

Chenliang Wu

Curriculum Vitae

Postdoctoral Researcher

Department of Earth System Sciences, Yonsei University, Seoul, Republic of Korea

E: wuchenliang1@gmail.com C: +82-010-5853-1353

EDUCATION

2020 Ph.D., Earth Science, Rice University

Dissertation: Coupling non-uniform channel hydrodynamics and development of fluvial-deltaic stratigraphy, over scales ranging from bedforms to basins

Advisor: Jeffrey Nittrouer

2013 M.S., Geology, University of Houston

Thesis: Heterogeneity, paleohydrology, and 3D facies architecture of ancient point bars, Ferron Sandstone, Notom Delta, South-central Utah

Advisor: Janok Bhattacharya

2011 B.E., Geological Engineering, China University of Petroleum

Thesis: Sequence stratigraphic framework of Funing Formation, Jinhu Basin, China

PROFESSIONAL APPOINTMENT

2020 Postdoctoral Researcher

Department of Earth System Sciences, Yonsei University, Seoul, Republic of Korea

2021 Postdoctoral Fellow

Department of Earth System Sciences, Yonsei University, Seoul, Republic of Korea

PUBLICATIONS

Refereed Journal Articles

- [1] **Wu, C.**, Nittrouer, J., Swanson, T., Ma, H., Barefoot, E., Best, J., and Allison, M., (2020) Dune-scale cross beds across a fluvial-deltaic backwater segment and preservation potential of an auto-stratigraphic signature, *Geology*, 48, 1144-1148.
- [2] **Wu, C.**, Nittrouer, J., Muto, T., Naito, K., Parker, G., (2020) Morphodynamic equilibrium of lowland river systems during autoretreat: *Geology*, 48, 1062-1066.
- [3] Li, A., Tsai, F., Yuill, B., **Wu, C.**, (2020) A 3-D stratigraphic model of the Mississippi River Delta: Implications for river deltaic hydrogeology: *Hydrogeology Journal*, 28, 2341–2358.
- [4] Gao, C., Ji, Y., **Wu, C.**, Jin, J., Ren, Y., Yang, Z., Liu, D., Huan, Z., Duan, X. & Zhou, Y., (2020) Facies and depositional model of alluvial fan dominated by episodic flood events in arid conditions: an example from the Quaternary Poplar Fan, northwestern China: *Sedimentology*, 67, 1750-1796.
- [5] **Wu, C.**, Nittrouer, J., (2020) Impacts of backwater hydrodynamics on fluvial-deltaic stratigraphy: *Basin Research*, 32: 567–584.
- [6] Wu, H., Ji, Y., **Wu, C.**, Duclaux, G., Wu, H., Gao, C., Li, L., Chang, L., (2019) Stratigraphic response to spatiotemporally varying tectonic forcing in rifted continental basin: insight from coupled tectonic-stratigraphic numerical model.: *Basin Research*, 31, 311–336.

- [7] **Wu, C.**, Ullah, M.S., Lu, J., Bhattacharya, J., (2016) Formation of point bars through rising and falling flood stages: Evidence from bar morphology, sediment transport and bed shear stress: *Sedimentology*, 63, 1458-1473.
- [8] **Wu, C.**, Bhattacharya, J., Ullah, M.S., (2015) Paleohydrology and 3D facies architecture of ancient point bars, Ferron Sandstone, Notom Delta, South-central Utah, U.S.A.: *Journal of Sedimentary Research*, 85, 399-418.
- [9] Meng, Y., Zhu, H., Li, X., **Wu, C.**, Hu, A., Zhao, Z., Zhang, L., Xu, C., (2014) Thermodynamic analyses of dolomite dissolution and prediction of the zones of secondary porosity: A case study of the tight tuffaceous dolomite reservoir of the second member, Lucaogou Formation, Santanghu Basin, NW China: *Petroleum Exploration and Development*, 41, 1-7.

Manuscripts in Preparation

Wu, C., Nittroer, J.A., Barefoot, E., Burmeister, K. Linking backwater hydrodynamics to fluvial-deltaic stratigraphy: an example from the Tullig Sandstone, Western Irish Namurian Basin, Co. Clare, Ireland (*Geological Society of America Bulletin*)

AWARDS AND HONORS

2018 Alison Henning Teaching Award, Rice University
2013 Chevron Scholarship (\$1000), University of Houston
2012 Shell Scholarship (\$1000), University of Houston

RESEARCH GRANTS AND FELLOWSHIP

2021 Post-doctoral Researcher Supporting Program (₩14,000,000), Yonsei University
2019 GSA Student Research Grant (\$1250), Geological Society of America
2019 David Worthington Named Grant (\$3000), American Association of Petroleum Geologists
2018 ExxonMobil/GSA Student Geoscience Grant (\$5000), Geological Society of America
2018 Meckel Family Named Grant (\$2750), American Association of Petroleum Geologists
2017 Post-Graduate Research Grant (€1000), International Association of Sedimentologists

