

March 31, 2022

Prof. Zhaoyin Wang, President of WASER
Prof. Guangquan Liu, Deputy Director of IRTCES
World Association for Sedimentation and Erosion Research
20 Chegongzhuang Road West
Beijing, 100048, China

Re: 16th International Symposium on River Sedimentation, September 2025

Dear Prof. Wang and Prof. Liu,

Based on our informal discussion last month, we enthusiastically submit a formal proposal about our organization and the bid to hold the 16th International Symposium on River Sedimentation in the University of Nebraska-Lincoln, Omaha, Nebraska, USA.

The University of Nebraska-Lincoln is one of the major research universities in the U.S. It has several water and sediment-related research programs in its College of Engineering and College of Agricultural Sciences and Natural Resources. It also hosts the Nebraska Water Center and the Daugherty Water for Food Global Institute. They have provided many impacted science and engineering solutions to the sediment problems of the Missouri River and its major branch, the Platte River.

Particularly, in the 1950s, the US Army Corps of Engineers Omaha District significantly supported Einstein and Chien's sediment research with many Missouri and Platte Rivers projects, which helped them establish the framework of modern sediment transport theory. This is why we see "Platter River near Omaha" and "Missouri River near Omaha" frequently in their classic papers and monographs on bed form resistance, bed load transport, and suspended load transport. Therefore, Omaha is a holy land for sediment research; and Omaha then is the most suitable place for the 16th International Symposium on River Sedimentation. By the way, the 3rd Symposium was held in 1986 in Vicksburg, MS, which is the research center for the Mississippi River; the USACE Omaha District is the management center for the Missouri River Watershed.

We plan to host the symposium as follows:

- Chair of the LOC: Prof. Junke Guo (University of Nebraska-Lincoln).
 - Prof. Guo successfully organized the 13th IAHR Asian-Pacific Division Congress in the National University of Singapore in 2022, which attracted 350 researchers from 25 countries.
- Venue: University of Nebraska-Lincoln (Marriot in Omaha Campus, or CenturyLink Center)
- Symposium dates:
 - Three or four consecutive days in the late of September 2025
- Proposed Theme of the Symposium: **Centennial of Modern Sediment Transport Mechanics**
 - Except the mass, momentum and energy conservation laws for water movement, our research of sediment transport is based on two sediment mass conservation equations,

Exner's (1925) equation for bed load and sand waves, and Schmidt's (1925) sediment diffusion equation for suspended load. These two laws found the basic theory of modern sediment transport. Therefore, the year 2025 is the centennial of modern sediment transport mechanics. On this occasion, we will review the achievements in last century, and propose several research needs for future studies.

- Proposed Topics of the Symposium:
 - Fundamentals for sediment transport (Boundary layer flow, fluvial Hydraulics, and Hydrology)
 - Fundamentals of sediment transport (Bed forms, bed load, and suspended load)
 - Experimental and computational sediment transport and fluvial processes
 - Watershed hydrology and sedimentation
 - River Erosion and sedimentation (case studies)
 - Scours around hydraulic structures (case studies)
 - Reservoir sedimentation
 - Estuarine and coastal sediment transport
 - Seabed sediment transport
 - Environmental and ecological sediment with climate changes
 - Sediment transport on Mars
 - *4-5 keynote speakers will be invited*
 - Others

- Technical Tours: Three technical tours will be arranged during the conference
 - Option 1: Tour the University of Nebraska water-related centers, institutes, and labs.
 - Option 2: Tour the Missouri River sedimentation projects.
 - Option 3: Tour the Platte River sedimentation projects.

- Post-Conference Tours:
 - We will arrange a tour company to assist individuals according to their needs.

According to Prof. Guo's experience of the 13th IAHR APD Congress, we will hire a local company to assist the logistic of the symposium and organize an international technical committee to review all paper submissions. We will also provide electric proceedings before the symposium.

Finally, we appreciate your comments/inputs about the proposal, and we are looking forward to your favorable approval of our proposal so that we could welcome delegate from all over the world to the sediment research holy land of Omaha in 2025.

Sincerely,



Dr. Junke Guo
Associate Professor of Hydraulics and Fluid Mechanics

CC: Dr. Tian C. Zhang, Professor of Civil Engineering
Dr. Shannon Bartel-Hubt, Chair of Civil Engineering
Dr. Lance Perez, Dean of Engineering
Dr. Chittaranjan Ray, Director of Nebraska Water Center
Dr. Peter G. McCornick, executive director of the Daugherty Water for Food Global Institute