Dear MATH+ Community,

First of all, I hope that everybody is healthy and not infected by the Corona Virus which is the main topic everywhere in these days of such a pandemic global crisis. Although the situation is disturbing, we are keen to assure you that we are working on solutions that will allow us to continue our work as good as possible under these circumstances.

As you all know, we had to stop all activities and events in the universities, buildings and institutes apart from the research that now focuses on the corona pandemic. This also affected the Thematic Einstein Semester, the MATH+ Friday Colloquia, and the upcoming workshops which have to be postponed. But the good news is that the approved workshop funds are still available and valid until the end of 2021.

In order to cope with the difficult situation, we are working towards finding online programs substitutes to continue with e.g., the MATH+ Friday Colloquia. If you have any suggestions for speakers, who are known to give good online talks, please inform the BMS Chair, John M. Sullivan at <chair@math-berlin.de>.

Some more good news: in March, Gabriele Steidl started her position as MATH+ professor in applied mathematics at the Institute of Mathematics at the TU Berlin. An introduction will be followed in the next newsletter. Also, the MATH+ Central Office is finally fully staffed again. Three new colleagues started their work over the past few weeks. See more below.

If you have any interesting news that you wish to share regarding your research, publications, prizes, interesting guests, the other MATH+ communication formats or the next newsletter, please contact the MATH+ Office at <press@mathplus.de>.

Please be careful and stay healthy! We are looking forward to seeing you all again!

Martin Skutella
**MATH+ News**

**Call for Application: New Projects**

You will probably all have seen the email announcing the new call for projects sent by Martin Skutella. MATH+ is calling for new projects to start in 2021. About 30 new positions will be funded. You can apply for either full-time positions for two years (generally meant for postdocs) or 75% positions for three years (generally meant for doctoral students). You can find all the information about the call on our website after the Easter holidays. The MATH+ Central Office will be happy to answer any questions you may have: <calls@mathplus.de>.

The deadline for submissions is 19 June 2020. We look forward to receiving your project ideas!

**Call for Hanna Neumann Fellows**

MATH+ is also inviting applications for Hanna Neumann Fellowships! The fellowships are awarded to female scientists in recognition for their outstanding mathematical achievements to help promote their international visibility. Eligible women are those who do not yet have a permanent professorship and who received their doctorates no more than seven years ago.

Two fellowships are awarded each year, one to a member of MATH+ and one external (to a non-member). For more information please have a look at the attached call.

**COVID-19 related research @ ZIB**

The Konrad-Zuse-Institut Berlin (ZIB) introduces its latest COVID-19 related research activities. Get more information about the following topics:

1. Effects of countermeasures on COVID-19 spread (German only): [http://www.zib.de/infektionsausbreitung](http://www.zib.de/infektionsausbreitung)
2. Data-driven spread models for specific regions: [http://iol.zib.de/covid19/](http://iol.zib.de/covid19/)
3. Two COVID-19 spread models specifically for Berlin: [http://iol.zib.de/covid19berlin/](http://iol.zib.de/covid19berlin/)
4. Pan-European Privacy-Preserving Proximity Tracing (PEPP-PT) Initiative: [https://www.zib.de/node/4558](https://www.zib.de/node/4558)

**Research Campus MODAL (located at ZIB) enters second funding phase**

The Research Campus MODAL received the approval for its second funding period (2020-2025) on 3 April 2020. The total volume of funding will exceed 25 million EUR, of which 10 million EUR come from the Federal Ministry of Education and Research (BMBF). MODAL's industrial partners provide matching funds significantly exceeding the BMBF amount.

The Research Campus MODAL is a platform for a public-private innovation partnership established by ZIB and Freie Universität Berlin together with more than 30 participating companies. It is located at ZIB where more than 60 researchers from the public and private sector are working alongside in jointly-run laboratories.
**On Our Own Behalf: These are Challenging Times, Covid-19 — a Global Crisis**

We are in unprecedented times and facing uncertainty as the Coronavirus pandemic evolves around the world. Therefore, it was necessary to protect the people and close the universities and research institutes. Up until now, we are relieved that all colleagues, BMS students and postdocs are safe and no cases of infection have been reported. However, please let us know if you develop symptoms or if you became infected. We all know that it is very important to follow the hygiene instructions, and to avoid physical and social contacts personally.

Concerning the funding scheme, please be assured that the commitments for funding are guaranteed and will not be affected by the current Corona Crisis.

Stay healthy and see you again soon!

