

**Main organizers:**



**Co-organizers:**



Urząd Marszałkowski  
Województwa Zachodniopomorskiego



## International Conference

### **„Sedimentary Source-to-Sink Systems in Marginal Seas”**

University of Szczecin, Nov 13 – 14, 2018  
Szczecin, Poland



(fot. UM Szczecin)

*Szczecin – city view and the Odra river channels scenery*

**Main organizers:**

University of Szczecin, Poland  
China Geological Survey, Guangzhou Marine Geological Survey

**Host:**

University of Szczecin, Poland

**Patronage:**

Prof. dr hab. Edward Włodarczyk, Rector of the University of Szczecin

**Co-organizers:**

Polish Geological Institute – National Research Institute (PGI-PIB)  
The Marshal's Office of the West Pomerania Region  
Western Pomerania Regional Landscape Parks  
Radisson Blu Hotel, Szczecin, Poland

**Scientific Committee:**

Helge Arz (Leibniz Institute of Baltic Sea Research Warnemünde, Germany)  
Ryszard K. Borówka (University of Szczecin, Poland)  
Hongjun Chen (Guangzhou Marine Geological Survey, Guangzhou, China)  
Joanna Dudzińska-Nowak (University of Szczecin, Poland)  
Jan Harff (University of Szczecin, Poland)  
Gaowen He (Guangzhou Marine Geological Survey, Guangzhou, China)  
Tao Jiang (China University of Geosciences Wuhan, China)  
Andrzej Osadcuk (University of Szczecin, Poland)  
Artur Skowronek (Polish Geological Institute – National Research Institute, Szczecin, Poland)  
Karl Stattegger (University Poznań, Poland)  
Witold Szczuciński (University Poznan, Poland)  
Andrzej Witkowski (University of Szczecin, Poland)  
Zhen Xia (Guangzhou Marine Geological Survey, Guangzhou, China)  
Shengxiong Yang (Guangzhou Marine Geological Survey, Guangzhou, China)  
Wenyan Zhang (Helmholtz Zentrum Geesthacht, Germany)

**Conveners**

Hongjun Chen (Guangzhou Marine Geological Survey, Guangzhou, China)  
Jan Harff (University of Szczecin, Poland)

**Local Organizing Committee**

Łukasz Maciąg, USz (chair)  
Michał Tomczak, USz (financial affairs)  
Jakub Miluch, USz (registration desk, poster session, technical issues)

**Contact**

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## ***Rational***

Understanding the current and future climate and environmental system requires a deep insight into the development of the global climate during the Quaternary, and the Last Glacial Cycle (LGC) in particular. High frequency climatic and environmental changes are recorded by proxy-data of sediments accumulated on the continental shelves and shallow basins of marginal seas. The sedimentary records do not only reflect changes of the environment on the global, but also on the regional and sub-regional scale. The basins receiving the load of sediments discharged by river mouth systems or coastal erosion display the history of impacts of natural and anthropogenic forcing on the environment of sediment transport from the origin to the final destination. Sedimentological source-to-sink studies allow mass balancing and detailed paleoenvironmental and paleoclimatic synopsis of local to regional development of geosystems in transitional continent – ocean position.

A Polish-Chinese research team is investigating the relation between the Hainan Island as the source and a deltaic systems SW offshore in the Beibu Gulf, South China Sea, between Marine Isotopic Stages (MIS) 4 and 1, in a source-to-sink study. Key results of the research project “Evolution of the Hainan Delta (SCS’s NW shelf) as a response to changes in paleoenvironment since Late Pleistocene – ERES” will be presented at this International conference to be held at the University of Szczecin. But the conference is not limited to the goals of the ERES project. It is anticipated to discuss source-to-sink studies for Quaternary marginal seas in general so that also scientists from the Baltic Sea and other comparable areas shall feel addressed to join the conference in order to discuss methodological questions of coastal research as well as general topics of the interference of natural and natural driving forces of the global change. Related research topics are not rooted just in the academic ivory tower, but directly related to socio-economic approaches and management tasks. For this reason, not only geoscientists are invited to join the conference but also coastal engineers, socio-economists and representatives of environmental protection and planning agencies.

