



# Bing Tan

Ph.D. Candidate

## Biography

I am a Ph.D. candidate in Mathematical Optimization at University of Electronic Science and Technology of China, co-advised by Prof. Songxiao Li and Prof. Xiaolong Qin. Prior to that, I received a B.Sc. in Applied Mathematics from Southwest Petroleum University. My research interests lie at the intersection of optimization and image processing. I currently work on designing fast and practical algorithms for optimization problems in Hilbert spaces.

## Research Interests

Optimization algorithms, theory, applications.

Variational inequality, Fixed Point Theory and Applications.

Extragradient method, Tseng's splitting method.

## Education

- 2020–present **PhD of Applied Mathematics**, *Institute of Fundamental and Frontier Sciences*, University of Electronic Science and Technology of China, China.  
Co-supervisor: Prof. Songxiao Li and Prof. Xiaolong Qin
- 2018–2020 **Master of Applied Mathematics**, *Institute of Fundamental and Frontier Sciences*, University of Electronic Science and Technology of China, China.  
Co-supervisor: Prof. Xiaolong Qin and Prof. Songxiao Li
- 2014–2018 **Bachelor of Applied Mathematic**, *School of Science*, Southwest Petroleum University, China.

## Publications

Journal papers (\* means Corresponding Author.)

- JNVA **Bing Tan\***, Songxiao Li. Strong convergence of inertial Mann algorithms for solving hierarchical fixed point problems. *J. Nonlinear Var. Anal.* 2020, 4(3):337–355.
- JAAC **Bing Tan**, Zheng Zhou, Xiaolong Qin\*. Accelerated projection-based forward-backward splitting algorithms for monotone inclusion problems. *J. Appl. Anal. Comput.* 2020, 10(5):2184–2197.
- JNCA **Bing Tan**, Shanshan Xu, Songxiao Li\*. Inertial hybrid and shrinking projection algorithms for solving variational inequality problems. *J. Nonlinear Convex Anal.* 2020, 21(10):2193–2206.
- JNCA **Bing Tan**, Shanshan Xu, Songxiao Li\*. Inertial shrinking projection algorithms for solving hierarchical variational inequality problems. *J. Nonlinear Convex Anal.* 2020, 21(4):871–884.
- Math. **Bing Tan**, Zheng Zhou, Songxiao Li\*. Strong convergence of modified inertial Mann algorithms for nonexpansive mappings. *Mathematics* 2020, 8(4), Article ID 462.
- Math. **Bing Tan**, Shanshan Xu, Songxiao Li\*. Modified inertial hybrid and shrinking projection algorithms for solving fixed point problems. *Mathematics* 2020, 8(2), Article ID 236.
- JANO **Bing Tan\***, Shanshan Xu. Strong convergence of two inertial projection algorithms in Hilbert spaces. *J. Appl. Numer. Optim.* 2020, 2(2):171–186.

- JNCA Liya Liu\*, **Bing Tan**, Sun Young Cho. On the resolution of variational inequality problems with a double-hierarchical structure. *J. Nonlinear Convex Anal.* 2020, 21(2):377–386.
- AA Jingjing Fan, Xiaolong Qin\*, **Bing Tan**. Tseng's extragradient algorithm for pseudomonotone variational inequalities on Hadamard manifolds. *Appl. Anal.* 2020.  
<https://doi.org/10.1080/00036811.2020.1807012>.
- COAM Zheng Zhou\*, **Bing Tan**, Songxiao Li. A new accelerated self-adaptive stepsize algorithm with excellent stability for split common fixed point problems. *Comput. Appl. Math.* 2020, 39(3), Article ID 220.
- JAAC Zheng Zhou\*, **Bing Tan**, Songxiao Li. An inertial shrinking projection algorithm for split common fixed point problems. *J. Appl. Anal. Comput.* 2020, 10(5):2104–2120.
- Math. Yinglin Luo, Meijuan Shang\*, **Bing Tan**. A general inertial viscosity type method for nonexpansive mappings and its applications in signal processing. *Mathematics* 2020, 8(2), Article ID 288.

## Professional Services

### Journal reviewer

- 2020–Now Journal of Nonlinear and Variational Analysis  
 2020–Now Journal of Nonlinear Functional Analysis

### Social service

- 2020–Now zbMATH Reviewer

### Memberships

- 2017–Now China Society for Industrial and Applied Mathematics (CSIAM), Student Member  
 2019–2022 Operations Research Society of China (ORSC), Student Member

## Conference

- Oct. 2020 中国运筹学会第十一次全国会员代表大会暨第十五次学术交流会 (The 11th National Member Congress of the Operations Research Society of China and the 15th Academic Exchange Meeting), Hefei, China.
- Jun. 2019 电子科技大学基础与前沿研究院五周年院士高峰论坛 (Academician Summit Forum for the 5th Anniversary of the Institute of Fundamental and Frontier Sciences, University of Electronic Science and Technology of China), Chengdu, China.
- Apr. 2019 电子科技大学基础与前沿研究院五周年院士高峰论坛 (The 12th National Mathematics Optimization Conference of the Operations Research Society of China), Nanjing, China.

## Awards

- 2020.9 Special scholarship for postgraduates in science, University of Electronic Science and Technology of China.
- 2019.9 First-class academic scholarship, University of Electronic Science and Technology of China.
- 2018.9 Second-class academic scholarship, University of Electronic Science and Technology of China.
- 2018.6 Outstanding Undergraduate Thesis Award, Southwest Petroleum University.
- 2018.6 Outstanding Graduate Award, Southwest Petroleum University.
- 2015–2018 National Encouragement Scholarship, three times, Sichuan Provincial Department of Education.
- 2017.12 First Prize (1%), China Undergraduate Mathematical Contest in Modeling (CUMCM).
- 2017.4 Meritorious Winner (7%), Mathematical Contest in Modeling (MCM).

## Computer skills

MATLAB, L<sup>A</sup>T<sub>E</sub>X, Microsoft Office.