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**MATH+ People**

**MATH+ Central Office is now fully staffed. Welcome to 3 new colleagues!**

**Beate Rogler** will be in charge of public relations, press releases, and the newsletter. She acts as a contact for the media and will additionally support events and activities. For more than a decade, she was responsible for the marketing of the study and research destination Germany in China and represented the DAAD, the University of Göttingen, and FU Berlin.

![Beate Rogler](image)

**Daniele Mariano** is the new FU Liaison Officer. He studied in Rome, Vienna, and Modena, where he graduated with a master’s degree in Languages for Communication in International Enterprises and Organizations.

![Daniele Mariano](image)

**Thibaut Géraudie** is the HU Liaison Officer. He trained as a foreign language correspondent and held various administrative positions before joining MATH+.

![Thibaut Géraudie](image)

The Liaison Officers support the BMS students and doctoral researchers in dealing with the respective university’s administration, provide information about the respective regulations, and assist new students when arriving in Berlin. Daniele and Thibaut will also be involved in the organization of MATH+/BMS events, workshops, and conferences.

To contact the MATH+ Central Office, please visit the MATH+ website: [https://mathplus.de/about-us/office/](https://mathplus.de/about-us/office/)
The following BMS-students have successfully completed their doctorates

**Philipp Bringmann** (HU Berlin):
"Adaptive least-squares finite element method with optimal convergence rates"

**Giulia Codenotti** (FU Berlin):
"Covering properties of lattice polytopes"

**Nada Cvetkovic** (FU Berlin):
"Convergent discretisation schemes for transition path theory for diffusion processes"

**Karl Däubel** (TU Berlin)
"Some Aspects of graph sparsification in Theory and Practice"

**Gerald Gamrath** (TU Berlin)
"Enhanced predictions and structure exploitation in branch-and-bound"

**Hana K Kouřimská** (TU Berlin):
"Polyhedral surfaces of constant curvature and discrete uniformization"

**Jorge Alberto Olarte** (FU Berlin):
"Polytopal subdivisions in Grassmanians, tropical geometry and algebraic curves"

**Stefan Rüdrich** (FU Berlin):
"Random walk approaches to clustering directed networks"

**Jan Techter** (TU Berlin):
"Discrete confocal quadrics and checkerboard in circular nets"

**Nicola Vassena** (FU Berlin):
"Sensitivity of metabolic networks"

Congratulations!

**Abhinav Jav from India shares his experiences as a BMS student and in Berlin**

During my masters, I was clear that I wanted to do my doctorate from a European country, to get better exposure and a different environment. I was visiting my department when I saw the poster of BMS and it instantly attracted me. Going over to the website and looking at the amazing organization and the collaboration that BMS provides, I was sure that I wanted to pursue my doctorate from Berlin.

Read more

**MATH+ Events**

**Preview**

Due to the spread of Covid-19, most of the MATH+ Events are cancelled until further notice.
The International Congress on Mathematical Software 2020 (ICMS 2020) will happen as a virtual conference

Despite the extraordinary conditions, the International Congress on Mathematical Software 2020 (ICMS 2020) will be organized as a virtual conference in July. The organizers around Michael Joswig assured that the aim is to virtualize not only the talks, but as many aspects of an academic conference as best as possible. Further information about the virtual format of ICMS 2020 will be announced regularly on their website: http://www.iaa.tu-bs.de/AppliedAlgebra/ICMS2020/ICMS2020.html

A considerable amount of positive feedback, for this decision alone, was received, and encouraged the organizer to let the conference take place online instead of completely cancelling it. The conference proceedings are on track, they will appear in July, at the time of the conference.

15th INFORMS Telecommunication and Network Analytics Conference postponed to 30 August – 02 September 2020

The conference will focus on the theory and application of operations research and management science to problems in telecommunications and network analytics, with particular emphasis on new and emerging technologies. Additionally, the conference will provide a platform for people in academic and industry working in telecommunications and network analytics to exchange ideas and initiate new collaborations.

Attendance is free for MATH+ members, but prior registration is mandatory. To register send an e-mail with your name and affiliation to <informs_tnac2020@zib.de>. Please, specify if you want to attend the conference dinner, for which payment is required.

For detailed information visit the conference website: http://informs_tnac2020.zib.de

Review

BMS Days, Student Conference and Admissions for 2020

The application process for admission to the BMS PhD program in the academic year 2020/21 ended on 01 April 2020. The BMS received a total of 458 applications from 77 countries, 263 for Phase I and 195 for Phase II.

