

WORLD ASSOCIATION FOR SEDIMENTATION AND EROSION RESEARCH

World Association for Sedimentation & Erosion Research – WASER

NEWSLETTER

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MESSAGE FROM THE PRESIDENT OF WASER

Dear Colleagues,

After a considerable period during which its production lapsed, I am very pleased to announce the relaunching of the WASER Newsletter, which will appear at regular intervals. This has been made possible by the restructuring of the WASER Secretariat and we are very grateful to Professor Cheng Liu, our Newsletter Editor, for his efforts in compiling this issue. The Newsletter aims to facilitate communication across the WASER community and includes, for example, information on upcoming meetings,

reports on recent meetings, extracts from recent reports which are seen to be of significance to our area of interest and details of the contents of our journal, the International Journal of Sediment Research, and its sister journal International Soil and Water Conservation Research. I hope that you will recognise and appreciate that communication is a two-way process and that you will all aim to contribute news items via the Editor. He very much looks forward to receiving your contributions.

I would also like to inform you that the WASER website has been updated. The process has not been fully completed, but I would invite you to access the new website <u>http://www.waser.cn</u> where you will find another Welcome Message from me providing some further details of the reorganisation of the WASER Secretariat.

With very best wishes

Giampaolo Di Silvio, President of WASER

NEWS

ISI, WASER and IRTCES: an auspicious cooperation

Sediments are involved in many branches of science and technology, ranging, respectively, from Earth Sciences and Biology to Engineering, Forestry and Agriculture. Even larger is the range of the specific disciplines belonging to these various academic and professional fields in which sediments play an important role. Earth Sciences embraces, for example, geography, hydrology, geomorphology, etc., while Engineering includes hydraulics, structures, energy, environment etc. In the field of Forestry and Agriculture, soil and therefore sediments represents an essential component in most of their applications.

It is only natural that each discipline or group of disciplines has proceeded to create their own networks, involving, for example, journals and magazines reporting recent findings in their respective fields, as well as national, regional and international associations and societies, whose members work together in pursuit of a common aim or purpose. In some cases, such bodies will publish their own journals and almost all convene periodic conferences and meetings. The resulting networks may reflect a clear disciplinary focus or a more multidisciplinary integrating character. However, as with any living organism, all networks tend to preserve their cultural identity and specificity in terms of methodologies, perspectives and points of view. Over the course of time, such networks are established, develop and may eventually terminate, or they or they may modify totally or partially their focus and adapt themselves to the prevailing cultural, economic and political climate. The consistency, life span and membership numbers of an organization are clear signs of its vitality and that of the discipline(s) that it represents.

With reference to the international organizations that deal with sediments and are linked to Earth Science (among the Natural Sciences) and to Engineering (among the Applied Sciences), I would like to mention the following prestigious scientific and/or professional associations, which are almost a century old.

- The International Association of Hydrological Sciences (IAHS), founded in 1922.

- The International Commission on Large Dams (ICOLD), founded in 1928.

- The International Association for Hydro-Environmental Engineering and Research (IAHR), founded in 1935.

As indicated by their names, these three associations focus on distinct areas. IAHS basically deals with the hydrological cycle (i.e. the various phases of the surface and subsurface circulation of fresh water on the earth), especially from the scientific point of view, as well as with the assessment of water resources. ICOLD is the world's leading professional organization devoted to the construction and operation of dams and to the utilization of impounded water; its focus is primarily technological and it functions through national commissions. IAHR, on the other hand, covers different aspects of water engineering, with reference to civil. industrial and environmental applications and with due attention to the respective scientific aspects.

Since sediments frequently interact with water during their mobilisation, transport and deposition, they are inevitably relevant to all the organizations mentioned above. In each organization, however, sediments are primarily covered by one of their subdivisions. In ICOLD, for example, the fundamental issue of the loss of reservoir storage capacity due to sedimentation and related problems are addressed by the "Technical Committee on Sedimentation". Similarly, the wellknown "International Commission on Continental Erosion" of IAHS has traditionally dealt with research on erosion and sedimentation and since the 1970s has published several pioneering "red books" dealing with erosion and sediment yields in different regions of the world and with advances in several different topics related to erosion and sedimentation, including sediment measurement. Finally, the Committees on "Fluvial Hydraulics" and "Coastal Maritime Hydraulics" are the subdivisions of IAHR where, more than in others, the dynamics of sediments under the action of currents and waves are theoretically and experimentally studied.