### ***Dates:***

November 13 – 14, 2018

### ***Venue:***

Radisson Blu Hotel,  
Plac Rodła 10, 70-419 Szczecin  
Poland

‘Mickiewicz’ Conference Hall (2<sup>nd</sup> floor)

### ***Registration desk:***

Registration desk will be held beside the ‘Mickiewicz’ Conference Hall:

Nov 12 before ‘Ice-breaker’, 17:00-18:00;

Nov 13, 8:00-9:00.

### ***Ice-breaker:***

Nov 12, ‘Mickiewicz’ Conference Hall (2<sup>nd</sup> floor), 18:00-22:00.

### ***Technical requirements:***

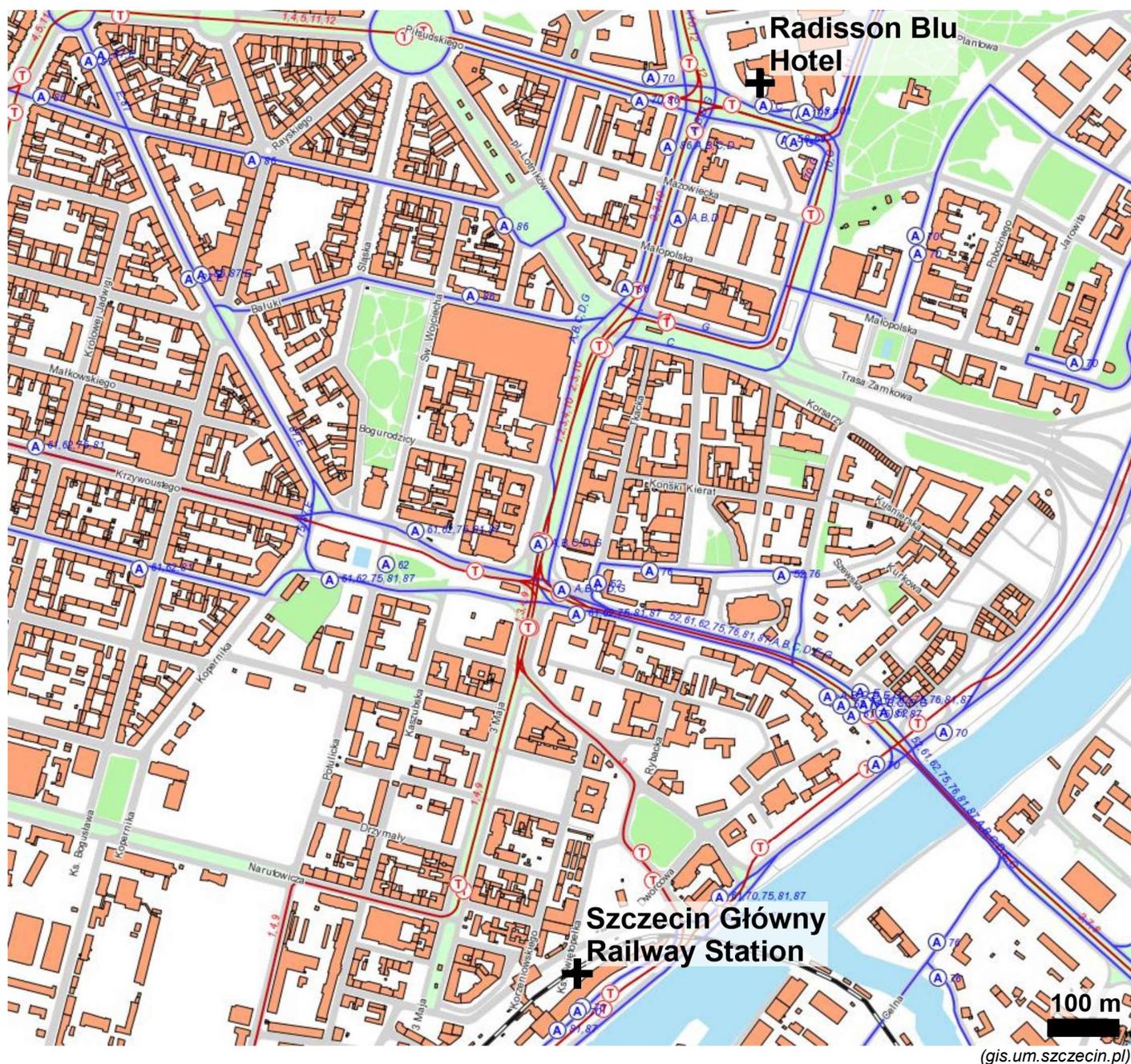
Presentations in PowerPoint format (.ppt or .pptx). Adobe Acrobat Reader (.pdf) as backup/alternative presentation file is recommended. Laser pointer will be provided. Posters in A0 format, printed vertically (1189 x 841 mm).

