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10<sup>th</sup> May, 2024

Subject: **Teachers for STEM, Exchange project information sharing from the Teacher Education Center, UNESCO.**

We are writing to extend our invitation to send us the nominations to participate in the upcoming Belt and Road Shanghai Autumn 2024 Exchange Project on Teachers for STEM Program.

2. The program is scheduled to take place in Shanghai, China, from October 9th to 20th, 2024. It is designed to focus on the preparation and support of teachers in STEM (Science, Technology, Engineering, and Mathematics) education, with a specific emphasis on national policies and practices. The event is organized by The Teacher Education Center, UNESCO, in collaboration with its founding team at the Research Institute for International and Comparative Education, SHNU.

3. Participants will have the opportunity to engage in workshops, seminars, and discussions led by experts in the field, as well as visit local educational institutions to gain insights into best practices and innovative approaches.

4. Please find attached further details about the program, including the schedule, objectives, and registration process. Please note that this is a non-funded invite.

5. Should you have any questions or require additional information, please do not hesitate to contact us.

Regards,

**(Samreen Mangi)**  
Assistant Secretary General

**Mr. Shahzeb Zaffar Sial**  
Assistant Director  
(HEC-Global Engagement)





Invitation to

**The Belt and Road Shanghai Autumn 2024 Exchange Project on  
Teachers for STEM**

**Candidates:** Teacher Educators, Researchers, and Government Officials

**Places:** 30 candidates **Time:** October 9th to 20th, 2023 **Language:** English

**Organizer:** Teacher Education Centre, UNESCO; Research Institute for International and Comparative Education, SHNU

**Partner:** UNESCO Multisectoral Regional Office for East Asia; National Commission of the People's Republic of China for UNESCO; Department of Teacher Education, Ministry of Education of the People's Republic of China

**Sponsor:** Shanghai Municipal Educational Commission

**Schedules:** Pending

**Open to application:** From March 1st to July 15th, 2024

**Contact person:** Prof. Dr. Bo Ning

**Address:** Guilin Road 55, Shanghai, China

**Tele:** 86-21-64321390 **Email:** ningbo@tec-unesco.org.cn



## A Brief Introduction to the Belt and Road Shanghai Autumn 2024

### Exchange Project

#### 1. Project overview

The Belt and Road Shanghai Autumn Exchange Project, funded by the Shanghai Municipal Education Commission (SHMEC), aims to facilitate the exchange of educational ideas and experiences among education administrators, university educators and researchers, and school principals and teachers from the Belt and Road countries. Starting in 2017, it serves as a platform at Shanghai Normal University (SHNU) to welcome international candidates. Due to international travel restrictions, the Project was conducted through a series of online activities in 2020, 2021, and 2022. In 2023, the Organizer resumes on-site activities and seminars in Shanghai. Interested colleagues are encouraged to send us their registration form as attached for 2024 Project.

Year	Topic	Participants
2017	China Education Overview: An International Perspective	14 government officials from 7 countries
2018	PISA, TALIS and Reforms in Basic Education	22 government officials and researchers from 15 countries
2019	Policy and Practice: Teacher Professional Development	35 government officials and researchers from 22 countries
2020	Schools and Teachers during and after the Pandemic	2,000 online participants
2021	Evaluation on Teacher Professional Development	18,368 online participants
2022	World Teacher Education Expo	5,688 online participants
2023	Integrated Training of Teachers before and after Service	35 government officials and researchers from 17 countries
2024	Teachers for STEM	Pending

This year's Project, entitled "*Teachers for STEM*," focuses on the preparation and supports of Teachers in STEM education, specifically national policies and practices. The Organizer, the Teacher Education Centre, UNESCO and its founding team at the Research Institute for International and Comparative Education, SHNU, expects to welcome 30 participants from around the world. The Project will take place between October 9th and 20th in two modules: "International Trends in STEM Teacher



Education”, “Advantages and Challenges of STEM teachers.” It will include 8 seminars presented by national and international officials and leading professors, 3 forums for participants and invited speakers, 4 school visits, and 3 cultural activities. Participants will be organized to visit Shanghai, Huainan, and Chengdu, three diverse cities in China. The Organizer welcomes recommendations for presentations and discussions in the aforementioned modules from international participants. The Organizer also welcomes introductory or theoretical presentations about teachers and STEM education in participants’ countries or universities. The exact Project schedule will be released later.

