

# Kensuke Naito

---

CONTACT INFORMATION	Centro de Investigación y Tecnología del Agua (CITA) Universidad de Ingeniería y Tecnología Jr. Medrano Silva 165, Barranco, Lima, Peru	+1 (312) 721-4626 knaito@utec.edu.pe
JOB EXPERIENCE	<b>Universidad de Ingeniería y Tecnología</b> Barranco, Lima, Peru	
	Postdoctoral Researcher	2019 to present
EDUCATION	<b>University of Illinois at Urbana-Champaign</b> Urbana-Champaign, IL, USA	
	Ph.D., Civil and Environmental Engineering Dissertation title: <i>How do sand-bed meandering rivers co-construct their own bankfull discharge and bankfull channel geometry? Analytical and numerical study</i>	2014 to 2019
	<b>Hokkaido University</b> Sapporo, Hokkaido, Japan	
	M.S., Civil Engineering Thesis title: <i>Boundary instability generated on an ice bed due to turbulent flow</i>	2012 to 2014
	B.S., Socio-Environmental Engineering Thesis title: <i>Experimental study on the formation of bedforms on an ice bed</i>	2008 to 2012
RESEARCH INTERESTS	<b>Research Interests</b> Long-term and short-term river morphodynamics, Bankfull characteristics of alluvial rivers, Sediment transport, Grain sorting, Remote sensing, Ice bed morphology	
RESEARCH EXPERIENCE	<b>Research Assistant</b> University of Illinois at Urbana-Champaign Supervisor: Professor Gary Parker	2014 to present
	<ul style="list-style-type: none"><li>• Developing a modeling framework for the evolution of bankfull characteristics of alluvial rivers</li><li>• Modeling of long-term and short-term evolution of the Minnesota River, MN, USA</li><li>• Modeling of multiple grain size sediment transport relation and its application to the Lower Yellow River, China</li><li>• Analysis of channel sinuosity dynamics with the use of remotely sensed imagery</li><li>• Field survey in the Lower Yellow River, China</li></ul>	
	<b>Research Assistant</b> Hokkaido University Supervisor: Professor Norihiro Izumi	2012 to 2014

- Flume experiments on the formation of bedforms at flow-ice bed interface
- Developing a theoretical framework on the formation of bedforms at flow-ice bed interface
- Linear stability analysis of the turbulent flow-ice bed interface

**Undergraduate Research Assistant** 2011 to 2012

Hokkaido University

Supervisor: Professor Norihiro Izumi

- Flume experiments on the formation of downstream-migrating step forms at the flow-ice bed interface

HONORS AND AWARDS **Hokkaido River Center Scholarship** 2014

**Best Poster Presentation Award** 2013  
*8th IAHR Symposium on River, Coastal, and Estuarine Morphodynamics*

**Best Presentation Award** 2013  
*Annual symposium of Japan Society of Civil Engineering, Hokkaido Branch*

REFEREED  
JOURNAL  
PUBLICATION

1. **Naito, K.**, and Parker, G. (2018). Can Bankfull Discharge and Bankfull Channel Characteristics of an Alluvial River be Co-specified from a Flow Duration Curve? Part 1: Framework for Analysis. *Journal of Geophysical Research: Earth Surface* (submitted).
2. **Naito, K.**, and Parker, G. (2018). Can Bankfull Discharge and Bankfull Channel Characteristics of an Alluvial River be Co-specified from a Flow Duration Curve? Part 2: Model implementation and assessment of the rapid channel deformation in the Minnesota River, USA. *Journal of Geophysical Research: Earth Surface* (submitted).
3. **Naito, K.**, Ma, H., Nittrouer, J.A., Zhang, Y., Wu, B., Wang, Y., Fu, X., and Parker, G. (2019). Extended Engelund-Hansen type sediment transport relation for mixtures based on the sand-silt-bed Lower Yellow River, China. *Journal of Hydraulic Research*.
4. Ma, H., Nittrouer, J.A., Wu, B., Zhang, Y., Mohrig, D., Lamb, M.P., Wang, Y., Fu, X., Moodie, A.J., **Naito, K.**, Wang, G., Hu, C., and Parker, G (submitted). Universal Relation with Phase Transition for Fine-grained Sediment Transport. *Nature Geoscience*.
5. An, C., Moodie, A.J., Ma, H., Fu, X., Zhang, Y., **Naito, K.**, and Parker, G. (2018). Morphodynamic model of Lower Yellow River: flux or entrainment form for sediment mass conservation? *Earth Surface Dynamics* (2018).
6. Ma, H., Nittrouer, J.A., **Naito, K.**, Fu, X., Zhang, Y., Moodie, A.J., Wang, Y., Wu, B., and Parker, G. (2017). The exceptional sediment load of fine-grained dispersal systems: Example of the Yellow River, China. *Science Advances* 3(5), e1603114.
7. **Naito, K.**, and Parker, G. (2016). Relation between bankfull geometry of alluvial rivers and flow duration curve. *Proceedings of the International Conference on Fluvial Hydraulics, RIVER FLOW 2016*, 183-189, ISBN: 9781138029132.

