IB Exchange
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IB DP MATHEMATICS SYMPOSIUM

Program Overview

Presented by: IB Exchange and International School of Stuttgart

16-17, November 2023

Welcome IB Mathematics Educators!

The inaugural Mathematics Symposium will take place on **November 16-17, 2023.**

The theme is **"Enhancing the Teaching of DP Mathematics."**

This online event sponsored by **IB Exchange** will also include a number of face-to-face activities, hosted by the **International School of Stuttgart in Germany**. It is intended that each future Symposium event will have its face-to-face component held in a different part of the world.

Our goal with this Symposium is to support DP teachers by sharing creative and effective teaching methods and materials that enhance the teaching and learning of mathematics for all DP students, around the globe.

- The **first day of the Symposium** will feature several, brief video keynotes by IB mathematics experts and industry leaders.

- The **second day of the Symposium** will showcase contributions from the wider IB mathematics teaching community including teaching ideas, discussion panels, posters, and hands-on activities.

We look forward to your participation in this global event!

IB DP Mathematics Symposium Planning Team

Meet the Symposium Planning Committee
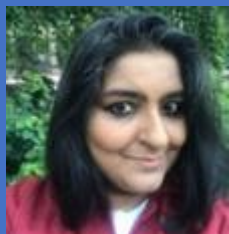
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Taylan Çeltik

DP Mathematics moderator and author for IB Exchange, IB workshop leader and examiner, Symposium head planner

After spending two decades working in various IB schools in Istanbul, Turkey, Taylan Çeltik recently relocated to Germany and is now the head of mathematics at the International School of Stuttgart. His greatest passion is developing materials that inspire students and teachers to grow their love of mathematics and tie it to real-world applications.

"We worked very diligently and faithfully on the Symposium. I hope you enjoy it and that it reaches its goal."

Priyamvada Das

IB examiner and moderator, course outline reader, workshop Leader and IB Exchange author

Priyamvada has 25 years of experience in teaching. Her journey with IB started in 2005. She has held several positions— team leader mathematics, TOK coordinator, middle school coordinator, continuum coordinator and Head of Inclusion. She is also a visiting faculty in Azim Premji University where she trains teachers in inclusive education.

"The IB Symposium will be an exciting platform to learn from the collective wisdom of IB mathematics educators across the world and I am excited to be a part of this planning."

Isaac Youssef

IB examiner, workshop leader and a senior IA moderator

A native of Egypt, Isaac has degrees in electrical engineering and teaching mathematics. He has written several tasks for the 2011-12 IA HL portfolio, contributed to the 2014-20 HL curriculum review, helped refine the assessment criteria for the HL mathematical exploration and shared teaching materials on IB Exchange.

He has taught in Oman, Canada, and now at a leading IB school in New Zealand.

"Being part of the first IB mathematics symposium is a huge privilege. I look forward to learning from my fellow IB educators around the world."

Sarah ElMeligy

IBDP Mathematics examiner, IB Exchange author, MYP coordinator, Head of Mathematics

Sarah is a passionate IB educator with 17 years of teaching experience. Her love of mathematics makes her keen to inspire educators and students and make a difference in student's life, knowledge and skills.
She is currently the MYP coordinator and head of mathematics in an international school in Dubai.

"The mathematics Symposium will be inspirational. I am honoured to be part of it."

Jeonghoon Choi

Math MYP/DP teacher at International School of Stuttgart, and MYP/DP workshop leader, AAHL and EE examiner and moderator

I am originally from South Korea and moved to Germany in 2020. I have 3 little children and started my teaching career in 2016.

"Very excited about the very first DP Mathematics Symposium and honoured to be part of the planning committee!"