Although IAHS, ICOLD and IAHR are actively dealing with sediments, the scope of these three organizations is much wider. In contrast, this is not the case with the following smaller and younger bodies exclusively devoted to sediments as clearly indicated by their name.

- The International Symposium on River Sedimentation (ISRS), initiated in 1980.

- The International Sediment Initiative (ISI), launched by UNESCO in 2002.

- The World Association for Sedimentation and Erosion Research (WASER), founded in 2004.

The ISRS is a triennial symposium, initially organized in Beijing by the Chinese Hydraulic Engineering Society (CHES) under the auspices of UNESCO, with the purpose of analysing river behaviour not so much from the hydrological and hydraulic point of view (as in many other previous technical meetings) but rather in terms of The large erosion/sedimentation processes. projects planned or under construction on the major Chinese rivers, e.g. Xiaolangdi on the Yellow River or the Three Gorges Dam on the Yangtze River, demanded specific and thorough analysis of those aspects which was facilitated by an event like ISRS, to be periodically replicated with the participation of international experts in different parts of the world. The first ISRS held in Beijing in 1980 has been followed by eleven other symposia in the series held in various continents, with IRTCES acting as the permanent Secretariat of the symposium series. The 13th Symposium will be held in Stuttgart (Germany) in September 2016.

The International Sediment Initiative (ISI) was launched in 2002, within the framework of UNESCO's International Hydrological Programme (IHP), to focus attention on the negative global effects of erosion and sedimentation, through a series of focussed activities, which include 'international cooperation and information exchange'. After its launch, ISI has supported the International Symposia on River Sedimentation and has been instrumental in obtaining UNESCO sponsorship for the symposia. The ISRS has also provided a venue for the regular meetings of the ISI Advisory and Expert Groups.

Just two years after the creation of ISI, the World Association for Erosion and Sedimentation Research (WASER) was officially inaugurated in 2004 during the 9th ISRS held at the Three Gorges Dam site in China. The statutory objectives of WASER are to:

1) Promote the study and development of the science of erosion and sedimentation, interpreted in its widest sense; and

2) Foster the application and dissemination of knowledge and technology in the field of erosion and sedimentation. The ISRS was also adopted as the official symposium of the Association and this has been explicitly incorporated into its statutes. In this way, the ISRS is organically linked to WASER and is a key element of the scope and objectives of the Association.

This brief historical survey indicates that the two new organizations, ISI and WASER, are structured to focus exclusively on sediments and sediment-related problems and therefore differ from existing more complex and broad-based organisations such as IAHS, ICOLD or IAHR. These prestigious larger associations clearly possess extensive and valuable experience related to sediments, but this experience is closely bound to the specific disciplinary identity of each association. In contrast, the supradisciplinary character of ISI and WASER makes it easier for them to foster, possibly in co-operation, interaction among the other organizations. A concrete example of inter-organizational interaction is the "Workshop on International Sediment Advances" (WISA), jointly promoted by WASER and ISI at the Kyoto ISRS in 2013 and Stuttgart in 2016, with the purpose of informing the Symposium participants of the most recent findings and activities of each association and, above all, to compare their respective disciplineoriented viewpoints on a specific issues related to sediments.

