

# Hui Chen

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Doctoral student

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## BRIEF INTRODUCTION

- Hui Chen is currently a Doctoral student at Seoul National University. He received his bachelor's degree from the Department of geography, Yanbian University, China in 2011 and his master's degree from the Department of geography education, Seoul National University, South Korea in 2018.
- He is interested in fluvial geomorphology, especially channel types and morphologies, bed materials, and interactions between hillslopes and channels in mountain rivers. He suggested that the reversal of grain size in incised valley reaches was mainly caused by the increase in transport capacity rather than the input of coarse materials from adjacent hillslopes. He proposed valley head initiation and colluvial channel initiation move downstream, and the headwater catchment extent gets larger with relief. He found that rock resistance affects the distribution and type of bedrock channels.

## RESEARCH TOPICS AND INTERESTS

- Fluvial geomorphology. Focused on mountain rivers, especially headwater catchment, bedrock rivers, and fluvial sediment.
- Application and improvement of topographic analysis based on digital elevation models.

## EDUCATION AND QUALIFICATION

- M.A., 2018, Department of Geography Education, Seoul National University, South Korea
- B.A., 2011, Department of Geography, Yanbian University, China

## SKILLS

- Software: Geographic information system – ArcGIS and QGIS.
- Programming language available: MATLAB

**PUBLICATION (Papers in peer-reviewed Journal)**

- Chen, H., Kim, J. W., Han, M. and Byun, J., 2019, The Effects of Incised Meandering Valley and Lithological Differences on the Grain Size and Shape of Channel Bed Materials: A Case Study of the Upper and Middle Reaches of Gongneungcheon River, Journal of the Korean Geomorphological Association, 26(1), 15-26. (in Korean with abstract in English)  
<http://dx.doi.org/10.16968/JKGA.26.1.15>

**PRESENTATIONS WITH ABSTRACTS**

- Chen, H., and Byun, J., 2022, Distribution and types of bedrock channels according to rock resistance: An examination from the Seo River, South Korea, 2022 Spring Meeting of the Association of Korean Geographers, 77-79. (in Korean)
- Lee, W. Y., Chen, H., Byun, J., 2022, The best method for extracting valley bottoms and the topographic characteristics of valley bottoms in headwater catchments, 2022 Spring Meeting of the Association of Korean Geographers, 73-75. (in Korean)
- Chen, H., and Byun, J., 2022, How do both valley head initiation and headwater catchment extent change with relief? EGU General Assembly 2022, Vienna, Austria, 23–27 May 2022, EGU22-13442.  
<https://doi.org/10.5194/egusphere-egu22-13442>
- Chen, H., and Byun, J., 2021, Effects of relief and lithology on the range of hillslope and headwater catchment, Abstract (EP55A-1075) presented at 2021 AGU Fall Meeting, 13-17 Dec.  
<https://agu2021fallmeeting-agu.ipostersessions.com/Default.aspx?s=F3-21-39-F2-E0-D6-BE-EC-A5-B3-78-7E-82-B5-12-E9>
- Chen, H. and Byun, J., 2021, Effects of lithology on bedrock channel occurrence: an examination from the Seogang River in South Korea, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-6784,  
<https://doi.org/10.5194/egusphere-egu21-6784>
- Chen, H., and Byun, J., 2021, Effects of rock type and resistance on bedrock channel occurrence, 2021 Summer Meeting of the Korean Geomorphological Association, 22-25. (in Korean)
- Chen, H., and Byun, J., 2021, Effects of relief on the distribution of channel types in mountain rivers: An examination from the Seogang River, 2021 Winter Meeting of the Korean Geomorphological Association, 23-24. (in Korean)
- Chen, H., and Byun, J., 2020, Effects of lithology on bedrock channel occurrence: An examination from the Seo River, 2020 Fall Meeting of the Association of Korean Geographers, 14-16. (in Korean)
- Chen, H., and Byun, J., 2019, Effects of incised valley topography on grain size of coarse bed materials: Examples from Gongneungcheon River, Korea, Abstract (EP51E-2131) presented at 2019 AGU Fall Meeting, 9-13 Dec.  
<https://agu.confex.com/agu/fm19/meetingapp.cgi/Paper/567964>
- Chen, H., and Byun, J., 2019, Effects of incised valley topography on grain size of coarse bed materials, 2019 Summer Meeting of the Korean Geomorphological Association, 9-10. (in Korean)
- Chen, H., and Kim, J. W., 2017, A study of grain size and shape of coarse bed materials in upper and middle Gongneungcheon River, 2017 Fall Meeting of the Association of Korean Geographers, 117-119. (in Korean)

## **REFERENCES INFORMATION**

### **Professor Jongmin Byun**

Department of Geography Education, Seoul National University, Seoul, South Korea.

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### **Emeritus Professor Jong Wook Kim**

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