8. Yokokawa, M., Izumi, N., and **Naito, K.**, Parker, G., Yamada, T., and Greve, R. (2015). Cyclic steps on ice. *Journal of Geophysical Research* 121, doi:10.1002/2015JF003736.
9. **Naito, K.**, Izumi, N., and Yokokawa, M. (2015). Boundary waves formed on ice by turbulent flow. *Journal of Japan Society of Civil Engineers, Sec. B1 (Hydraulic Engineering)* 71 (4), I.1027-I.1032, doi:10.2208/jscejhe.71.I.1027, in Japanese with English abstract.
10. Luchi, R., Parker, G., BALACHANDAR, S., and **Naito, K.** (2015). MECHANISM GOVERNING CONTINUOUS LONG-RUNOUT TURBIDITY CURRENTS. *Journal of Japan Society of Civil Engineers, Sec. B1 (Hydraulic Engineering)* 71 (4), I.619-I.624, doi:10.2208/jscejhe.71.I.619, in Japanese with English abstract.
11. **Naito, K.**, Izumi, N., Yokokawa, M., and Yamada, T. (2015). DOWNSTREAM MIGRATING STEPS ON ICE. *Journal of Japan Society of Civil Engineers, Sec. B1 (Hydraulic Engineering)* 69 (4), I.1123-I.1128, doi:10.2208/jscejhe.69.I.1123, in Japanese with English abstract.
12. Izumi, N., Yokokawa, M., and **Naito, K.** (2013). BOUNDARY INSTABILITY GENERATED ON THE FLOW-ICE INTERFACE. *Journal of Japan Society of Civil Engineers, Ser. B1 (Hydraulic Engineering)* 69 (4), I.1117-I.1122, doi:/10.2208/jscejhe.69.I.1117, in Japanese with English abstract.
13. Yokokawa, M., Izumi, N., **Naito, K.**, Yamada, T., and Greve, R. (2013). AN EXPERIMENTAL STUDY OF STEP TOPOGRAPHY ON THE ICE SURFACE. *Journal of Japan Society of Civil Engineers, Sec. B1 (Hydraulic Engineering)* 69 (4), I.1129-I.1134, doi:/10.2208/jscejhe.69.I.1129, in Japanese with English abstract.

CONFERENCE  
PRESENTATION

1. **Naito, K.** and Parker, G. (2017). Modeling of the temporal and spatial evolution of bankfull characteristics of sand-bed meandering rivers: role of the flow duration curve. *American Geophysical Union Fall Meeting 2017*, New Orleans, LA, 11-15 December.
2. **Naito, K.** and Parker, G. (2017). Bankfull characteristics of alluvial rivers: evolution toward macroscopic equilibrium. *JpGU-AGU Joint Meeting 2017*, Chiba, Japan, 20-25 May.
3. **Naito, K.** and Parker, G. (2016). Bankfull characteristics of alluvial rivers. *American Geophysical Union Fall Meeting 2016*, San Francisco, CA, 12-16 December.
4. **Naito, K.** and Parker, G. (2016). Relation between bankfull geometry of alluvial rivers and flow duration curve. *River Flow 2016*, St. Louis, MO, 12-15 July.
5. **Naito, K.**, Ma, H., and Parker, G. (2015). GRAIN SIZE SELECTIVE SEDIMENT TRANSPORT IN LOWER YELLOW RIVER, CHINA. *Workshop on Modelling Mixed-Sediment River Morphodynamics*, Delft, Netherlands, 27-29 May.
6. **Naito, K.**, Izumi, N., Yokokawa, M., Yamada, T., and Lima, A. (2013). BOUNDARY WAVES ON THE ICE SURFACE CREATED BY CURRENTS. *American Geophysical Union Fall Meeting 2013*, San Francisco, CA, 9-13 December.
7. **Naito, K.**, Izumi, N., Yokokawa, M., and Yamada, T. (2013). DOWNSTREAM MYGRATING STEPS ON ICE. *8th IAHR Symposium on River, Coastal, and Estuarine Morphodynamics*, Santander, Spain, 9-13 June.

8. **Naito, K.**, Izumi, N., Yokokawa, M., and Yamada, T. (2013). DOWNSTREAM MIGRATING STEPS ON ICE. *The 57th Conference on Hydraulic Engineering*, Nagoya, Japan, February.
9. **Naito, K.**, Izumi, N., Yokokawa, M., and Yamada, T. (2013). Cyclic steps formed by a hydrophobic fluid with water dispersed flowing on ice - an analogy with spiral troughs on Martian polar caps -. *Japan Geoscience Union Meeting 2012*, Chiba, Japan, 20-25 May.

SKILLS	<b>Programming and modeling</b> Python, Visual Basic for Applications, Google Earth Engine, ArcGIS / QGIS, iRIC	
TEACHING	<b>Teaching Assistant</b>	
EXPERIENCE	Open channel hydraulics Instructor: Professor Gaku Tanaka	
PROFESSIONAL SERVICES	<b>Treasurer</b> <i>IAHR University of Illinois at Urbana-Champaign Young Professional Networks</i>	2016 to 2017
	<b>President</b> <i>IAHR University of Illinois at Urbana-Champaign Young Professional Networks</i>	2015 to 2016
	<b>Main organizer</b> <i>Social gathering of IAHR-Young Professional Networks at River Flow 2016</i>	2016
COMMUNITY SERVICE	<b>Volunteer soccer coach</b> Champaign Park District	2014 to 2015
	<b>Volunteer soccer coach</b> Nissin elementary school FC	2012 to 2014