Co-operation between ISI and WASER is facilitated by the fact that the Secretariats of both organizations are based at the International Research and Training Center on Erosion and Sedimentation (IRTCES) in Beijing. Moreover, the organizations have diverse two but complementary features. WASER, through its relatively large membership of sediment specialists, can provide worldwide expertise on sediment research as well as the venue of the triennial ISRS, UNESCO's ISI provides direct contact with the activities of the International Hydrological Programme (FRIEND, HELP, etc.), with other United Nations agencies (WMO, FAO, World Bank, etc.) and with the sediment-related international associations (including the already mentioned IAHS, ICOLD, IAHR, and many others). If we consider the contribution of IRTCES to the two Secretariats and its capability in terms of research, training and management, we may that ISI. WASER and conclude IRTCES potentially constitute a very effective cooperative tool for contributing to knowledge, research and practice relating to sediments, over and above and to complete what is already provided by the traditional disciplinary organizations. (by Prof. Giampaolo Di Silvio, WASER President)

ISRS 2016: Three keynote speakers announced



The 13th International Symposium on River Sedimentation (ISRS 2016) will be held from September 19 to 22, 2016 in Stuttgart, Germany. Held triennially since 1980 under the auspices of the International Research and Training Center on Erosion and Sedimentation (IRTCES), the symposium series provides an important forum for scientists, engineers and policy-makers to share information, exchange ideas and collaborate in the field of erosion and sedimentation processes. The ISRS has served as the official symposium of WASER since the Association was founded in 2004, To date, 300 abstracts have been received by the LOC Team of the ISRS 2016, and 3 keynote Speakers have confirmed their participation:

Prof. Bruce W. Melville, The University of Auckland (New Zealand)

Prof. David M. Paterson, University of St Andrews (UK): In his keynote address "Form, Function and Physics" he will assess the state of knowledge regarding how organisms and flow interact, discussing the ecological and evolutionary concepts of niche construction, and classical and cooperative ecosystem engineering against a background of the recent research on physical and biological coupling in aquatic ecosystems.

Dr. Weiming Wu, Clarkson University, Potsdam, N.Y. (USA): In his keynote "Advances and Challenges in Mixed Cohesive/Noncohesive Sediment Transport Research", Dr. Wu will present a state-of-the-art review of recent advances in laboratory experiments, field measurements and computational modelling of mixed cohesive/noncohesive sediment transport.

ISRS 2016 website: http://www.isrs2016.de

E-Mail: <u>isrs2016@iws.uni-stuttgart.de</u>

The Fifth International Conference on Estuaries and Coasts successfully held in Muscat, Omen



Fifth International The Conference on Estuaries and Coasts (ICEC-2015), organized by the Qaboos University(SQU), Sultan and sponsored by IRTCES, IAHR, the Research Council of Oman, the Ministry of Agriculture and Fisheries Wealth of Oman and the Special Economic Zone Authority in Duqm, was successfully held in Muscat, Omen on November 2-4, 2015. About 150 participants from more than 20 countries and regions around the world participated in the ICEC 2015.

Dr. Fuad bin Jaafar Al Sajwani, Minister of Agriculture and Fisheries Wealth of Oman, attended the opening ceremony. Dr. Liu Ning, Vice Minister of Water Resources of China, Prof. Khalifa Al-Jabri, Chairman of Local Organizing Committee (LOC), Dr. Christopher George, Executive Director of IAHR, and IRTCES representative delivered speeches, respectively in the opening ceremony.

The ICEC-2015. includina kevnote 7 presentations and 44 oral presentations lasted for 3 days. Several themes related to coastal zone management such as coastal erosion, seawater quality, tsunamis and storm surges, integrated coastal zone management, estuaries: water quality observations and modeling, integrated management. coastal zone coastal hydrodynamics, and shoreline change and seawater intrusion wer presented and discussed.

The ICEC is a triennial technical event initiated by IRTCES and its Permanent Secretariat is hosted by the IRTCES. The 6th ICEC will be hosted by GIS HEDD and the University of Caen in France in 2018.