Additionally, the Organizer is preparing an international survey on pre-service teachers and greatly values participation and contributions from the international community. A pilot study of this survey, entitled “Teachers’ Pre-service Learning and In-service Development in China” was conducted in three Chinese universities in 2023 and several other universities in the world in 2024. The fundamental ideas, the research design, and main findings from this pilot survey, specifically on teacher preparation in STEM education, will be introduced in this Project.

## 2. Introduction to the Organizer

The Teacher Education Centre is a new branch of the UNESCO family. In November 2017, the 39th General Assembly of UNESCO decided to set up the “Teacher Education Centre”(UNESCO TEC) in Shanghai. In April 2019, the State Council of China officially put on record of UNESCO TEC. In September 2020, the Chinese government and UNESCO signed an agreement on the fundamental rules of regulations of the UNESCO TEC. According to this agreement, the objective of UNESCO TEC is to be a service provider, standard setter, and a research and resource management centre in the global field of teacher education. UNESCO TEC shoulders the international responsibilities of knowledge production, capacity building, technical service, and information sharing in teacher education domain.

Shanghai Normal University (SHNU), founded in 1954, is a comprehensive university with salient features of teacher education and particular strength in liberal arts. SHNU



### *Teachers for STEM*

manifests a high-quality academic staff of 2,915 teachers and researchers, including 1,831 full-time teachers, among which there are 300 professors (or equivalents) and 667 associate professors (or equivalents). Located in the metropolis Shanghai, SHNU boasts special features and strength in international cooperation and exchanges. By March 2021, the University has established links with 405 universities and educational institutions in 40 countries and regions. Every year, more than 2,000 foreign students choose to study at SHNU, and a large number of SHNU teachers and students visit and study in universities abroad.

The Research Institute for International and Comparative Education (RIICE) is an important branch of Shanghai Normal University (SHNU) and the founding team of UNESCO TEC. It is also the University Think Tank of Shanghai Municipal Government for Global City Education, the International Education Research and Consultation Centre Education Policy Research Unit affiliated to MOE, and the MOE Base for International Education Studies. RIICE is also the Shanghai organizer of several international large-scale educational surveys, including Programme for International Student Assessment (PISA) 2009 & 2012, Teaching and Learning International Survey (TALIS) 2013 & 2018, TALIS 2018 Video Study, and Systems Approach for Better Education Results (SABER) 2014.

RIICE has undertaken a series of international teacher training and exchange projects. From 2014 to 2021, RIICE runs the China-England Mathematics Teacher Exchange Project each year in charge of the training programs management and the local coordination during England teachers' sojourn in China. In May 2016, RIICE hosted the Global Conference on Equity and Excellence in Basic Education supported by the World Bank. Administrators, educators, and researchers from the Shanghai Municipal Government, universities and schools shared the "Shanghai secrets" in basic education with more than 100 educational administrators from over 30 countries in this conference.



## *Teachers for STEM*



**Minxuan ZHANG, PhD**, professor, Director of the Teacher Education Centre, UNESCO, Chairman of the Centre for International Education Studies and Consultation, Chinese Ministry of Education, the founding Director of the Research Institute for International and Comparative Education, SHNU. Prof. Zhang concentrates his career on education, he served as a school teacher and a principal, a scholar and a government officer, worked as the President of Shanghai Normal University, the President of Shanghai Academy of Educational Sciences, and the Deputy Director-General of Shanghai Municipal Education Commission. As a consultant of UNESCO, UNICEF and the World Bank, he worked for education development in Cambodia, Indonesia, Malaysia and other countries. As Shanghai PISA and TALIS National Project Manager, he studied Shanghai education system from a global perspective.



**Bo NING, PhD**, professor at the Research Institute for International and Comparative Education, SHNU and a project manager of the Teacher Education Centre, UNESCO. Prof. Ning is the Project manager for the Belt and Road Shanghai Autumn Exchange Project. He received his PhD degree from KU Leuven, Belgium in 2014. He is an expert in educational effectiveness and evaluation, particularly on school effectiveness and improvement, teacher preparation and supports, and Shanghai schooling from an international perspective.