### ***Additional information:***

Polish currency is PLN (1PLN~0.22€). The money exchange is possible in the banks and in the several currency exchange bureaus.

Please note that Nov 12 is ‘day off’ in Poland. There will be opened only restaurants and pubs.

## Szczecin city center



### **Recommended taxi corporations:**

Taxi '4You' +48 91 194 64

Szczecin Taxi +48 91 194 22

City Taxi +48 91 335 335

Taxi payment by card is available.

### **Predicted weather:**

Temperature 5 to 8°C, possible rain.

Radisson Blu Hotel, Szczecin →



(fot. Radisson Blu Hotel, Szczecin, 2018)

# PROGRAMME

**Nov 13, 2018**

09:00 Welcome addresses.

09:15 J. Harff, H. Chen: The ERES project – state of the art.

## **Topical Session 1: From source to sink**

09:30 **W. Szczuciński: Tsunami as “sediment conveyor belt” - sediment sources, sinks and budget.**

10:00 S. Yu, X. Jing, J. Zhang, H. Chen, S. Li: Provenance of terrestrial materials and age correction of MIS3 – 4 in the continental shelf of northwestern of South China Sea based on pollen analysis.

10:20 K. Stattegger, L. Shao: Eocene to Miocene source-to-sink pathways in the northern South China Sea.

10:40 Ł. Maciąg, R.K. Borówka, A. Osadczuk, H.W. Arz, T. Leipe, S. Plewe, T. Jiang, K. Osadczuk, J. Miluch, J. Harff, K. Bloom, J. Tomkowiak: Heavy minerals analysis and clay mineralogy for assessing the provenance of marine and terrestrial sediments – examples from South China Sea and Hainan Island.

11:00 Coffee.

## **Topical Session 2: River-Mouth systems and coasts: zones of continent – ocean transfer**

11:20 K. Bloom, P. Chara: Nature of Western Pomerania.

11:30 **S. Uścińowicz: Lithological indicators of sediment sources and transport directions - an example from the Southern Baltic coast.**

12:00 H. Chen, J. Harff, A. Osadczuk, T. Jiang, P. Xiong, W. Du, W. Huang, J. Miluch: Seismic stratigraphy and Reconstruction of the paleo-Digital Elevation Model (DEM) of Late Quaternary delta deposits on the continental shelf of Southwestern Hainan Island, Northwestern South China Sea.

12:20 M. Endler: Modelling geo-acoustic parameters of sedimentary units.

12:40 A. Osadczuk, J. Miluch, P. Feldens, Ł. Maciąg: Geometry and sedimentary architecture of the late Pleistocene delta in the Beibu Gulf, SW of Hainan Island, based on the seismic profiles.

13:00 Lunch.

14:00 **P.D. Cliff (via Skype): Signal Loss and Sediment Recycling in the Neogene of the South China Sea and Arabian Sea.**

14:40 P. Xiong, J. Dudzińska-Nowak, J. Harff, W. Zhang, H. Chen, J. Miluch, P. Feldens, Ł. Maciąg, A. Osadczuk: Paleogeographic scenarios of the northwestern shelf of the South China Seas for the Last Glacial Cycle.

15:00 A. Groh, J. Harff: Models to display coastline change.

15:20 T. Radziejewska, B. Wawrzyniak-Wydrowska, B. Bieniek, A. Grabia: Benthic communities versus a small-scale anthropogenic source-to-sink coastal process: responses to alteration of inshore sedimentary habitat by dredging spoil dumping; a southern Baltic example.

15:40 Posters and coffee.

16:00 Discussion.

18:00 Dinner.