Group photo in the closing ceremony

Presentations of the 8th International Gravel Bed Rivers Workshop in YouTube

The Local Organizing Committee of the 8th International Gravel Bed Rivers Workshop (http://www.gbr8.dpri.kyoto-u.ac.jp/poster.html) which took place in Japan on 13-19 September, 2015 invite you to view the recorded presentations in YouTube (GBR8 channel; https://www.youtube.com/channel/UC8oW0Abmlh cJYwvtTBrAAsA). Sessions 6, 9 and 11 did not have talks so these are not included. Your students and colleagues may wish to watch the free video clips of the sessions, so please openly distribute this information. (by Shusuke Miyata, Daizo Tsutsumi and Jonathan Laronne)

Government to train farmers to check soil erosion (India)

The Government is taking several steps, including training of farmers, to check erosion of soil affecting swathes of arable land across the country. According to a report tabled in the Parliament in this Monsoon session, the government told a house panel on agriculture that soil erosion was a serious matter and the steps are being taken by the government to contain the menace on 92.39 million hectares of cultivable area in the country. The government also informed that it is conducting regular training courses on these aspects to educate farmers, state functionaries and Kisan Vikas Kendras(KVKs) in the areas of soil degradation,

soil water conservation and watershed management. "The ICAR- National Bureau of Soil Survey & Land Use Planning, Nagpur in collaboration with ICAR- Indian Institute of Soil & Water Conservation, Dehradun (IISWC) and ICAR- Central Arid Zone Research Institute. Jodhpur has developed soil erosion map of the entire country at 1:250,000 scale," it said in its reply to the panel. According to the government's submission, as per the latest estimates based on harmonised database, the cultivable area affected by soil erosion is 92.39 million hactares, excluding the area eroded under open forest.

The ICAR and IISWC also conduct regular training courses on these aspects to educate farmers, state functionaries and KVKs in the areas of soil degradation, soil water conservation and watershed management, it said. "The KVKs are providing the available expertise and technical backup to the programmes on soil erosion and soil degradation taken up by State Government agencies, besides taking up need-based technical interventions under their mandated activities.

Moreover, as suggested by the Committee, all the KVKs have been advised to spread the information about good farming practices in the country, in order to educate farmers on soil erosion and soil degradation," it added. The panel noted that soil erosion due to natural reasons, urbanisation and industrialisation directly affects the crops as the fertile upper layer of the soil is eroded.

"Degradation of soil, especially soil erosion, is a major challenge being faced by the farmers and planners in the country. A large part of Punjab is affected by the problem of soil erosion and the Government of Punjab is addressing the problem of erosion in the state through integrated watershed management programmes," the panel said. The government also informed the Committee that the State Government and the Department of Land Resources, Government of India is implementing 6 IWMP projects for 17 micro watershed projects in affected areas. The panel was of the view that there is need to spread vital information relating to good agricultural practices and involvement of farmers in order to reclaim the degraded land.

It said there is an urgent need for preparation of soil erosion map at larger scale covering the entire country in order to assess the magnitude of the problem and devise suitable action plan in the affected areas. (Source: http://news.webindia123.com/)

Effective wastershed management increases Mangla Dam life by another 100 years (Pakistan) This was disclosed in a meeting chaired by WAPDA Chairman Zafar Mahmood at the WAPDA House on Wednesday.

It was briefed that the consultants forMangla Dam in their design of the project way back in late 1950s, had predicted the life of the Mangla reservoir to be from 100 to 110 years with an estimated sediment load of 42,000 acre feet per annum.

However, the meeting was told that due to effective measures taken under MWMP, the sediment load has reduced to 2,774 acre feet annually, adding more than a hundred years to the life span of Mangla reservoir.

The volume of benefits resulting from the Mangla Dam's increased life, could be better assessed by the fact that benefits equivalent to billion of rupees are accrued every year from the Mangla Dam, it was added.

The meeting was told that MWMP has been continuously implemented since 1960 in the reservoir's catchment area, covering 5,710 square miles in Azad Jammu and Kashmir (AJK) and Pakistan to control soil erosion and reduce the sediment yield. "Some of the measures taken under the project from 1960 to 2015 include the planting of about 133 million trees, construction of dry stone and earthen structures measuring 122 million cubic feet in the form of check dams and retaining walls, construction of 4,000 engineering structures of stone masonry dams and drop spillways, improving 8,400 acres of cultivated land and imparting training to the farmers," it was briefed.

