

# ZHENAN FAN

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## EDUCATION

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- University of British Columbia** Sep. 2019 - Present  
**Ph.D.** in Computer Science  
Supervisor: Michael P. Friedlander  
Area: Numerical Optimization, Machine Learning and Operation Research
- University of British Columbia** Sep. 2017 - August. 2019  
**M. S.** in Computer Science
- University of Toronto** Sep. 2013 - June 2017  
**B.S.** in Math and Computer Science (double major), Overall GPA: 3.98/4.0

## PUBLICATIONS

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- **Z. Fan**, Y. Sun, M. Friedlander. Bundle-type method for dual atomic pursuit. Frank-Wolfe-type algorithm for atomic minimization problem, eg. Basis Pursuit, Matrix Completion. In *Asilomar Conference on Signals, Systems, and Computers (ACSSC)*, 2019.
- H. Fang, **Z. Fan**, Y. Sun, M. Friedlander. Greed Meets Sparsity. Understanding and Improving Greedy Coordinate Descent for Sparse Optimization. In *International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2020.
- **Z. Fan**, Y. Sun, H. Jeong, M. Friedlander. Polar Alignment and Atomic Decomposition. Revisiting the optimality condition for constrained and regularized problems. *Under Review*
- **Z. Fan**, H. Jeong, M. Friedlander. Signal demixing via polar convolution. New convex model for signal demixing. *In preparation.*
- **Z. Fan**, H. Fang, M. Friedlander. Gap safe screening rules for atomic norm regularization problems. A generalized active set identification rule for structured optimization. *In preparation.*

## EXPERIENCE

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- Research Assistant** Sep. 2017 - June 2019  
*University of British Columbia* *Software Development*
- Develop the julia version of spgl1: A solver for large-scale sparse reconstruction.

## HONORS AND AWARDS

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- UBC Computer Science Merit Scholarship C\$5000×2, 2017, 2018
- UBC International Tuition Awards C\$3000×2, 2017, 2018
- University of Toronto Deans list for all semesters, 2013-2016
- William Lowell Putnam Mathematical Competition, Rank 273 out of 4275, top 3rd in UofT, 2015
- U of T Hackathon 3rd Place, C\$3000 total (with W. Xiao, Y. Chen), 2016
- University of Toronto Excellent Awards C\$6000 2016 Summer

## TECHNICAL STRENGTHS

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- Programming** Python, R, C++, Matlab, Julia, Bash, MySQL, L<sup>A</sup>T<sub>E</sub>X  
**Personal Page** <https://zhenanf.me>