

# Tian ZHAO

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## EDUCATION

**B.Sc., Geographical Science, Nanjing University** (Outstanding Graduate)

June 2017

- Minor: Oceanographic Science
- Thesis: "[\*A Numerical Experiment on Tide-induced Sediment Transport Capacity Based on Process Analysis\*](#)." (in Chinese, with abstract in English)
- Mentored by Assoc. Prof. Qian YU (NJU) and Prof. Shu GAO (ECNU & NJU).
- GPA: 4.47/5 (89.4/100, 3.55/4 equivalent)
- Relevant coursework: Geomorphology, Hydraulics, Physical Oceanography, Marine Biology, Marine Chemistry, Cartography and Surveying, Geographic Modeling, Experiments in Physical Geography, GIS Technology and Application, Marine Sediment Dynamics, Coastal Ocean Hydrodynamics

## RESEARCH EXPERIENCE

**Research Assistant**

September 2015 – Present

- MOE Key Laboratory for Coast and Island Development, Nanjing University
- Advisers: Prof. Shu GAO, Prof. Ya Ping WANG, and Assoc. Prof. Qian YU
- Projects: (for details, see <https://tonytianzhao.github.io/research.html#projects>)
  - Numerical modeling of sediment transport capacity in shallow coastal seas**
  - Prepared a course report in *Marine Sediment Dynamics* on the classification of previous current-induced sediment carrying capacity formulae
  - Built models in C language for cohesive and non-cohesive sediments accordingly
  - Statistical analyses and *in-situ* observational verification for model-derived formulae in Origin and SPSS
  - Result presenting: B.Sc. thesis, conference presentation, and two journal manuscripts in progress

## CONFERENCE PRESENTATION

- Zhao, T., Yu, Q., Gao, S., 2017. [\*A Process-based Tide-induced Sediment Transport Capacity Formula\*](#). **Oral Presentation**, ECSA 2017 Where Land Meets Ocean: The Vulnerable Interface, 16-20 October 2017, Shanghai, China.

## FIELDWORK PARTICIPATION

- **In situ sediment transport observation in South Yellow Sea**, August 2016, participating undergraduate student.
  - Collected 165 bottles of water sample for SSC-profile study, set up the observation platform with the team, and participated in LISST, ADV, ADCP, OBS, RBR measurements.
- **Geological excursion in the Western Alps**, July 2016, team leader.
  - A 10-day English-based geological excursion in collaboration with Université d'Orléans.
  - 40 stops of observation regarding sedimentology, stratigraphy, lithology and tectonics.

- Prepared presentation materials and slides for the team, on the topic of Foehn.
- Interview: <http://www.nju.edu.cn/EN/80/a7/c4662a164007/page.htm>
- **Coral-reef dynamics study**, January 2016, participating undergraduate student.
  - Positioned 26 stops of study, studied the lagoon environment, sand spits, coastal dunes, ripples, wave-cut platforms, mangroves, a volcanic coast, coral-reef dynamics and DJI-drone operation, around Hainan Island, China.
- **Practice of geographical sciences in Lushan Mountain**, September 2015, team leader and GPS-based navigator.
  - Personal work: Positioned 29 stops, collected meteorological data of 2 stops, surveyed 4 strata, 5 folds, 3 faults, 2 slides, 3 reservoirs and the Poyang Lake. Studied 4 typical kinds of cultural landscapes. Mapped the northern part of Lushan Mountain in a set of 6 feature-based maps in ArcGIS. Finished a report on this practice.
  - Team work: Studied 110 typical plant species and ecological succession, 6 kinds of typical soil. Measured pH, temperature, electrical conductivity, ammonia nitrogen, dissolved oxygen and flow velocity of Changchong River. Built a model of Lushan Church in SketchUp.
- **Bio-geomorphological study of *Spartina alterniflora* saltmarshes**, July-August 2015, participating undergraduate student and GPS-based navigator.
  - Positioned 5 profiles and 25 stops for study, photographed, counted and sampled 125 quadrats of soil and plant in *Spartina alterniflora* saltmarshes near Rudong, China.
- **Saltmarsh cliff stability study**, May 2015, participating undergraduate student.
  - Set up a RTK base station, measured 1 of 5 mudflat profiles, sampled 20 of 110 bags of surface sediment in a *Spartina alterniflora* saltmarsh near Yancheng, China.
- **Practice of General Geology**, July 2014, group leader.
  - Surveyed 18 strata, 2 folds, 2 faults, a dead volcano, a spring, and various types of rock in Jiangsu Province, China.

## AWARDS, HONORS & SERVICE

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|---|-----------------------|
| ● Outstanding Graduate of Nanjing University (Top 10%)                    | 2017                  |
| ● Excellent Student of Nanjing University (Top 5%)                        | 2015                  |
| ● Liao's Scholarship, Nanjing University (20 Awardees)                    | 2015                  |
| ● People's Scholarship (First Grade), Nanjing University (Top 5%)         | 2014                  |
| ● Class Monitor of Geographical Science 2013                              | September 2014 – 2017 |
| ● Teaching Assistant of <i>Marine Sediment Dynamics</i> (Graduate course) | Spring 2017           |

## SKILLS

- Laboratory: grain-size analysis, elemental analysis
- Instrument: Garmin GPS, RTK, total station, LISST, ADV, ADCP, OBS, RBR, ALEC EM
- Software: C, ArcGIS, ERDAS IMAGINE, ENVI, SPSS, Origin, SketchUp
- Language: Chinese (native), English (fluent)

## STANDARDIZED EXAMS

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|---|--------------|
| ● TOEFL: 109/120 (Reading 28, Listening 28, Speaking 26, Writing 27)          | Oct 29, 2016 |
| ● GRE: Verbal 158 (80%), Quantitative 170 (97%), Analytical Writing 4.0 (60%) | Nov 5, 2017  |