It is noted that the Mangla Dam was constructed in 1967, while its Raising Project was completed in 2011. Subsequent to its completion, the raised Mangla Dam is now the largest reservoir in the country with a storage capacity of 7.48 million-acre feet (MAF), surpassing Tarbela Dam that can store 6.4 MAF.

During the briefing, the WAPDA chairman expressed satisfaction over the reduced sediment loads flowing into the Mangla reservoir.

The Authority also decided to acknowledge the services of all those who had contributed over the last 55 years towards managing the sediment. They would be honoured in the golden jubilee celebrations of the Mangla Dam, planned for 2017.

A letter would also be written to the consultants, who supervised construction of the

Mangla Dam in the late 1950s and 1960s, regarding the successful implementation of MWMP and enhancement of the reservoir's life by another 100 years.

The authority has set the target for 2015-16 of planting 1.325 million saplings spread over an area of 1960 acres. It was also decided that thirdparty-evaluation-mechanism would be adopted by involving local non-governmental organisations (NGOs) for the purpose.

In addition to the planting of trees, soil conservation structures equivalent to 3.774 million cubic feet and 183 engineering structures would also be constructed during the current financial year under this programme.

The Warsak Dam constructed across the River Kabul in 1960, was completely silted-up in just six years. One of the contributing factors to rapid silting was that it did not have any watershed management programme. (Source: http://www.dailytimes.com.pk/)

Benefits of strip-till vs. no-till surface: Study

How does style of tilling make a difference in crop success? The blades on tilling equipment don't simply chop up soil and move it around. They blend dead plant material left from harvest into the soil. They also expose wetter soil to the air and loosen it.

For some soils this may be useful, but for others not so much. Not tilling can help prevent soil erosion and keep in moisture, while tilling the soil can cause erosion and moisture loss. If a soil tends to be too cool and wet, tilling may be a good option. The opposite may be true for a soil that is warmer and drier.

"Strip-till is in between the two systems where you combine the benefits of each," Fabián Fernández of the University of Minnesota said in a news release.

"You have some of the soil conservation benefits derived from leftover plant tissue on the soil surface and undisturbed soil structure in the in-between row positions where you don't till. And then you have the benefits of a better seedbed from tilling the crop rows where you're going to plant."

He added that for typical Midwest springs, tilled crop rows would be warmer and a bit dryer earlier so farmers can get in and plant. The farmers also won't need special equipment to deal with the leftover plant residue in the crops rows like they do when they plant in no-till.

The long-term effects of these different methods can have impacts on soil properties,

nutrient and water uptake, yield and ultimately farmers' profit — but research on them is lacking. Fernández, who is from the Department of Soil, Water, and Climate at the University of Minnesota, along with other researchers, compared soil properties after five years of no-till and strip-till to try to fill these research gaps. Their findings were recently published in Agronomy Journal.

"We saw a consistent benefit of strip-till over no-till for these soils we were working with," he said. "In a previous study we measured a lot of crop parameters that indicated that strip-till allowed the plant to be more efficient in taking up nutrients and water and increasing yield. So then we decided to look at the soil physical properties that may be changing in response to these tillage methods to see if we can explain why we're seeing these benefits in the crops."

The researchers looked at five specific soil properties: soil organic matter, penetration resistance, bulk density, water aggregate stability, and infiltration rate. The goal was to find out why strip-till was better at creating a beneficial environment for that crop to grow, Fernández said.

A major result was that after just five years, soil organic matter content was 8.6 percent greater in the strip-till plots when compared to the no-till plots. Furthermore, bulk density was reduced by 4 percent and penetration resistance, the force a root must exert to move in the soil, decreased by 18 percent.

"We know that soil organic matter is extremely important for a lot of properties in the soil, and we saw one of those benefits in terms of reduction in the bulk density of the soil," he explained. "The soils were less dense and because of the reduction in density, we also observed less penetration resistance."

However, there was no significant change in the water aggregate stability. This tests how stable the soil is against water erosion. The infiltration rate, which is how fast the water moves through the soil, was also unchanged. Fernández thinks these properties may develop over time. (Source: http://www.iowafarmertoday.com/)

In Memoriam Prof. Nikolay I. Alexeevsky (1950 –2015)

Nikolay I. Alexeevsky, 65, passed away after a short incurable illness on May 14, 2015.