3. Notice to this Project

- This is a non-profit annual project for international professionals in education and social affairs held by the Teacher Education Centre, UNESCO and the Research Institute for International and Comparative Education, Shanghai Normal University. To respect diverse cultural contexts, the Project will accept a maximum of three registered participants from each country. For applicants with similar professional backgrounds, the Organizer will follow a "first come, first served" policy.
- The registration fee and tuition for the Project are waived. The Project organizer will provide each participant with a subsidy to cover local accommodation, meals, and transportation between the hotel and workshop venues. This subsidy will be provided based on the standards issued by the Shanghai Government.
- Participants are responsible for their round-trip tickets. The Project organizer can cover the cost of international round-trip tickets for up to five participants from developing countries through an independent application and approval procedure. If you require this financial support, please mention it in the important note section of the application form below. The round-trip tickets of the invited keynote speakers will be covered by the Organizer.
- The Project includes two modules. Participation in part of the Project, such as one module or several days, is acceptable. Please indicate your duration in the important note section of the application form below. Participation in part or whole is not an influential factor for enrollment.



*The Belt and Road Shanghai Autumn 2024 Exchange Project*

*Teachers for STEM*

*A Series of On-site Activities for Teacher Educators, Researchers, and Educational Administrators from the Belt and Road countries*

## **Invitation Letter**

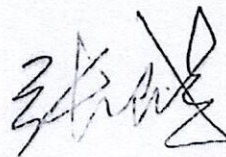
To Whom It May Concern,

Since the beginning of this century, teacher preparation and supports in STEM education has been concerned in most countries and economies. On November 9, 2023, the 42nd Session of the UNESCO General Conference in Paris adopted a resolution to establish the UNESCO International Institute for STEM Education (IISTEM) in Shanghai.

Shanghai Municipal Educational Commission authorized Shanghai Normal University to organize interactive on-site activities for teacher educators, researchers, and educational administrators from all over the world. The Project in 2024 was themed "*Teachers for STEM*", in response to the coming UNESCO IISTEM. We hope that the Project would help colleagues from around the world put forward their ideas and actions in teachers and STEM education by examining the philosophy, theory, and practice in the world and exploring cures to the common problems.

You are welcome to register or recommend registered participants in this year Project. The registered participants of our Project are welcome to publish their ideas, articles, research reports, and speech through this platform. Particularly, the Organizer expect an introductory or theoretical presentation of teacher and STEM education in each participating country or university. Colleagues can also send their ideas and reports to [ningbo@tec-unesco.org.cn](mailto:ningbo@tec-unesco.org.cn).

Prof. Dr. Minxuan Zhang  
The Director  
Teacher Education Centre, UNESCO  
March 20th, 2024





### The Bell and Road Shanghai Autumn 2024 Exchange Project: Teachers for STEM Registered Participant Form

Family Name:			
Given Name:			
Nationality:	Gender:		
Passport No.:			
Date of Birth: Year Month Day			
Employer or Institution Affiliated:			
Title:			
Professional Rank:			
Mobile Phone:			
E-mail:			
Please mark to the right the events that you will participate in this Project with a "✓":			
1. International Trends in STEM Teacher Education			
2. Advantages and Challenges of Teachers for STEM			
Please inform us of your work field, an introductory or theoretical presentation about Teachers for STEM in your country or university, and your potential topics (optional):			
Please offer your recommendation of a keynote speaker from your country, university, or organization, who is a leading expert or high-rank official in teacher education or governance (optional):			

You are more than welcome to recommend yourself or a colleague from your country as a keynote speaker. Please send your registration form to [lingbo@tee-unsg.org.cn](mailto:lingbo@tee-unsg.org.cn) as soon as possible.





