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Humboldt-Universität zu Berlin

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- Founded in 1810 following the concept of Wilhelm von Humboldt
- Role model of the “modern” universities
- 29 Nobel Prize winners originate from Humboldt-Universität
- More than 430 professors and 38.000 students

- Covers all the major academic disciplines in the Arts and Humanities, in Social Science, Cultural Science, Human Medicine, Agricultural Science, Mathematics, Economics and Law, and the Natural Sciences



- Partner in the “Berlin University Alliance”, jointly with FU Berlin, TU Berlin, and Charité
 - Seven “Clusters of Excellence” approved in 2018, one of which is MATH+
 - Nine Graduate Schools targeted to train junior scholars and scientists
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- Aim: Achieve a new quality of cooperation and use the wide range of potential to a larger extent



- Represents all major mathematical disciplines
- Partner within the Excellence Cluster MATH+
- Partner of the Berlin Mathematical School (BMS)
- Partner of the Einstein Center for Mathematics (ECMath)



- Preservice mathematics teacher education
- Berlin Network of Schools with a profile in mathematics and the natural sciences
- Summer Schools „Lust auf Mathematik“
- German Center for Mathematics Teacher Education (DZLM)
- Projects in MATH+/ECMath
- Kangaroo Competition



Berlin Network of Schools with a profile in mathematics and the natural sciences

- Network of five grammar schools, the Humboldt-Universität zu Berlin, and the State Government of Berlin
- Founded in the year 2001
- Promoting high school students who are talented in mathematics and the natural sciences
- Enriched curriculum in mathematics, additional course hours starting in fifth grade
- Focus on mathematical structures, argumentation, and proofs
- Opportunity to obtain credit points for the first semester of university education
- Approximately 1800 high school students in classes with a focus on mathematics and the natural sciences



Berlin Network of Schools with a profile in mathematics and the natural sciences

- Delegation of teachers of the grammar schools for one year to the Humboldt-Universität zu Berlin on a regular basis
- Enrich the education of the teacher students at the university
- Help to reduce the gap between high school and university education
- Advanced training in mathematics and mathematics education
- Fruitful interaction and exchange between university researchers and teachers





Summer Schools “Lust auf Mathematik”

- Take place every year and last for one week
- The best students get to attend the summer schools
- Students work in small groups on challenging mathematical problems
- Students are guided by university researchers
- Present their results by a talk and a 10-page report



German Center for Mathematics Teacher Education (DZLM)

Who we are

- Consortium of nine universities across Germany
- Initiated by Deutsche Telekom Foundation in 2011

What we do

- Develop, implement, and research effective professional development (PD) courses for teachers and PD facilitators
- Knowledge transfer from research to practice
- Close cooperations with practice on different levels (ministries/ teacher training institutes, facilitators, schools, teachers)
- Strategic focus on support and qualification for facilitators

Research project within MATH+/ECMath and DZLM

Developing video-based instruments to foster multipliers' noticing of teachers' mathematics learning – NoTe

- Challenge: Prepare PD facilitators for qualification courses with regard to the practical demands of teachers
- There is only limited research on how to do this support content-specifically
- Design of qualification courses is key for the learning processes of facilitators
- Activities based on authentic videos of PD courses are a possibility for facilitators to notice teachers' content-specific learning and probe concrete acting in such courses