Nikolay Alexeevsky was born in April 1950, in

North Caucasus, Russia. He obtained his PhD in 1981 and was elected as a full Professor of the Land Hydrology Department of Moscow State University in 1993. He has served as a Council Member of the World Association for Sediment and Erosion Research (WASER) since



2010 and was a member of the Russian Committee for the UNESCO International Hydrological Programme. For over 20 years he served as head of the largest Hydrology Department in Russian universities, with more than 40 staff and over 10 student hydrologists graduating annually from the department.

He has 2 grandsons and was a truly beloved grandfather.

His wide-ranging research interests included sediment transport, fluvial processes, stream ecology, hydrological hazards and integrated river basin management. He published over 20 books and more than 200 journal papers. He supervised many PhD, Master and Bachelor students. He taught undergraduate courses for the students of the Faculty of Geography of Lomonosov Moscow State University (LMSU) on Fundamentals of Hydrology, Hydrophysics asnd Fluvial processes.

His passing is a very sad loss for Russian hydrology, for his colleagues and for his family.

PUBLICATIONS



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Dynamics and genesis of calcic accumulations in soils and sediments of the Argentinean PampaOriginal Research Article

Pages 179-189 Alsu Kuznetsova, Olga Khokhlova

Evolution of Çan-Etili (Çanakkale-NW Turkey) lignite basin: Sedimentology, petrology, palynology and lignite characterizationOriginal Research Article

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A preliminary study of the failure mechanisms of cascading landslide damsOriginal Research Article Pages 223-234

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New proposed method for prediction of reservoir sedimentation distributionOriginal Research Article Pages 235-240

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Distribution, source identification and risk assessment of selected metals in sediments from freshwater lakeOriginal Research Article Pages 241-249 Javed Iqbal, Munir H. Shah, Nazia Shaheen

Predictive modeling in sediment transportation across multiple spatial scales in the Jialing River Basin of ChinaOriginal Research Article Pages 250-255

Xiaoying Liu, Shi Qi, Yuan Huang, Yuehong Chen, Pengfei Du

Shrinking of Dongting Lake and its weakening connection with the Yangtze River: Analysis of the impact on floodingOriginal Research Article Pages 256-262 Chunhong Hu, Chunming Fang, Wenhong Cao

Adsorption behaviors of acetaminophen onto sediment in the Weihe River, Shaanxi, ChinaOriginal Research Article Pages 263-271 Yue Zhao, Shengke Yang, Huihui Li, Di Wang

Full papers are available at ScienceDirect: http://www.sciencedirect.com/science/journal/1001 6279, with free access to the paper abstracts.



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Identification of waterbody status in Indonesia by using predictive index assessment tool Pages 224-238 Robby Yussac Tallar, Jian-Ping Suen

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http://www.sciencedirect.com/science/journal/2095

Philosophy of Rivers (Keynote presentation by Prof. Z.Y. Wang at the 36th IAHR Congress)

36th IAHR World Congress, the Hague, June-July 2015

Philosophy of Rivers

Zhaoyin Wang

Professor, Tsinghua University Vice President of IAHR and Chairman of Hydroenvironmental Division Chairman of Advisory council of IRTCES Vice President of WASER

Humans change river morphology by constructing dams, cutting off meanders, and channelizing streams. If the river morphology is plastic, the changed river morphology may remain stable. If it is resilient the changed river morphology will rebound.



