEX fellowship?**

The largest benefit was learning new experimental techniques that were available at the Host Institution.

### **What was the main reason you decided to apply for the SCIEX fellowship?**

An abroad stay is generally considered as a part of the career of a young scientist. My Swiss Home mentor, whom I met by chance at a conference, contacted me and advised to jointly apply for a SCIEX project. I agreed as I found his research direction to be interesting for me.

### **Would it have been different if you stayed in CZ?**

If I stayed in CZ, I would most likely not get the position I have at the moment.

### **What did you learn about Switzerland?**

#### **Is there anything that surprised you that you did not expect?**

Switzerland is a very heterogeneous country, hosting many foreigners and encompassing different cultures. This was something I did not know before moving there. I was lucky to be a part of an international group, where I could get to know many great people from the entire world. Switzerland is definitely a place worth visiting or staying for a while.

#### **What did you learn about yourself?**

I learned that people from different parts of the world have different life stories, background and habits. This is something one only realizes when going abroad and meeting them. In the view of the current refugee crisis in the EU, such experience teaches one to be sympathetic and tolerant to those who seek help in troubles.



**Štěpán Stehlík**

**University of Basel,  
Department of Physics**

Microscopic electronic properties  
of diamond nanoparticles (MEDIAN)



### **What do you consider as the best benefit of the SCIEX fellowship?**

Best benefit was obviously the experience to live in Switzerland for one complete year together with my family and got to know how is the scientific work at prestigious Swiss university within worldwide recognized scientific group.

### **What was the main reason you decided to apply for the SCIEX fellowship?**

Main reasons were three:

- 1) Excellent scientific level of the group of the host mentor.
- 2) Chance to experience the life in Switzerland.
- 3) Rather generous salary which improved a lot financial situation of my family without any limitation to our life in Basel.

### **Would it have been different if you stayed in CZ?**

Yes, I suppose that some things would be different, some positively, some negatively but I do think that the positive effects prevail.

### **What did you learn about Switzerland?**

#### **Is there anything that surprised you that you did not expect?**

In my opinion Switzerland is well organized country where things just work and are considered to the latest detail. It is country where the authorities really serve people effectively. It is country where I and my family felt safe without any cultural shock. It is country where the rules must be obeyed. It is country with rich and unique culture and culture heritage. Last but not least it is country with excellent science.

### **What did you learn about yourself?**

Since I already had some experience from several few months lasting stays abroad there was nothing really unexpected for me. Still, one year is rather long time and I find myself more self-confident after my return home, enriched by scientific knowledge and personal memories. In the end I have to mention that I also learned that I feel home here, in the Czech Republic.



**Petr Pokorný**

**Interstate University of Applied  
Science NTB, PWO**

Simple and Flexible Interferometric Asphere  
Measurement Without Stitching

### **What do you consider as the best benefit of the SCIEEX fellowship?**

The SCIEEX fellowship had been defined with such conditions that one could completely focus on the topic of the project without any doubts or worries about formalities, financial background, or social problems. Such advantages were commented many times during the closing conference in Zürich and I can completely agree with the statements.

### **What was the main reason you decided to apply for the SCIEEX fellowship?**

I would say it had been combination of factors which together made a great opportunity to any student or researcher and which I had seen immediately after noticing the possibility to become the SCIEEX fellow.

We had caught the last call for the fellowship and it had been quite fast organization issue, because I had got the information only a few days before the deadline. However, thanks to my home mentors and their contacts with Swiss colleagues, and mainly thanks the simplicity of formalities which had been focused only on important facts, we had been finally successful with the application. Therefore, the formality issue had been a huge advantage of the project.

Next factor had been given by the financial conditions of stay – the coverage of all living expenses, which had been quite unique compared to other fellowships or programs. Other programs offer some kind of support but the conditions of the SCIEEX had been more appropriate for foreigners staying in more developed country than their home country is.

And last but definitely not least, the term “stay in Switzerland” itself. This country has great research history, social environment, living standard, etc.; therefore, I found the possibility to stay there as one of the best opportunities how to learn not only in my professional field.

