Ai Jianhang
Curriculum Vitae

PERSONAL DETAILS

Birth	May 28, 1993
Address	Karlovo nám. 13, 121 35 Praha 2
Mail	`ai.jianhang@fel.cvut.cz`; `ajianhang@gmail.com`

EDUCATION

Phd. Computer Science `2019-Current`

Czech Technical University in Prague

- Advisor: Prof. Ondřej Kuželka
- Courses: Artificial Intelligence, Deep learning, Graphical Markov Model etc.

MSc. Mathematics `2016-2019`

Beijing Institute of Technology

- Advisor: Prof. Liping Fang
- Courses: Algebra, Riemannian Geometry, Topology etc.
- Thesis: Tensor Compressed Sensing Model Analysis

BSc. Mathematics `2011-2015`

Beijing Institute of Technology

- Courses: Mathematical Analysis, Functional Analysis etc.

PUBLICATIONS

- Ai J, Kuželka O, Wang Y. Hoeffding and Bernstein inequalities for U-statistics without replacement[J]. Statistics & Probability Letters, 2022, 187: 109528.

- Ai, J., Kuželka, O. & Wang, Y. Hoeffding–Serfling Inequality for U-Statistics Without Replacement. J Theor Probab (2022). https://doi.org/10.1007/s10959-022-01169-x

- J. Ai, S. Ma, H. Du and L. Fang, "Dynamic MRI Reconstruction Using Tensor-SVD," 2018 14th IEEE International Conference on Signal Processing (ICSP), 2018, pp. 1114-1118, doi: 10.1109/ICSP.2018.8652421.

RESEARCH PROJECTS

Weight Learning For Graphical Probabilistic Models `2021-Current`

- Apply algorithm results on maximum entropy framework to the problem of weight learning for both Markov Logic Network and Hing-Loss Markov Random Fields.

Concentration Inequality For U-statistic Without Replacement `2019-2021`

- Prove that the Hoeffding inequality could be extended to cover U-Statistics without replacement
- Improve the Hoeffding inequality for U-Statistics without replacement with Serfling effect when n is big enough

Tensor Compressed Sensing Model Analysis `2017-2019`
Cooperated with School of Information and Electronics

- Introduce new mathematical frame work Tensor t-SVD to dMRI processing
- Cast new dMRI reconstruction model and solve it with appropriate optimization algorithm
- Promote random sampling bound for data under any operator basis

WORK EXPERIENCE

Teaching Assistant `2016-2018`
Course of Mathematical Analysis, Part-time

Teaching Counselor of Secondary Mathematics `2015-2016`
Work Gang Education Technology (Beijing).Inc, Full-time

SKILLS

Languages	Chinese (mother tongue)
	English (IELTS 6.5)
Software	MATLAB, LaTeX, Python

HONOR AND AWARDS

- 2018.09 First-class of China National Scholarship
- 2016.09 National First-class Academic Scholarship for Postgraduate Students
- 2013.02 Honorable Mention in American Mathematical Contest in Modeling