Free down load at WASER website: http://www.waser.cn/

COMING EVENTS

13th International Symposium on River Sedimentation (Stuttgart, Germany, Sep. 19-22, 2016)

Date: September 19 – 22, 2016 **Venue:** Stuttgart, Germany

Invitation: On behalf of the entire Local Organizing Committee, I take great pleasure in inviting you to 13th International Symposium on River the Sedimentation (ISRS2016), which will be held from September 19th to 22nd 2016 in Stuttgart, Germany. Held triennially since 1980 under the auspices of the International Research & Training Center on Erosion and Sedimentation (IRTCES), the symposium series provides an important forum for scientists, engineers and policy-makers to share information, exchange ideas and collaborate in the field of erosion and sedimentation processes. Sediment dynamics in fluvial systems is of high ecological, economic and human-health-related significance worldwide. Appropriate management strategies are needed to limit maintenance costs as well as minimize potential hazards to the aquatic and adjacent environments. Human interventions, from nutrient / pollutant release to physical modifications by river regulation, have a large impact on sediment quantity and quality and thus on river morphology as well as ecological functioning. Truly understanding sediment dynamics requires multidisciplinary approaches. But how do we transfer new insights on complex interactions in fine sediments into sustainable management strategies? Can we win new partners by integrating biota? Can we do more with less? We hope to provide a stimulating symposium event with interesting talks and tours. (Silke Wieprecht, Chairperson of the Local Organizing Committee) Organizer: University of Stuttgart

Sponsors: World Association for Sedimentation and Erosion Research (WASER), International Research and Training Center on Erosion and Sedimentation (IRTCES)

Co-Sponsors: United Nations Educational, Scientific and Cultural Organization (UNESCO), International Sediment Initiative (ISI), International Association for Hydro-Environment Engineering and Research (IAHR).....

Secretariat: Institute for Modelling Hydraulic and Environmental Systems, University of Stuttgart **Permanent Secretariat:** IRTCES

Theme and Topics: The theme of the symposium is Sediment on the Move - Innovative Management Strategies in Riverine Systems: from old problems to new solutions

The symposium topics include:

- Sediment Sources: Aspects of land erosion and sediment input, management strategies influencing sediment yield
- Sediment Transport in Rivers and Lakes: Transport processes, fundamental considerations, aspects of hydraulic and sediment transport, morphological processes
- Geomorphology Meets Ecology: Interaction between biota and sediments, from macro- to microscale to impact stability, erosion, transport, deposition and consolidation
- Sedimentation Processes: Reservoir and lake sedimentation, impacts on hydraulic structures (intakes, bridges, weirs, dams, etc.)
- Erosion Processes: Impacts on hydraulic structures (foundations), effects on groundwater, special effects (sorting, armoring, etc.)
- Morphology and Water Quality: Sediments as a source of contaminants, ecotoxicological and environmental aspects, mitigation measures, morphology and floodplains
- How to Address Sediment Dynamics Better: Data collection, measurement techniques, and requirements for models
- Innovative Management Strategies: Can we do more with less? Sediment removal, sediment trapping, hydraulic and ecological constructions
- Social, Economic and Political Aspects of Sediment Management

Key Dates:

- Abstract submission: September 1st, 2015
- Abstract notification: November 1st, 2015
- Paper submission: February 1st, 2016
- Paper notification: April 1st, 2016
- Early bird registration: May 31st, 2016
- Conference: Sept. 19th to 22nd, 2016

URL: http://www.isrs2016.de/

Symposium Secretariat:

Institute for Modelling Hydraulic and Environmental Systems

University of Stuttgart Pfaffenwaldring 61 D-70569 Stuttgart Germany **Contacts:** Dr. rer. nat. Karolin Weber

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THESIS 2016 (Tokyo Japan, Sep. 12-14, 2016)

THESIS 2016, TWO-PHASE MODELING FOR SEDIMENT DYNAMICS IN GEOPHYSICAL FLOWS **Date:** September 12 - 14, 2016

Venue: Tokyo Japan

Invitation: On behalf of the Local Organizing Committee, we would like to inform you of the 3rd symposium on Two-pHase modElling for Sediment dynamIcS in geophysical flows. THESIS-2016.

THESIS symposia (THESIS-2011, THESIS-2013) were successfully held in Chatou, France, to provide a forum for discussing and exchanging experience and knowledge within the international research community, with the goal of developing two-phase approaches to sediment dynamics in geophysical flows. THESIS-2016 will be held in Tokyo, Japan, September 12-14, 2016. This symposium will focus on the state-of-the-art of the two-phase approach for sediment dynamics. The symposium is hosted by Research and Development Initiative (RDI), Chuo University with the co-hosts of Japan Society of Civil Engineers (JSCE), International Association of Hydraulic Research (IAHR), and the Society Hydrotechnique de France (SHF).

