Tian ZHAO

Research Assistant, MOE Key Laboratory for Coast and Island Development

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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
- 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 *Marine Sediment Dynamics* (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
- TOEFL: 109/120 (Reading 28, Listening 28, Speaking 26, Writing 27)   Oct 29, 2016
- GRE: Verbal 152 (55%), Quantitative 170 (97%), Analytical Writing 3.5 (42%)   May 8, 2016
- Verbal 158 (~77%), Quantitative 170 (~97%), AW not available   (unofficial)   Nov 5, 2017