GLOBAL TALENT MENTORING

by the World Giftedness Center

***Connect. Empower. Transform.***

*The Hub,* Issue No. 13, 24 October 2023

# Outwitting the Inexorable March of Time

Dear Partners and Friends,

Since our last newsletter, we've been busy expanding the program's global reach and optimizing its offerings for STEMM talent development at the highest levels.

Check out our **latest research insights** on effective mentoring for highest achievers in STEMM:

- interview with mentoring expert Dr. Linlin Luo and
- our update on recent scientific research publications.

And take a moment to learn about our **latest global expansion activities**:

- at the second annual conference of the World Giftedness Center (WGC) and
- at the 47th annual conference of the Japan Society for Science Education (JSSE).

In recent weeks, we've received exciting nominations from our partners around the world for the next mentee application round. We look forward to welcoming new outstanding mentees and distinguished mentors to our community.

If you're a STEMM expert contemplating a mentoring experience, please consider volunteering with us to help us support our future cohort of outstanding mentees and help them—and humanity—make the most of the precious time we have together. For talent development mentoring, every shared second counts.

Best wishes,

Prof. Dr. Heidrun Stoeger
Chair Professor of School Research,
Development, and Evaluation,
University of Regensburg

Prof. Drs. Albert Ziegler
Chair Professor of Educational Psychology
and Research on Excellence,
Friedrich Alexander University of Erlangen-
Nuremberg

---

Interview

# Rage, Rage Against the Uniformity of Time

**Dr. Linlin Luo, Educational Psychologist and Former Coordinator of Program Experience at Global Talent Mentoring Unpacked Her Findings on Significant Factors in Developing Eminence in STEMM (while packing) in a Conversation with Shiva Kazemi**

*"Time is equal for everyone. Therefore, how individuals value time dictates what they do with it and then influences their learning process."*

—Dr. Linlin Luo paraphrasing an interview response

**A Transitioning Scholar Sitting Amidst Boxes:** My former colleague at Global Talent Mentoring, Dr. Linlin Luo, recently started a new postdoctoral researcher position at Texas A&M University. Shortly before she moved from Germany to the US for her new position, I had the chance to sit down with her—between moving boxes—to discuss some of her latest research findings on mentoring and talent development. Dr. Luo seemingly had no time. Yet she took time to speak with me and share thoughts based on her years of researching mentoring and talent development for Global Talent Mentoring, which made me think about the deliberateness of time use. During our

conversation, Dr. Luo recalled a remark from an expert she interviewed:

“Time is equal for everyone. Therefore, how individuals value their time dictates what they do with it and then influences their learning process.” This point gets at the heart of what we are working to achieve at Global Talent Mentoring: helping those who show the most impressive early achievements and evince the greatest determination to optimize their talent development—despite the fundamental constraints of time and place to which all humans are beholden.

**Global Talent Mentoring is an online mentoring program. How is mentoring operationalized in Global Talent Mentoring? How does the experience differ from just having a caring person to talk with via video chat?**
In Global Talent Mentoring, mentoring is defined as a reciprocal relationship between a more knowledgeable person—the mentor—and a younger, less experienced person—the protégée or mentee—that gives the less experienced person a chance to learn from the more experienced person. Mentors must care. However, just caring isn’t enough for the type of talent mentoring we advocate in the program. Global Talent Mentoring implements goal-oriented mentoring, which encourages mentees and mentors to set mentoring goals based on the mentees’ STEMM learning goals and progress, and structures their mentoring sessions to work on and achieve the mentoring goals. […]

Goal-oriented mentoring has implications for various aspects of Global Talent Mentoring. Let’s start with matching. Since the goal is to promote STEMM talent, it is very important that we match mentees and mentors based on the mentee’s STEMM field of interest and the mentor’s STEMM field of expertise.

The goal-oriented structure also impacts the program experience and how we want mentees and mentors to use their time together. Our goal-oriented approach led us to design the platform in a way that participants have a special area for goal setting—something like a workbench for mentors and mentees to work together on a goal and to see how far along they are in completing a goal. Accordingly, we provide participants with training materials that explain not only what goal-oriented mentoring is about but also why it is important.