Types of Presentations We Are Seeking

The Symposium will feature multiple presentation formats, including:

- **Demonstration of Creative Teaching Material/Idea**
  - E.G., a novel way of teaching a mathematical concept, incorporating technology in the mathematics classroom, or an activity that deepens students' understanding of a subtopic. Or a digital presentation that shares the findings of a study or highlights a unique experience from an IB educator or student.
- **Pre-recorded Video Presentation**
  - E.G., a recorded classroom activity, a teaching demonstration, a lecture or even a mathematics-related conversation between teaching colleagues. Please limit video to 20 minutes.
- **Live Mini-Workshop**
  - E.G., a live hands-on exploration of a keynote topic or a discussion session. Conducted via Zoom and limited to one-hour.
- **Student-Run Activity**
  - E.G., a discussion or demonstration. All student participants require permission from a parent or guardian. Please connect with Symposium organisers if you have students interested in participating.
- **Invited Keynotes (math experts from the IB and industry)**

Two Main Categories of Presentation Content

The Symposium will include content relating to the various DP Mathematics syllabi, the core elements of the IBDP model as well as links to the sciences, arts and real-life applications. Both standard and higher-level practitioners are encouraged to submit presentations that relate to

- A topic from the DP Mathematics syllabi (Analysis and Approaches or Applications and Interpretation)
  - Number and algebra
  - Functions
  - Geometry and trigonometry
  - Statistics and probability
  - Calculus

- The Core Elements of the DP programme or other aspects of DP Mathematics
  - The Extended Essay
  - Theory of Knowledge
  - Creativity, Activity, Service
  - Internal Assessment (the mathematical exploration)
  - ATT/ATL Skills

A summary of each accepted teacher contribution will be published in the IBDP Mathematics Symposium-2023 booklet. Full texts of papers, videos, activities, etc. will be shared online. All materials will be provided in English.

Connecting to Aims of DP Maths Courses

It is important to be able to associate aims of DP Mathematics courses while preparing presentations. The aims of all DP Mathematics courses are to enable students to:

- develop a curiosity and enjoyment of mathematics, and appreciate its elegance and power
- develop an understanding of the concepts, principles and nature of mathematics
- communicate mathematics clearly, concisely and confidently in a variety of contexts
- develop logical and creative thinking, and patience and persistence in problem solving to instil confidence in using mathematics
- employ and refine their powers of summation and generalisation
- take action to apply and transfer skills to alternative situations, to other areas of knowledge and to future developments in their local and global communities
- appreciate how developments in technology and mathematics influence each other
- appreciate the moral, social and ethical questions arising from the work of mathematicians and the applications of mathematics
- appreciate the universality of mathematics and its multicultural, inter- national and historical perspectives
- appreciate the contribution of mathematics to other disciplines, and as a particular "area of knowledge" in the TOK course
- develop the ability to reflect critically upon their own work and the work of others
- independently and collaboratively extend their understanding of mathematics.

Apply Soon for In-Person Option

The International School of Stuttgart (ISS) is an IB school for early years through grade 12 students. The school is home to a co-educational, multicultural student body of over 820 students from over 45 countries.

Although the majority of the Symposium will be online, 150-200 face-to-face participants will be accepted to attend for in-person networking and collaboration. The summary agenda includes

✓ **First day:** All in-person participants will join in the big opening ceremony in the auditorium. After the ceremony, Keynote speakers will present and lunch will be provided. At the end of the first day, there will be opportunities to tour the local community.

✓ **Second day:** All in-person participants will come to ISS with their laptops. They will join the online symposium in different classrooms, either on individual laptops or via broadcast to room screens.

How to Apply to Present or Attend

You are invited to express your interest to attend or present at the 2023 IB DP Mathematics Symposium.

- All applications must be submitted in English using the form linked below.

- Please submit separate forms if you are applying to present multiple sessions.

- All presenter applications are due by **June 16, 2023**.

- Acceptances will be announced via email confirmation by **July 28**.

- All materials to be presented are due by **September 23**.

Application form: https://forms.gle/W6HyatLG9VkQ7GCV6

We Hope to See You in November!