

Ying Lin

[linyopt.github.io](https://github.com/linyopt)

Department of Data and Systems Engineering
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RESEARCH INTEREST

► **Machine learning and data science**

Theories, algorithms and applications, especially *sparse learning*, *support vector machine*, *kernel-based learning* and *neural networks*, etc.

► **Continuous Optimization**

Convex and nonconvex optimization: theories, algorithms and applications. Special topics about *error bounds*.

WORK EXPERIENCE

- 2024.11 – present Postdoc Fellow, Department of Data and Systems Engineering, The University of Hong Kong
- 2021.09 – 2024.09 Teaching Assistant, Department of Applied Mathematics, The Hong Kong Polytechnic University

EDUCATION

- 2021.09 - 2024.09 Ph.D., Applied Mathematics, The Hong Kong Polytechnic University, Hong Kong, China.
Supervisor: Prof. Ting Kei Pong
- 2018.09 - 2021.06 M.Phil., Computational Mathematics, South China Normal University, Guangzhou, China.
Supervisor: Prof. Dr. Qi Ye
- 2014.09 - 2018.06 BA, Information and Computing Science, South China Normal University, Guangzhou, China.
Advisor: Prof. Dr. Qi Ye

PREPRINTS

1. **Ying Lin**, Yao Kuang, Ahmet Alacaoglu, Michael P. Friedlander. *Decentralized Optimization with Topology-Independent Communication*. Submitted September 2025. JULIA Code available in Michael's [GitHub organization](#).
2. **Ying Lin**, Benjamin Poignard, Ting Kei Pong, Akiko Takeda. *Break recovery in graphical networks with D-trace loss*. Submitted October 2024. MATLAB Code available in my [GitHub repository](#).

PUBLICATIONS

1. **Ying Lin**, Scott B. Lindstrom, Bruno F. Lourenço, Ting Kei Pong. *Tight error bounds for log-determinant cones without constraint qualifications*. Journal of Optimization Theory and Applications, 2025, volume 205, article 45.
2. **Ying Lin**, Scott B. Lindstrom, Bruno F. Lourenço, Ting Kei Pong. *Generalized power cones: optimal error bounds and automorphisms*. SIAM Journal on Optimization, 2024, 34(2):1316-1340.
3. **Ying Lin**, Yimin Wei, Qi Ye*. *A Homotopy method for multikernel-based approximation*. Journal of Nonlinear and Variational Analysis, 2022, 6(2):139-154.
4. **Ying Lin**, Qi Ye*. *Support vector machine classifiers by non-Euclidean margins*. Mathematical Foundations of Computing, 2020, 3(4):2-5.
5. **Ying Lin**, Rongrong Lin*, Qi Ye. *Sparse regularized learning in the reproducing kernel Banach spaces with the ℓ^1 norm*. Mathematical Foundations of Computing, 2020, 3(3):205-218.
6. Qi Ye*, **Ying Lin**. *Application of machine learning methods based on LAZE priors in cancer data*. Journal of South China Normal University (Natural Science Edition), 2018, 50(04):115-120.
In Chinese, part of Bachelor's thesis.

TALKS

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| 2023.06 | <i>Error bounds for the generalized power cone and applications in algebraic structure</i>
SIAM Conference of Optimization (OP23), Seattle, Washington, U.S. |
| 2022.12 | <i>Error bounds for the generalized power cone and applications in algebraic structure</i>
CAS AMSS-PolyU SIAM Student Chapter Workshop, online |
| 2020.11 | <i>Non-Euclidean support vector classifiers for sparse learning</i>
CSIAM Students Forum 2020, online |
| 2020.10 | <i>Non-Euclidean support vector classifiers for sparse learning</i>
CSIAM 2020, Changsha, Hunan Province, China |
| 2019.10 | <i>Support vector machine classifiers by maximum margin of arbitrary norm</i>
2019 Optimization Frontier Progress Seminar, China West Normal University, Nanchong, Sichuan Province, China |
| 2018.10 | <i>The sparse regression model based on LAZE prior – The application in prostate cancer detection</i>
Information Science Young Scientist Forum, Jinan University, Guangzhou, Guangdong Province, China |
| 2018.07 | <i>The sparse regression model based on LAZE prior – The application in prostate cancer detection</i>
ICSA 2018, Qingdao, Shandong Province, China |

VISITING EXPERIENCES

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|-------------------|--|
| 2024.01 – 2024.05 | Department of Applied Mathematics, The University of British Columbia
Host: Professor Michael P. Friedlander |
| 2023.03 | The Institute of Statistical Mathematics
Host: Professor Bruno F. Lourenço |