

### Education

- 2018-present **National University of Singapore**,  
*Ph.D. candidate in Electrical and Computer Engineering*, expected graduation: 2022,  
Thesis topic: "Fundamental Performance Limits for Statistical Learning Algorithms".  
Supervisor: Prof. Vincent Y. F. Tan
- 2016-2017 **National University of Singapore**,  
*M.Sc. in Electrical Engineering*,  
Project topic: "Joint Altitude and Beamwidth Optimization for UAV-Enabled Wireless Communications".  
Supervisor: Prof. Rui Zhang
- 2012-2016 **Beihang University (BUAA), Beijing, China**,  
*B.Eng in Electrical and Information Engineering*.

### Publications

- Preprints 1. **Haiyun He**, Hanshu Yan and Vincent Y. F. Tan, "Information-Theoretic Characterization of the Generalization Error for Iterative Semi-Supervised Learning", submitted [\[arXiv\]](#).
- Journal Papers 1. **Haiyun He**, Qiaosheng (Eric) Zhang and Vincent Y. F. Tan, "Optimal Change-Point Detection with Training Sequences in the Large and Moderate Deviations Regimes", IEEE Transactions on Information Theory, Vol. 67, No. 10, Pages 6758-6784, Oct. 2021 [\[arXiv\]](#).  
2. **Haiyun He**, Lin Zhou and Vincent Y. F. Tan, "Distributed Detection with Empirically Observed Statistics", IEEE Transactions on Information Theory, Vol. 66, Pages 4349-4367, July 2020 [\[arXiv\]](#).  
3. **Haiyun He**, Shuowen Zhang, Yong Zeng and Rui Zhang, "Joint Altitude and Beamwidth Optimization for UAV-Enabled Multiuser Communications", IEEE Communications Letters, Vol. 22, No. 2, Pages 344-347, Feb. 2018 [\[arXiv\]](#).
- Conference Papers 1. **Haiyun He**, Qiaosheng (Eric) Zhang and Vincent Y. F. Tan, "Optimal Resolution of Change-Point Detection with Empirically Observed Statistics and Erasures", ISITA 2020, Virtual Conference.  
2. **Haiyun He**, Lin Zhou, and Vincent Y. F. Tan, "Distributed Detection with Empirically Observed Statistics", ITW 2019, Visby, Gotland, Sweden.

### Experience

- Jan 2020-Apr 2020 **Visiting Student**, UNIVERSITY OF TORONTO, TORONTO, CANADA.  
Advisor: Prof. Ashish Khisti
- Feb 2018-Jul 2018 **Research Engineer**, NATIONAL UNIVERSITY OF SINGAPORE, SINGAPORE.  
Advisor: Prof. Vincent Y. F. Tan
- Feb 2016-Jun 2016 **Exchange undergraduate student**, POLYTECHNIC UNIVERSITY OF TURIN, TURIN, ITALY.  
Department of Electronics and Telecommunications

### Honors and Awards

- 2021 EASIT 2021 Best Poster Award  
2018 NUS Research Scholarship, 2018-2022  
2016 Outstanding Graduate of Beihang University

- 2015 "Internet+" Innovation and Entrepreneurship Competition top 10 in Beijing, top 50 in China (*Project of Smart Band*)
- 2015 Honorable Mention of American College Students Mathematical Modeling Contest
- 2013,2014 First-class Scholarship of Beihang University

## Presentations and Academic Activities

- 2021 BIID'9, Virtual Conference  
Main program talk: "*Optimal Change-Point Detection with Training Sequences in the Large and Moderate Deviations Regimes*"
- 2021 EASIT 2021, Virtual Conference  
Poster: "*Optimal Change-Point Detection with Training Sequences in the Large and Moderate Deviations Regimes*"
- 2021 CSCIT 2021, Virtual Conference
- 2020 ISITA 2020, Virtual Conference  
Oral presentation: "Optimal Resolution of Change-Point Detection with Empirically Observed Statistics and Erasures"
- 2019 ITW 2019, Visby, Gotland, Sweden  
Oral presentation: "Distributed Detection with Empirically Observed Statistics"
- 2019 CSCIT 2019, CUHK, Hong Kong, China  
Poster: "Distributed Detection with Empirically Observed Statistics"
- 2018 ISIT 2018, Vail, Colorado, USA
- 2017 GlobeComm 2017, Singapore (Volunteer)

## Teaching Assistant

- AY 18/19 NUS EE4603 Biomedical Imaging Systems
- AY 19–22 NUS EE5139 Information Theory and its Applications
- AY 20/21 NUS CG2023 Signals and Systems
- AY 20/21 NUS EE5137 Stochastic Processes

## Service

- Conference Reviewer
  - International Symposium on Information Theory (ISIT) (2020, 2021)
  - China Communications, 2018
  - IEEE International Conference on Communications Workshops (ICC Workshops), 2018
- Journal Reviewer
  - IEEE Transactions on Information Theory
  - IEEE Communications Letters
  - IEEE Transactions on Signal Processing
  - IEEE Transactions on Signal and Information Processing over Networks
  - IEEE Internet of Things Journal
  - Neurocomputing

## Skills

- Languages Matlab, C/C++, Python
- Communication Chinese(Native), English(Fluent), Japanese(Beginner)

## Interests

- Music
- Movie
- Swimming
- Japanese