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EDUCATION	Oregon State University (OSU) , Corvallis, OR Ph.D., Computer Science Advisor: Raviv Raich Dissertation: Fixed-Point Algorithms in Machine Learning and Signal Processing Hanoi University of Science and Technology (HUST) , Hanoi, Vietnam B.Eng., Computer Science, <i>Honors program</i> : Talented Engineers	2016-present 2009 - 2014
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RESEARCH INTEREST	Optimization theory, matrix analysis, machine learning for signal processing, perturbation theory, random matrix theory, differential geometry
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PUBLICATIONS

Journals

1. **Trung Vu**, Raviv Raich, and Xiao Fu, “On Local Linear Convergence of Gradient Projection for Unit-Modulus Least Squares”, arXiv preprint arXiv:2206.10832, 2022. Under review.
2. **Trung Vu**, Evgenia Chunikhina, and Raviv Raich, “On Asymptotic Linear Convergence Rate of Iterative Hard Thresholding for Matrix Completion”, arXiv preprint arXiv:2112.14733, 2022. Under review.
3. **Trung Vu** and Raviv Raich, “On Asymptotic Linear Convergence of Projected Gradient Descent for Constrained Least Squares”, IEEE Transactions on Signal Processing, vol. 70, pp. 4061-4076, 2022.
4. **Trung Vu** and Raviv Raich, “A Closed-Form Bound on the Asymptotic Linear Convergence of Iterative Methods via Fixed Point Analysis”, Optimization Letters, vol. 1, pp. 1-14, 2022.
5. **Trung Vu**, Evgenia Chunikhina, and Raviv Raich, “Perturbation Expansions and Error Bounds for the Truncated Singular Value Decomposition”, Linear Algebra and Its Applications, vol. 627, pp. 94-139, 2021.
6. **Trung Vu**, Phung Lai, Raviv Raich, Anh Pham, Xiaoli Z. Fern and UK Arvind Rao, “A Novel Attribute-based Symmetric Multiple Instance Learning for Histopathological Image Analysis”, IEEE Transactions on Medical Imaging, vol. 39, no. 10, pp. 3125-3136, 2020.

Conference papers

1. **Trung Vu** and Raviv Raich, “Exact Linear Convergence Rate Analysis for Low-Rank Symmetric Matrix Completion via Gradient Descent”, In Proceedings of IEEE International Conference on Acoustics Speech and Signal Processing (ICASSP), pp. 3240-3244. IEEE, 2021.
2. **Trung Vu**, Raviv Raich, and Xiao Fu, “On Convergence of Projected Gradient Descent for Minimizing a Large-scale Quadratic over the Unit Sphere”, In Proceedings of IEEE International Workshop on Machine Learning for Signal Processing (MLSP), pp. 1-6. IEEE, 2019. **Student Paper Award!**
3. **Trung Vu** and Raviv Raich, “Local Convergence of the Heavy Ball method in Iterative Hard Thresholding for Low-Rank Matrix Completion”, In Proceedings of IEEE International Conference on Acoustics Speech and Signal Processing (ICASSP), pp. 3417-3421. IEEE, 2019.
4. **Trung Vu** and Raviv Raich, “Accelerating Iterative Hard Thresholding for Low-Rank Matrix Completion via Adaptive Restart”, In Proceedings of IEEE International Conference on Acoustics Speech and Signal Processing (ICASSP), pp. 2917-2921. IEEE, 2019.

5. **Trung Vu**, Raviv Raich, “Adaptive Step Size Momentum Method For Deconvolution”, In Proceedings of IEEE Statistical Signal Processing Workshop (SSP), pp. 438-442. IEEE, 2018.

PRESENTATIONS

Conference presentations

- On Convergence of Projected Gradient Descent for Minimizing a Large-scale Quadratic over the Unit Sphere, MLSP 2019, October 13-16, Pittsburgh, US.
- Accelerating Iterative Hard Thresholding for Low-Rank Matrix Completion via Adaptive Restart, ICASSP 2019, May 11-17, London, UK.

Posters

- Local Convergence of the Heavy Ball method in Iterative Hard Thresholding for Low-Rank Matrix Completion, ICASSP 2019, May 11-17, London, UK.
- Adaptive Step Size Momentum Method for Deconvolution, SSP Workshop 2018, June 10-13, Freiburg, Germany.

Talks

- On Asymptotic Linear Convergence of Projected Gradient Descent for Constrained Least Squares, July 12, 2022 (IEEE SPS Technical Seminar).
- Accelerating Iterative Hard Thresholding for Low-Rank Matrix Completion via Adaptive Restart, Signal Processing group, March 1, 2019 (Departmental Talk).
- Adaptive Step Size Momentum Method for Deconvolution, April, 2018 (Departmental Talk).

SERVICES

Journal and conference reviews

1. ICASSP - 2018, 2019, 2021, 2022.
2. MLSP - 2019, 2020, 2021.
3. Numerical Mathematics - 2022.

Teaching assistant (at OSU)

1. CS 290 - Web Development
 - Term(s): Spring 2019, Summer 2019, Spring 2020 (Head TA), Summer 2020 (Head TA), Fall 2020, Winter 2021, Spring 2021, Fall 2021,
 - Supervisors: [Eric Ianni](#), [Luyao Zhang](#), [Pam Van Londen](#), and [Nauman Chaudhry](#)
2. CS 362 Software Engineering II
 - Term(s): Summer 2021
 - Supervisor: [Eric Ianni](#)
3. ECE464/564 - Digital Signal Processing
 - Term(s): Winter 2020
 - Supervisor: [Raviv Raich](#)
4. CS 261 - Data Structures
 - Term(s): Winter 2019
 - Supervisor: [Samina Ehsan](#)
5. CS 271 - Computer Architecture and Assembly Language
 - Term(s): Fall 2016, Fall 2019
 - Supervisors: [Stephen Redfield](#) and [Justin Goins](#)

REFERENCES

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