### **Would it have been different if you stayed in CZ?**

Yes, it would be definitely different. I had got many experiences and knowledge about myself, my work, or my abilities. And I had learned a lot about different, modern, well organized, and successful culture as well.

Speaking more in detail, one part had been in having full responsibility for the results of the project; therefore, I had improved my managing skills. Next part had been ensuring living need and organizing myself (accommodation, formalities at the town hall, insurance, full foreign language communication, etc.). And finally, one huge and positive impact on myself and my conviction had been caused by Swiss people I met and I could talk to, and due to surrounding environment as well.

### **What did you learn about Switzerland?**

#### **Is there anything that surprised you that you did not expect?**

I would not say I did not expect, but the amount and quantity had overcome my expectations in many ways – culture, people, working standards, social environment, cleanliness, respect to others and their work, sharing the space, valuing the well done work without envying, etc. I had been surprised that it is possible to share opinions and to approach to life is such a compact, respectful, and well working attitude. I feel that this is the true richness and strength of Switzerland and Swiss people. And all of the aforementioned points contribute to such an amazing atmosphere which had been and still is in all parts of Switzerland I could visit during my stay as a SCIEEX fellow.

### **What did you learn about yourself?**

I have already mentioned some points in previous. From the professional point of view I consider as the most important: the organization skills in team, responsibility, improving the ability to manage myself, and motivate myself and others to work. And from the personal part, I appreciate the possibility to learn about sharing the space with others. The intelligence and richness of nation can be recognized from the fact that a personal freedom and democracy do not overcome to selfishness at the expense of others. This is the main idea of many democracies, but unfortunately it is not present in many democratic countries. Fortunately, thanks the SCIEEX fellowship and as far as I could see, I had the possibility to learn from the country where the main idea of freedom is not impaired.



**Ondřej Matějka**

**University of Geneva, Department of History**

Transnational history of Central European modernization in interwar period: case study on the Czechoslovak YMCA (THCEM)

### **What do you consider as the best benefit of the SCIEX fellowship?**

There are at least two great benefits for my academic development: first of all, thanks to the SCIEX fellowship I could start working on my habilitation research project: not only did I enrich my knowledge of theoretical and methodological tools in the field of transnational history but I also profited from the richness of Geneva archives (which are substantial for carrying out my research project). Second, I succeeded in constructing a network of Swiss colleagues who are interested in collaboration with Central Europe and even involve them in Czech academia: thanks to funding from Swiss contribution (Partnership Fund) they come to Prague this academic year and share their expertise on methodology of transnational history with Czech PhD students and postdocs (<http://uhsd.ff.cuni.cz/?q=en/node/417>).

### **What was the main reason you decided to apply for the SCIEX fellowship?**

The main reason for applying for the SCIEX fellowship was connected with the interest in transnational history and with previous contacts with colleagues from Geneva University (namely prof. Sandrine Kott).

### **Would it have been different if you stayed in CZ?**

It would have been impossible for me to start my new research project without an extensive stay in Switzerland.

### **What did you learn about Switzerland?**

#### **Is there anything that surprised you that you did not expect?**

The main thing that truly surprised me was the openness in the archives of international organizations in Geneva (YMCA, ILO, WCC), on the one hand, and genuinely international atmosphere at Geneva University, on the other (with numerous students showing particular interest in Central Europe).

### **What did you learn about yourself?**

That the possibility to dive into a different (academic) culture is really THE great pleasure of academic life!



**Darina Koubínová**

**University of Fribourg,  
Department of Biology**

Genetic consequences of the ecological island syndrome in myrmecophilic lycaenid butterflies (ECOISLAND)

### **What do you consider as the best benefit of the SCIEX fellowship?**

I had the opportunity to work in a great team of young scientists originating from different countries (Switzerland, France, Poland, Spain, Ecuador, Romania and Canada) and learn new techniques (next generation sequencing and bioinformatics). After my PhD, I wanted to quit research, because of many reasons (e.g. not enough vacancies and funding in the Czech Republic, not adequate salary), but this opportunity returned me my enthusiasm. I broadened my research focus, as I started to work on a new project using different methods than during my studies. And I refreshed my knowledge of French.

