

ZICHANG HE

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EDUCATION

Northwestern Polytechnical University (NWPU), Xi'an, China Sep. 2014 -- Jun. 2018
B.E. in Detection, Guidance and Control Technology

UC Santa Barbara (UCSB), CA, USA Sep. 2018 -- present
Pursing *Ph.D.* in *Electrical and Computer Engineering*, GPA: 3.9/4.0;
Skills: Matlab, Python, C, C++, Mathematica, Keil, LaTeX, Photoshop, etc.

RESEARCH EXPERIENCES

Uncertainty and Big Data Analysis Lab at UCSB Sep. 2018 -- present
Graduate Research Assistant, Supervisors: Prof. Zheng Zhang

Uncertainty Quantification: Build surrogate models via spectral stochastic methods, especially focusing on high-dimensional cases.

- An optimization-based method to determine quadrature points for building a surrogate model for computer architecture simulation: speed up 100x to 1000x.

Tensor Analysis: Statistic-based methods for tensor completion; Estimating latent variant models via tensor decomposition.

Intelligent Information Processing Lab at NWPU Sep. 2015 -- Jun. 2018
Undergraduate Research Assistant, Supervisors: Prof. Wen Jiang & Prof. Yong Deng

Uncertain Information Processing: We compared and combined several methods to handle uncertainty in applications like prediction, multi-criterion decision making, etc.

Information Fusion: We adopted multiple methods to quantify the reliability of multiple information sources for better information fusion.

Quantum Decision Theory: We adopted quantum-based approaches to model human decision making process and predict the counterintuitive phenomena.

The Hong Kong Polytechnic University Jul. 2017 -- Aug. 2017
Research Intern, Supervisor: Prof. Felix T.S. Chan

SELECTED PUBLICATIONS [GOOGLE SCHOLAR](#)

- **He, Z.** and Jiang, W.*, An evidential dynamical model to explain the interference effects of categorization on decision making results, *Knowledge-Based Systems*, 150 (2018): 139-149.
- **He, Z.** and Jiang, W.*, An evidential Markov decision making model, *Information Sciences*, 467 (2018): 357-372.
- **He, Z.** and Jiang, W.*, A new belief Markov chain model and its application in inventory prediction, *International Journal of Production Research*, 56 (2018): 2800-2817.
- **He, Z.**, Chan, Felix. T.S.* and Jiang, W.*, A quantum framework for modelling subjectivity in multi-attribute group decision making, *Computers & Industrial Engineering*, 124 (2018): 560-572.
- **He, Z.**, Jiang, W.* and Chan, Felix. T.S., Evidential supplier selection based on interval data fusion, *International Journal of Fuzzy Systems*, 20 (2018): 1159-1171.
- **He, Z.** and Jiang, W.*, Quantum mechanical approach to modelling reliability of sensor reports, *IEEE Sensors Letters*, 1 (2017): 1-4.

SELECTED HONORS & AWARDS

- Meritorious Winner in Interdisciplinary Contest in Modeling (awarded by COMAP) Apr. 2016
- The NWPU special scholarship of Yajun Wu (top 3%) Dec. 2016
- The NWPU special scholarship of Aviation Industry Corporation of China (top 3%) Oct. 2017