After the end of the first round on 01 December 2019, the Admissions Committee reviewed all applications and conducted interviews with over 40 promising applicants. The Admissions Committee will meet again on 15 May 2020 to discuss the applications submitted in the second round. Every year the BMS accepts at most 20 new Phase I students, 10 of which receive a BMS Phase I scholarship. In Phase II also about 20 new students are accepted each year depending on funding options.

Most of the interviews are done in person during the BMS Days, our great annual event to recruit promising young scientist. This year the BMS Days took place from 17/18 February 2020. In addition to their interviews with potential supervisors, the BMS Days give prospective students a preview of the opportunities offered by the BMS, they get the chance to meet current students and learn about life as a graduate student in Berlin. The program includes an overview of the BMS graduate program and the research opportunities in Berlin, informal meetings with BMS faculty members and postdoctoral faculty and students.
The BMS Days were followed by the 8th BMS Student Conference from 19-21 February 2020. Here, the BMS students display the broad spectrum of Berlin’s mathematical landscape by presenting their own research projects. The highlight, as usual, was the praised “Wine and Cheese” event on Thursday night – a great event for everyone with an interest in mathematics to socialize and mingle.

For further information go to: https://www.math-berlin.de/academics/bms-days

10 March 2020: MATHInside at the URANIA Berlin

On 10 March 2020, the MATHInside Talks provided another interesting insight in a variety of applied mathematics for pupils and the general public. Around 200 participants followed the explanation of the lecturers from MATH+ and prestigious mathematical institutes of Berlin to learn more about how mathematics supports other disciplines in finding solutions we need for solving problems of all societies.

The program was:
- Marcus Weber, Christoph Stein: Schmerzmittel aus dem Computer (Painkillers designed by computers)
- Niels Lindner: S-Bahn-Challenge
- Niklas Wulkow: Mit f(x) die Welt erklären – Das Entdecken mathematischer Spielregeln in der Realität (Explain the world with f(x) – Discovering the mathematical rules in the reality)

With our lecture series “MATHInside”, we give exciting insights into current research at MATH+. Three times per semester, three MATH+ researchers come to the Urania Berlin and give talks for pupils (grade 10+) and the general public. (Language: German)

Read more

If you have an idea for such a talk that you would like to present, please contact Ariane Beier at <schule@mathplus.de>.

MATH+ Outreach

Due to the spread of Covid-19, most of the MATH+ Events are cancelled until further notice.
Hanna Neumann Fellowships for 2021

The Berlin Mathematics Research Center MATH+ awards Hanna Neumann Fellowships to young female scientists in recognition of their outstanding mathematical achievements, in order to promote their international visibility in the fields of research where MATH+ is active. (Young scientists are those who do not yet have a permanent professorship and who received their doctorates no more than seven years before the start of the fellowship year. Time spent caring for children or others will be taken into account.)

Two fellowships are awarded each year, one internal (to a member of MATH+) and one external (to a nonmember). Each fellowship carries an award of 10,000 EUR, to be used for travel expenses that support long-term research co-operations between MATH+ and external scientists. (Travel expenses of course must be reimbursed according to the federal travel expense law, Bundesreisekostengesetz, BRKG.) Fellows can apply for additional funds for childcare, if needed. All money must be spent within the calendar year of the Fellowship, here 2021.

Internal Fellowship

The internal Hanna Neumann Fellowship, awarded to a member of MATH+, supports research co-operations of the fellow with scientists from other (usually international) institutions. Fellows can choose to use the money for their own travel to an institution of their choice and/or to invite a scientist (female or male) to visit MATH+.

External Fellowship

The external Hanna Neumann Fellowship is awarded to a woman who will visit Berlin during the fellowship year 2021, in order to begin or continue research collaboration with MATH+ members.

Application and selection of fellows

Applications are to be submitted via email by Friday, 24th July 2020 to:

MATH+ Committee on Mentoring, Gender and Diversity
Frau Tanja Fagel (fagel@math.tu-berlin.de)

Each application consists of:

- Nomination letter from a MATH+ faculty member (including, in the case of the external fellowship, the commitment to provide office space in Berlin),
- Academic CV with up to 5 relevant publications,
- Concept for scientific cooperation (no more than 2 pages) including a schedule/timeline,
- Relevant correspondence with the nominee (for the external fellowship) or the proposed host/guest (for the internal fellowship).

The Hanna Neumann Fellowships are awarded by the MATH+ Executive Board, based on a recommendation from the Mentoring, Gender and Diversity Committee. The decisions are based on the following factors, which must be documented in the application materials:

- Outstanding scientific achievement (in relation to academic age),
- Significance of their current and proposed research, and in particular its relevance to MATH+.