### **Nov 14, 2018**

#### **Topical Session 3: Paleoenvironments and provenance displayed by sedimentary proxies**

09:00 **T. Jiang, H. Chen, J. Harff, Y. Hu, S. Liu (via Skype): Optically Simulated Luminescence Geochronology of Hainan Delta and its Constraints on Delta Evolution.**

09:30 Z. Li, H. Chen: Geochemical Characteristics of ZBW Core, Hainan Island Delta, Northwestern SCS.

09:50 C. Tian, M. Li: Clay mineral assemblages in the northwestern South China Sea, and its implications for paleoclimate and paleoenvironment.

10:10 J. Waniek, K. Fisch, C. Deich, D. Kaiser, D.E. Schulz-Bull: Megacity's fingerprint in Chinese southern marginal seas: Investigation of pollutant fingerprints and dispersal in Pearl River and northern South China Sea.

10:30 Coffee and posters.

10:50 M. Tomczak, J. Kaiser, J. Zhang, H.W. Arz, J. Harff, A. Witkowski: Monsoon and ocean circulation controls on paleoenvironmental conditions off the SW Hainan Island during the last glacial.

11:10 C. Wu, Y. Zhou: Foraminiferal zones of ZBW core from Hainan Delta: implications for the environmental changes of the Beibu Gulf region since Late Pleistocene.

11:30 K. Osadczuk, R.K. Borówka, B. Bieniek, Z. Li, A. Osadczuk, J. Miluch, J. Tomkowiak: Sedimentological and geochemical features of sediments in the southwest of Hainan Island, continental shelf NW South China Sea.

11:50 R.K. Borówka, Ł. Maciąg, K. Bloom, A. Osadczuk, K. Osadczuk, J. Harff, J. Miluch, J. Tomkowiak, M. Tomczak: Late Pleistocene and Holocene palaeogeography of Hainan Island - first results of the 2017 expedition.

12:10 Lunch.

#### **Topical Session 4: Events vs continua**

13:10 **C. Winter: Dynamics and hydraulic effect of estuarine tidal bedforms.**

13:40 A. Kurylczyk: The analysis of hazards in the coastal zone in terms of mass drowning in Darłówko West.

14:00 J. Deng, J. Wu (**via Skype**): On dynamic equilibrium of the Pearl River Estuary (Lingding Bay) – effects of lateral river outflows and sediment supply.

14:20 J. Zhang, S. Li, M. Tomczak, A. Witkowski, C. Li, Y. Zhou, J. Miluch, C. Wu, J. Harff, H. Chen: Hainan Delta: The general stage shifting and paleo-ecology response to the paleo-delta evolution.

14:40 Discussion and closing the conference.

15:10 Coffee.

15:40 ERES business meeting (internal).

## **Posters**

*Short poster sessions will be held at Nov 13<sup>th</sup> and 14<sup>th</sup>, beside the Radisson Blu Hotel Szczecin, 'Mickiewicz' Conference Hall, 2<sup>nd</sup> floor. Please provide the posters before the lunch time, Nov 13, 13:00.*

P. Terefenko, D. Paprotny, A. Giza: Estimates of potential impacts of sea level rise in Poland and their practical implementation.

A. Cedro: Effects of sea water intrusion in November 1995 on the Karsibór Spit oak tree stands.

B. Cedro: Holocene history of the southern Baltic Sea level changes as recorded in the deposits of the sedimentary basins of the Mrzeżyno area (NW Poland).

H. Kowalewska-Kalkowska: Recent changes in water level in the Odra River mouth area (the southern Baltic Sea).

T. Zalewski: Influence of processes related to risk assessment and categorization of bathing areas on the development of a water safety system on the Polish Baltic coast in the 2010-2017 perspective.

M. Adamczyk: Analysis of the times of reaching victims with the use of geolocation tools.

D. Zawadzki, Ł. Maciąg, G. Kozub-Budzyń, R.A. Kotliński, A. Piestrzyński, R.J. Wróbel: Formation of ferromanganese crusts in Dirck Hartog Ridge, Perth Abyssal Plain.

A. Binczewska, Z. Stachowska: Foraminiferal potential as paleo-proxy in Baltic Sea sediments.

***We wish You a pleasant time in Szczecin!***



*(fot. UM Szczecin)*

***Szczecin – view on the Odra river and Chrobry Embankment***