# Interdisziplinäre Vortragsreihe Bildungsforschung

**Sondertermin: Mittwoch, 05.07.2023, 14:00 Uhr**
S06 S00 A40

**Sophie Shuhui Li, PhD**, School of Mathematical Sciences East China Normal University

## How ICTs impact Mathematics Education in China? Challenges and Issues?

*Information and communications technology (ICT) has impacted and changed the teaching and learning of mathematics in many aspects. In this talk, I will introduce a series of collaborative research studies investigating ICT use in mathematics education in China from the perspectives of students, teachers, and assessment. First, from the student's perspective, we examined Shanghai students' access, use, and perception of general ICTs in learning mathematics (Fan et al., 2022a). Second, focusing on the teachers' perspective, we investigated Chinese mathematics teachers' use of digital resources before, during and after mathematics lessons (Fan et al. 2022b). Third, regarding the ICTs use in assessment, we collected calculator use policies and practices in College Entrance Examination Mathematics in 30 relative economically developed countries and regions, and compared their delivery modes (single VS mixed), types of calculators allowed (scientific, graphing with CAS, or graphing without CAS), and roles of calculators in exam questions and solutions (active VS. inactive) (Li et al., 2023). Finally, I will outline some challenges and issues we met regarding the integration of ICT in mathematics education in China, especially in Shanghai.*

**About:**
Sophie Shuhui Li is a Mingyuan Chenhui Scholar, Lecturer in the School of Mathematical Sciences at East China Normal University, Shanghai. She earned her BSc in mathematics and applied mathematics at Shanghai University of Finance and Economics, China and her MA, MPhil, and PhD in mathematics education at Teachers College, Columbia University, USA. She joined East China Normal University as a post-doc research fellow in 2020. Her research focuses on mathematical connection, mathematics curriculum and textbook, interdisciplinary curriculum, and ICT in mathematics education.

Fan, L., Luo, J., Xie, S., Zhu, F., & Li, S*. (2022a). Chinese students' access, use and perceptions of ICTs in learning mathematics: Findings from an investigation of Shanghai secondary schools. *ZDM – Mathematics Education, 54*(3), 611–624. https://doi.org/10.1007/s11858-022-01363-5

Fan, L., Luo, J., Xie, S., Li, N., & Li, S*. (2022b). Investigating Chinese mathematics teachers' use of digital resources before, during and after mathematics lessons [Paper presentation]. *The 12th Congress of the European Society for Research in Mathematics Education*, Bozen Bolzano, Italy.

Li, S., Fan, L.*, & Li, S. (2023). Should calculators be allowed to use in college entrance examinations in mathematics? An international comparison of 30 countries and regions' calculator use policies and practices in college entrance examinations. *Journal of East China Normal University (Educational Sciences)*, (4), 83-92. https://doi.org/10.16382/j.cnki.1000-5560.2023.04.007

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