For a list of the main topics, important dates and further details of the symposium, please visit our symposium web-site: <u>http://c-faculty.chuo-</u> <u>u.ac.jp/~ths2016/</u> or read the Flyer of THESIS-2016 in Tokyo: <u>http://c-faculty.chuo-</u> u.ac.jp/~ths2016/downloads/Flyer thesis-2016.pdf

We hope you will accept our invitation to participate in the symposium.

Please circulate this announcement to colleagues who may be interested in this symposium.

Please feel free to contact us if you have any questions at: <u>ths2016@tamacc.chuo-u.ac.jp</u>

Sincerely yours,

Shoji Fukuoka

Chair, Local Organizing Committee of THESIS-2016 in Tokyo

Workshop: The workshop will focus on both conventional and novel models for sediment transport to enhance their accuracy and application to geophysical flows.

Date: Tuesday, 13 September 2016

Time: 15:20-17:20 in Room 1 (main room)

Workshop Topics: Conventional and novel sediment transport models, bed load and suspended load, and sediment mixture and armoring

Symposium Topics: This symposium will cover the following research topics, all of which are based on the perspective of a two-phase approach to sediment dynamics, in which the dynamics of water and the solid-particles phases are considered with interphase interactions and momentum transfer.

A. Fundamentals

Physical processes, mathematical formulations and parameterizations, analytical solutions

B. Modelling

Numerical simulation, turbulence modelling

C. Measurements

Experimental techniques in the laboratory, measuring methods in the field

D. Environmental applications

(D1) Sheet flows, highly concentrated flows, Nutrient/contaminants transported by sediments

(D2) Internal flows (erosion around pipelines and hydraulic sluices) and groundwater flows (porous media), Vegetated channels, riverbank restoration, Landslide/debris flows, Breaching processes in dyke-overlap and dyke-break flows, Tsunami with sediment transport

Form and size of the Symposium:

- Language: English
- Presentation forms: Oral and posters
- Four plenary key-lectures and a workshop
- Duration: 3 days with plenary and parallel sessions

URL: http://c-faculty.chuo-u.ac.jp/~ths2016/

Contacts:

Email: ths2016@tamacc.chuo-u.ac.jp

River Flow 2016 (US, July 11-14, 2016)

Date: July 11-14, 2016; Master classes: July 10 **Venue:** Saint Louis, US

Summary: On behalf of the IAHR Committee on Fluvial Hydraulics it is our pleasure to invite you to participate at River Flow 2016? the 8th International Conference on Fluvial Hydraulics ? at Saint Louis, Mo, US. River Flow is the major international meeting in the area of river engineering and fluvial hydraulics. The conference will focus on the latest advances in experimental, theoretical. and computational tools in the field of fluvial hydraulics. River Flow 2016 will include special sessions dedicated to the Upper Mississippi River Basin, one of the largest of its kind in the world. Several master classes for graduate students and young researchers will be organized and led by recognized international experts topics on in river hydrodynamics, morphology, and sediment transport. Organizer: River Flow 2016 is co-organized by IIHR 程 ydroscience & Engineering, the University of Iowa (UI), the Ven Te Chow Hydrosystems Laboratory of the University of Illinois at Urbana-Champaign (UIUC), and Saint Louis University (SLU), in partnership with the National Great Rivers Research and Education Center (NGRREC) at Alton, Illinois.

Theme and Topics:

A. River Flow and Transport Processes

- B. Sediment Transport and River Morphodynamics
- C. River Floods

D. River Management, Ecology and Restoration **URL:** http://www.riverflow2016.org

Contacts:

Email: riverflow2016@uiowa.edu

Phone: + 319 384 0630 (G. Consatantinescu, Conference Chair)

More coming events at WASER website: http://www.waser.cn/

World Association for Sedimentation & Erosion Research



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