### **What was the main reason you decided to apply for the SCIEX fellowship?**

I could not find a position in the Czech Republic. I was searching for any job for 2.5 years and within that a year for a postdoc or similar academic position after finishing my PhD. I wanted to go abroad to gain new skills and attitude to science. I wanted to get international experience and work in close contact with people from other countries and with different background, as in the Czech Republic, researchers at the institutions are usually mostly Czech or Slovak. The main reasons for applying for the Swiss fellowship were the quality of research institutions, high life-standard, mountains, nature and multicultural environment. I was in Switzerland before and had colleagues who received the SCIEX fellowship, so I fully knew what I was applying for and knew that they all were extremely satisfied. And I applied for a fellowship, as it seemed to me that I would be more independent than when applying for a post financed from a grant of the head of the team, as here I had my budget for additional allowances, so I could e.g. visit the conferences, that I found interesting.



### **Would it have been different if you stayed in CZ?**

It would be more difficult to learn the new techniques I wanted. When I was leaving the Czech Republic, next generation sequencing was still quite new there, not accessible to every team, mainly because the lack of money and experience. Here, I joined a group, which was using these methods routinely (even for projects of Master students) and even trying to improve them. I would probably not have changed much the research focus. I would maybe still underestimate myself, as some people at home did not believe I could get this fellowship or discouraged me from going abroad. I proved to myself that it is possible to start working from scratch after PhD on a new project and that it is even far more motivating than continuing with the things you already know. I would not have refreshed and improved my French and not have met many interesting scientists from different fields of research from all over the world. The international experience will hopefully help me in my future career.

### **What did you learn about Switzerland?**

#### **Is there anything that surprised you that you did not expect?**

I was in Switzerland before, once for holidays and once for SymBioSE (Symposium for Biology Students in Europe), so I roughly knew, what I could expect. Switzerland for me was and is one of the best countries to live in, with beautiful nature and interesting history and culture.

Sometimes, I think, that students or people in general have more opportunities in Switzerland (money, quality of universities, high life standard, possibilities for international collaboration and mobility), but sometimes they do not realize that it is much more difficult elsewhere and they do not fully use and appreciate what is available for them.



**Zdeňka Svobodová**  
**University of Bern,**  
**Department of Biology**

Transfer of insecticidal Cry proteins  
along the food chain (TRANSCRY)

I was also surprised that many people share accommodation, even families with small children or couples and realized that some common beliefs about Switzerland are not absolutely true: trains can have a delay (usually only few minutes, but still), I had a bank account in the Czech Republic and South Africa before, and both had much more better conditions for customer than in Switzerland (interest rate, fees, payments abroad or cards). Also the health insurance system, where the insured person pays part of the treatment costs by means of different deductibles and 10% of the cost and no reimbursement for the dental care in the basic insurance, is a bit strange, e.g. compared to the Czech Republic. I was surprised by some technologies: e.g. there is a subway without driver in Lausanne and at the EPFL campus they test buses without driver, which you can call according to your needs with an application in your mobile phone.

### **What did you learn about yourself?**

I am now more self-confident and do not mistrust my knowledge and skills, as I could compare my capabilities with other researchers originating from all over the world and it seemed to me I am not somewhere low below average.  
I learned not to be shy as a foreigner and insist on my ideas and demands, even when not speaking that good French as locals.  
I always thought, I am not gifted for sports, but here in Switzerland, where everybody does some physical activity regularly and there are more opportunities than in my home town and country, I started skiing, snowboarding, sailing, windsurfing and climbing, as it would just be a sin not to fully exploit the mountains and the lake Geneva.

### **What do you consider as the best benefit of the SCIEX fellowship?**

Long-time experience abroad. I have seen how bigger team is functioning.

### **What was the main reason you decided to apply for the SCIEX fellowship?**

Offer from one of the best people in my field of interest.

### **Would it have been different if you stayed in CZ?**

Definitely. I would never gain the knowledges I gained in Switzerland in the Czech Rep. My "speaking English" is better now.

### **What did you learn about Switzerland? Is there anything that surprised you that you did not expect?**

Nice dialects completely different to each other. Swiss people are very proud of their own labor (products). English in offices (Kreisbüro, PensionKasse, Health insurance,...) and in shops (I do not think tourist areas). Very kind people that are willing to solve problems.