Sponsored by Shanghai Municipal Education Commission

**Attachment: Project Schedules (in pending status)**

<b>Module 1: International Trends in STEM Teacher Education</b>		
<b>Date</b>	<b>Morning (9:00-11:30)</b>	<b>Afternoon (14:00-16:30)</b>
Oct. 9 <sup>th</sup> (Day 1)	<b>Opening Ceremony</b> <b>Forum: Integrated Development of Industry, Education, and Research in STEM education: A Response to the Trinity of Education, Science and Technology, and Talents</b> <b>Speaker: Representatives from enterprises, universities, and research institutes in typical countries</b>	
Oct. 10 <sup>th</sup> (Day 2)	<b>Forum: Systematic Design of STEM Teacher Education in the world</b> <b>Speaker: Government officials and university presidents in typical countries</b>	<b>Forum: Theories and Practices in STEM teacher education in the world</b> <b>Speaker: Participants from universities</b>
Oct. 11 <sup>th</sup> (Day 3)	<b>Lecture: Action Plan for China STEM Education 2029: Summary and Prospects</b> <b>Speaker: Prof. Dr. Su Wang, Research Institute for Comparative Education, China National Academy for Educational Sciences</b>	<b>Culture Activity: Visiting to Shanghai Museum of Natural History</b> <b>Team building: Participants</b>
Oct. 12 <sup>th</sup> (Day 4)	<b>Lecture: Measurement and Evaluation of STEM Teacher Capacities in the World</b> <b>Speaker: Experts from international organizations and universities</b>	<b>Culture Activity: Visiting to Shanghai Schools</b> <b>Team building: Participants</b>
Oct. 13 <sup>th</sup> (Day 5)	<b>Lecture: STEM Teachers' Institutionalized Learning, Professional and General Literacy in Shanghai Normal University</b> <b>Speaker: Prof. Dr. Shuang Wei, Deputy Dean of the College of Information, Mechanical and Electrical Engineering, SHNU</b>	<b>Free Talk: International Trends in STEM Teacher Education</b> <b>Speakers: Participants</b> <b>Summary Speaker: Prof. Dr. Jie Wang, Deputy Dean of RIICE, SHNU</b>



<b>Module 2: Advantages and Challenges of Teachers for STEM</b>		
Date	Morning (9:00-11:30)	Afternoon (14:00-16:30)
Oct. 16 <sup>th</sup> (Day 1)	<b>Lecture:</b> Findings from National and International Surveys on STEM Teachers <b>Speaker:</b> To be invited	<b>Lecture:</b> Findings from TALIS TVS Study on Teachers' Teaching Practices in Mathematics <b>Speaker:</b> To be invited
Oct. 17 <sup>th</sup> (Day 2)	<b>Forum:</b> Teachers' Readiness of STEM Education: A perspective of Out-of-Field Teaching <b>Convener:</b> Prof Linda Hobbs, Deakin University & Coordinator, OOF-TAS Collective	<b>Talks:</b> Professional Development and Learning of Teachers Teaching Out-of-Field in STEM Education <b>Convener:</b> Prof Linda Hobbs, Deakin University & Coordinator, OOF-TAS Collective
Oct. 18 <sup>th</sup> (Day 3)	<b>Speech:</b> Female Perspectives on STEM Education <b>Speaker 1:</b> Female scientist <b>Speaker 2:</b> Female STEM teacher educator <b>Speaker 3:</b> Female STEM teacher <b>Speaker 4:</b> Participants	<b>School visit:</b> STEM Teachers in the Schools <b>Chair:</b> Prof. Dr. Xiaohu Zhu, RIICE, SHNU
Oct. 19 <sup>th</sup> (Day 4)	<b>Speech:</b> International Experience of Professional Supports for STEM Teachers <b>Speaker 1:</b> Government official from education domain <b>Speaker 2:</b> Experts from professional organizations <b>Speaker 3:</b> Participants	<b>Field Activity:</b> STEM Projects in Shanghai Chen Shan Botanical Garden <b>Team building:</b> Participants
Oct. 20 <sup>th</sup> (Day 5)	<b>Forum:</b> Addressing STEM Teacher Shortages and Transforming the Profession: A Response to the UNESCO Global Report on Teachers 2024 <b>Speaker:</b> Educational Specialists from UNESCO Beijing Office and others <b>Closing Ceremony</b>	