**As an educational psychologist, how important do you see the role of mentoring in the educational progress of young talented students?**
I think it’s very important! Every person who aims to reach a high level of understating, competence, and achievement in a field has to be guided by someone who already has the knowledge, has traveled the same path, and basically has reached a high level of achievement. […] As I mentioned earlier, mentors can play so many different roles in mentees’ developmental stages. […] People who become the next generation of leaders, innovators, or scientists have a lot of power to shape society. Mentors as role models can show the next generation of domain leaders research ethics and how to use their talent for the common good of human beings and society rather than just for their own gains and profit. Therefore, I believe mentors play a significant role in many ways.

Please click here to read our complete interview with Dr. Luo.

Research

## Effective Mentoring Towards Eminence!


Nowadays, there are numerous and varied mentoring programs serving students of different ages for different purposes. But how effective are they? Are they using the full potential of mentoring in their programs? Which aspects play a crucial role in professionalizing a mentoring program? How different are these aspects for a STEMM-focused mentoring program? What aspects help to develop eminence in STEMM fields?

These are only a few questions that you can explore in the two recent publications of Dr. Linlin Luo, former coordinator of Global Talent Mentoring's program experience, and Prof. Dr. Heidrun Stoeger, the co-director of the program. In their recent special-issue introduction on "Unlocking the Transformative Power of Mentoring for Youth Development in Communities, Schools, and Talent Domains," the authors review the main types of mentoring programs in terms of structure, medium, format, and mentor type. Moreover, they describe the crucial aspects responsible for mentoring's actual effect versus its potential effect. In their other recent joint publication, "Developing Eminence in STEMM: An Interview Study with Talent Development and STEMM Experts," Dr. Luo and Prof. Dr. Stoeger explore how highly successful individuals' internal resources (their learning capital) and external resources (their educational capital) influenced their development toward excellence in STEMM. By comparing the viewpoints of talent development experts and STEMM experts, their study provides a systematic examination of significant factors in developing eminence in STEMM fields.

As a research-based program, Global Talent Mentoring continuously considers the outcomes of such studies to improve its effectiveness. To explore more about the research publications of the program, please visit here.

Event

## Practice Meets Research: Second World Giftedness Center International Conference


The World Giftedness Center (WGC) held its second annual international conference from 16−19 October 2023. As a global center, WGC advocates for rigorous standards of scientific inquiry in gifted education and talent development around the world and connects researchers, practitioners, and policymakers in these fields to create a specialized hub for effective gifted education and talent development.

This four-day online event welcomed speakers from different institutions and organizations around the globe, including representatives of Global Talent Mentoring. Prof. Dr. Heidrun Stoeger, the co-director of the program, gave her keynote on “The Role of Mentoring in Talent Development.” Dr. Kathrin Emmerdinger and Dr. Daniel Patrick Balestrini provided a workshop on “Applying Key Elements of Evidence-Based Mentoring for Talent Development.” The primary conference themes revolved around STEM talent development, gifted education, creativity, mentorship, and gifted identification.

---

Expansion

## STE(A)M Education and Possible Practical Collaborations

Prof. Dr. Heidrun Stoeger presenting Global Talent Mentoring at the 47th annual JSSE conference

The Japan Society for Science Education (JSSE) held its 47th annual conference from 18−20 September 2023 at Ehime University in Matsuyama City, Japan. Founded in 1977, JSSE contributes to the progress and diffusion of education in and about science in many domains. The organization holds annual meetings—including academic lectures, symposiums, and interactive sessions—to provide platforms for the presentation of research results encompassing the entire field of science education research and to facilitate exchanges of information by providing common topics.