### **What did you learn about yourself?**

I can live alone outside the Czech Rep. for longer time. It was the biggest challenge for me.

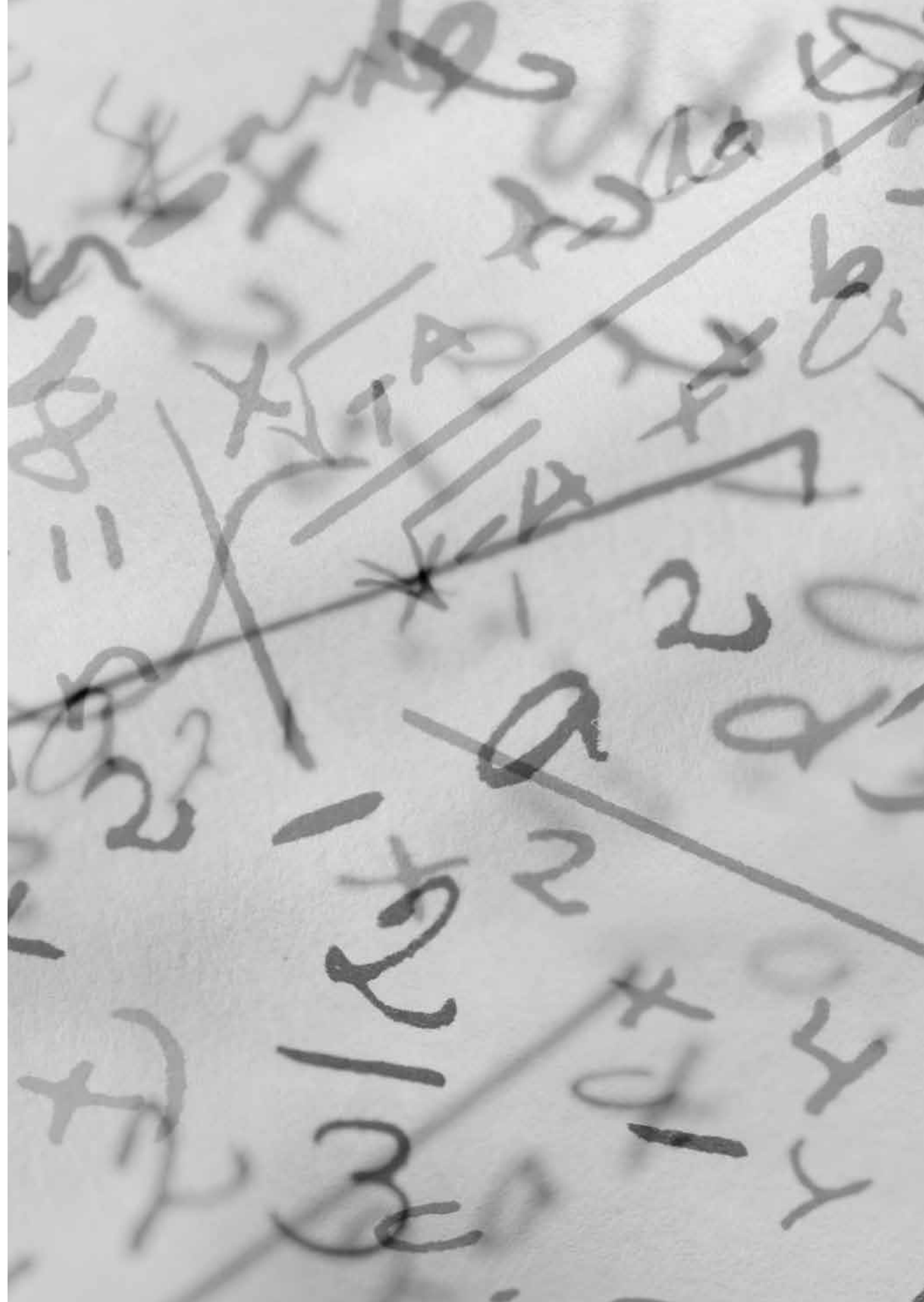
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