TEACHING EXPERIENCE

Teaching Assistant, Rice University
The Earth (spring 2019)
Advanced topics in basin sedimentation and stratigraphy (spring 2018)
Earth systems and cycles (fall 2017, fall 2018)

WORKING EXPERIENCE

2013-2015 Petroleum Geoscientist, C&C Reservoirs Inc., Houston, TX

ACADEMIC SERVICE

Reviewer for refereed journals: *Sedimentology* (2), *Island Arc* (1), *Interpretation* (2)

Conference Activity:

Technical program chair, AAPG Annual Convention and Exhibition (May 2019)
Sub-theme chair, AAPG Annual Convention and Exhibition (May 2021)

DEPARTMENT/UNIVERSITY SERVICE

Rice University

President, AAPG student chapter (2018-2019)

Vice-President, AAPG student chapter (2017-2018)

Outreach Coordinator, GeoUnion (2016-2017)

Student representative, Education USA Fair and university outreach program (2016)

COMMUNITY INVOLVEMENT

2017 Volunteer for Hurricane Harvey relief

2017 Volunteer judge of Science and Engineering Fair of Houston

2012 Volunteer docent for HISD program at Houston Museum of Natural Science

2008 Beijing Olympic Games and Paralympics Games volunteer

PROFESSIONAL SKILLS

Computer: Matlab, Arcgis, Microsoft office, Machine Learning (in training on Coursera.org)

REFERENCES

Jeff Nittrouer

Department of Earth, Environmental and Planetary Sciences, Rice University

Phone: +1 (713) 348 4886

Email: nittrouer@rice.edu

Janok Bhattacharya

School of Earth, Environment & Society, McMaster University

Phone: (905) 525-9140 ext. 23528

Email: bhataj@mcmaster.ca

Gary Parker

Department of Civil and Environmental Engineering, University of Illinois Urbana-Champaign

Phone: (217) 244-5159

Email: parkerg@illinois.edu

Tetsuji Muto

Graduate School of Fisheries and Environmental Sciences, Nagasaki University

Email: tmuto@nagasaki-u.ac.jp

CONFERENCE ABSTRACTS

[¹] **Wu, C.**, Moodie, A. J., Dong, T., Li, A., Tsai, F. T., Ma, H., & Nittrouer, J. A. (2020). Spatial Variability in River Sinuosity across the Backwater Regime. AGU Fall Meeting.

[²] **Wu, C.**, Nittrouer, J.A., Barefoot, E., Burmeister, K., (2020) Stratigraphic evidence for non-uniform hydrodynamics in the Tullig Sandstone, Western Irish Namurian Basin, Co. Clare, Ireland, GSA Annual Meeting.

- [3] **Wu, C.**, Nittrouer, J.A., Moodie, A. J., Dong, T., Dunne, K., Ma, H., (2020). The influence of backwater morphodynamics on spatial variability in fluvial-deltaic reservoir quality. AAPG Annual Convention and Exhibition.
- [4] **Wu, C.**, Duan, Y., Cole, T., Nittrouer, J, and Torres, M., (2019) A Mesozoic record of fluvial response to climatic and tectonic perturbations, Ordos Basin, north-central China, GSA Annual Meeting, Phoenix, AZ.
- [5] Duan, Y., Li, W., Ding, Y., **Wu, C.**, Reoccurring marine influxes through late Permian to early Triassic and the transition to lacustrine condition of the south margin of the Ordos Basin, GSA Annual Meeting, Phoenix, AZ.
- [6] **Wu, C.**, Nittrouer, J., Swanson, T., Ma, H., Barefoot, E., Best, J., Allison, M., (2019) Backwater control on the dimension and architecture of fluvial-deltaic stratigraphy: From cross bed to bar, 34th IAS Meeting of Sedimentology, Rome, Italy.
- [7] **Wu, C.**, Nittrouer, J., Swanson, T., (2018) Dune morphodynamics and forward models of set-scale architecture within the backwater zone of the Mississippi River, USA. AGU Fall Meeting, Washington DC.
- [8] **Wu, C.**, Nittrouer, J., (2018) Impacts of non-uniform flow hydraulics on fluvial-deltaic stratigraphy: Linking field investigations and hydrodynamic modeling. GSA Annual Meeting, Indianapolis.
- [9] **Wu, C.**, Nittrouer, J., Burmeister, K., (2017) Impacts of variable channel hydraulics on the stratigraphic record: an example provided from the Tullig Sandstone, Western Irish Namurian Basin. AGU Fall Meeting, New Orleans.
- [10] **Wu, C.**, Bhattacharya, J., Lu, J., Ullah, M.S., (2015) Near bed flow process inferred from bar morphology, sediment transport and grain size distribution of a plan-view exposed ancient point bar complex. 2015 AAPG Annual Convention and Exhibition, Denver.
- [11] **Wu, C.**, Bhattacharya, J., Li, Z., Ullah, M.S., (2014) Paleohydrology and 3-D Facies Architecture of Ancient Point Bars Formed by a Low Sinuosity River, Ferron Sandstone, South-Central Utah: Implications for Evolution of Channel Bend. AAPG Annual Convention and Exhibition, Houston.