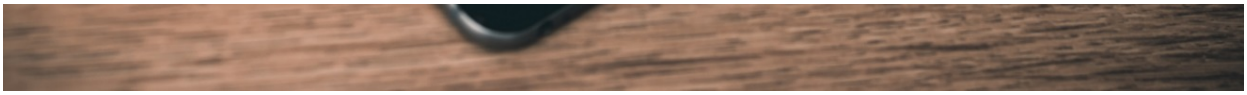
Global Talent Mentoring directors Prof. Dr. Heidrun Stoeger and Prof. Drs. Albert Ziegler presented at the conference in a symposium that included speakers from a JSSE special committee, local government, international projects, and colleges of technology. Topics included research on education in science, technology, engineering, the Arts, and mathematics (STE(A)M). In their joint presentation, Prof. Dr. Heidrun Stoeger and Prof. Drs. Albert Ziegler introduced Global Talent Mentoring, described the research work behind the program, and shared participants' success stories. A big special thanks is in order for Prof. Dr. Manabu Sumida, the president of JSSE and the chairperson for the Japanese National Committee of Global Talent Mentoring, for the kind invitation, for coordinating this inspiring and informative conference, and for his successes at integrating Global Talent Mentoring into the advanced STEMM education offerings in Japan.

While in Japan, the Global Talent Mentoring directors had fruitful meetings with leading organizations in the public and private sectors about the program and its expansion. Stay tuned for more updates!

---

**Mentees In Focus**

## STEMMtastic Summer/Winter!



This past summer/winter break (depending on the hemisphere) was a season full of activities for our mentees and mentors—and not just surfing and snowboarding, but also amazing activities and accomplishments in STEMM domains. While some mentees completed summer courses or internships, others developed projects or attended competitions. For example …

- Arnav Ranjekar—nominated by Dr. Kalmadi Shamarao Junior College (India)—organized an amazing lecture on "Space Telescopes, Exploding Stars, and Dark Energy" by Dr. Brad Tucker, an astrophysicist from Australia, for the BITS−Pilani K K Birla Goa Campus Astronomy Club.
- Mariia Dzhelmach—nominated by the Junior Academy of Sciences (Ukraine)—completed her second internship at ETH Zurich Laboratory of Exercise and Health. She says, "after working with the leading specialists in the field and learning a lot from them, I performed some experiments on my own, such as tissue digestion, RNA isolation, and confocal microscopy." Read more about Mariia's previous internship experience at the same institution here.
- Yiding Song—nominated by the Hong Kong Academy for Gifted Education (HKAGE)—attended a 6-week summer course at the Massachusetts Institute of Technology (MIT) in the United States that allowed him to research multimodal language models at the NSF AI Institute for Artificial Intelligence and Fundamental Interactions (IAIFI).
- Georgios Georgeles—nominated by the Foundation for Research and Technology−Hellas (Greece)—won first prize at the International Mathematics Competition (IMC) in Greece.

These are only a few examples of the amazing experiences and achievements that our outstanding mentees had this past season. To appreciate our caring mentors for sparing no effort in supporting their mentees, and also to share our mentees' inspiring stories with our wider audience, we are publishing a series of posts on our social networks. Please check out our channels to learn more about the latest activities of our stunning mentees.

---

Support

## Volunteer as a Mentor!

Global Talent Mentoring accepts new mentor volunteers year-round from all over the world. If you are a STEMM expert (PhD or equivalent R&D experience) and would like to mentor an exceptionally talented, highly motivated youth in STEMM, please fill out our Mentor Volunteer Form to register.

**Spread the News!**
Please share *The Hub* with your friends and colleagues so that they can also become a part of our growing network. Comments and questions about *The Hub* and Global Talent Mentoring can be addressed to the Editorial Team.

Universität Regensburg

Friedrich-Alexander-Universität Erlangen-Nürnberg

WORLD GIFTEDNESS CENTER

GLOBAL TALENT MENTORING by the World Giftedness Center

Hamdan Bin Rashid Al Maktoum Foundation for Distinguished Academic Performance

## Global Talent Mentoring

www.globaltalentmentoring.org

Global Talent Mentoring is part of the World Giftedness Center, a program of the UNESCO-affiliated Hamdan Bin Rashid Al Maktoum Foundation for Medical and Educational Sciences (Dubai, UAE).