

# HANG WANG

✉ wang.hang@ntu.edu.sg · ☎ (+65) 8586-0408 · 🔗 [ustcmike.github.io/](https://ustcmike.github.io/)

## EDUCATION

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**Nanyang Technological University**, Singapore Sep, 2018 – Aug, 2019

*Research Engineer*, School of Computer Science and Engineering(SCSE)

**University of Science and Technology of China (USTC)**, Hefei, China Aug, 2014 –July, 2018

*B.E. (Hon.)* EE (Automation), **Talent Program** in Information Sci. & Tech.

*G.P.A.* 3.6/4.3 (TOP 7/93) *TOEFL* R23+L29+S23+W22=97 *GRE* 145+165+3.0

**Twente University**, Enschede, Netherlands June, 2017 – Oct, 2017

*Research Internship* in Biomedical Signals and Systems(BSS), Faculty of EEMCS

## RESEARCH INTEREST

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Optimization, Control, Statistical Signal Processing, Game Theory, Smart grid, IoT, Healthcare

## PUBLICATION(1ST AUTHOR)

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- **Hang Wang**, “Statistical Model Based Recommender System”(USTC Distinguished Thesis, Top 5%), 2018 Class, USTC, details [here](#)
- **Hang Wang**, Jianing Xi, Minghui Wang, Ao Li, “Dual-layer Strengthened Collaborative Topic Regression Modeling for Predicting Drug Sensitivity”, *IEEE/ACM Transactions on Computational Biology and Bioinformatics*(TCBB), 10.1109/TCBB.2018.2864739, available [here](#).
- **Hang Wang**, Mohamed Irfan Mohamed Refai, B. J. F. van Beijnum, “One IMU Based Signal Processing for Remote Rehabilitation System”, Oral Presentation, 12th International Joint Conference on Biomedical Engineering Systems and Technologies, Prague, Czech, 2019. available [here](#).

## EXPERIENCE

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**STATISTICAL MODELING for P2P POWER TRADING** Sep, 2018 – Present

*Nanyang Technological University* Supervisor: Prof. Wen Yonggang and Dr. Gao Guanyu

- non-cooperative game theory based bilateral contract networks for P2P energy trading
- design the pricing model for microgrids market from the statistical view
- yield prediction for the solar panel through data mining technologies

**OPTIMIZATION for LARGE-SCALE DISTRIBUTED SYSTEM** July, 2018 – Oct, 2018

*Sensetime, Shenzhen* Supervisor: Dr. Sun Peng (Senior Researcher)

- Imagenet/Resnet in very-large-batch size( $b = 256K$ ) training optimization(Parallel Computing)
- sparse communication optimization with NCCL, improved group-ring-base collectives and synchronize SGD update

**STATISTICAL OPTIMIZATION for DRUG SENSITIVITY PREDICTION**, Feb, 2017 – July, 2018

*National Natural Science Foundation Program* Supervisor: Prof. Li Ao

- design a graphical model to integrate multi-source information
- establish a novel bayesian-based collaborative topic regression model
- develop a variational EM algorithm to learn the maximum a posterior estimates

## **SIGNAL PROCESSING for REHABILITATION SYSTEM**

June, 2017 – Sept, 2017

*Netherlands National Project: NeuroCIMT* Supervisor: Dr.ir. B. J. F. van Beijnum

- kinematics modeling for patients with central neurological disorders.
- put forward a novel bio-signal processing structure (filter, metric, prediction)
- pattern recognition for the motion types through statistical learning.

## **ELECTRONIC and ROBOT DESIGN CONTEST**

June, 2015 – Oct, 2016

*Talent Program in USTC* Supervisor: Mr. Alberto (Hackaday project, Spain)

1<sup>st</sup> Prize(1/13), video available [here](#)

- optimize the filtering algorithm for the stability of the four-rotor aircraft.
- design Microcontroller Unit(MCU & FPGA) by using Altium Designer.
- adjust the core control system(PID) for self-reconfigurable robot.

## **HONORS**

Honorable Degree in School of Information Science and Technology	Talented program, 2017
The Silver Prize Scholarship	Top 5%, 2017
University-level excellent student leader	Outstanding leadership, 2016
Shanghai Institute of Microsystem and Information Technology Scholarship	Top 5%, 2016
Chen Guilin leadership scholarship	Top 5%, 2015
Scholarship for Outstanding Fresher	Top 5%, 2014
Chinese Amature Violinist, Level 8/10	2010

## **RELATED COURSES**

Course	Type	Score	Course	Type	Score
Function of Complex Variable	Math	90(A)	Fundamental signal and Image Processing	CS	99(A+)
Equation of Mathematical Physics	Math	90(A)	Data structure and Algorithm	CS	91(A)
System Identification	Math	92(A)	Operating System and Database	CS	90(A)
Mathematical Analysis B1	Math	89(A)	Fundamentals of Computer Control	CS	98(A+)
Fundamentals of Operations Research	Math	92(A)	Computer programming	CS	90(A)
Stochastic Processing	Math	90(A)	Modern Control Theory	EE	90(A)
Lineal Algebra	Math	89(A)	Signals and Systems	EE	89(A)
Fundamentals of Electronic System Design	EE	89(A)	Sensor principle	EE	99(A+)
Principles of Automatic Control	EE	90(A)	Basic Circuit Theory	EE	86(A-)
Digit logic Circuit	EE	90(A)	Electromagnetism	EE	86(A-)

## **SKILLS**

**Machine languages:** C, C++, R, Python, Java, HTML, SQL, Matlab,  $\text{\LaTeX}$ , Verilog

**Human languages:** Native Chinese, Fluent English, Simple Dutch, Simple Japanese

## **REFeree (MENTOR)**

**Prof. To Russell Hsing** (IEEE Life Fellow), [thsing190@gmail.com](mailto:thsing190@gmail.com)

**Prof. Yonggang Wen, NTU, Singapore** (IEEE Senior Member), [ygwen@ntu.edu.sg](mailto:ygwen@ntu.edu.sg)

**Prof. Ao Li ,USTC, China**, [aoli@ustc.edu.cn](mailto:aoli@ustc.edu.cn)

**Prof. Bert-Jan van Beijnum, Twente University, Netherlands** , [b.j.f.vanbeijnum@utwente.nl](mailto:b.j.f.vanbeijnum@utwente.nl)

———*Thank you for your time and consideration*———