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| CONNECT INFORMATION | Email: s2130117@s.tsukuba.ac.jp Office: 3E310, 1-1-1 Tennodai, Tsukuba, Ibaraki, 305-8577, Japan Homepage: https://galvinlai.github.io/ | |
| RESEARCH INTERESTS | Mathematical Optimization, Riemannian Optimization, Machine Learning, Deep Learning, Quantum Computing | |
| EDUCATION | University of Tsukuba Ph.D. of Science in Policy and Planning Sciences Master of Science in Policy and Planning Sciences Supervisor: Prof. Akiko Yoshise | Tsukuba, Japan Apr. 2021 – Mar. 2024 (expected) Apr. 2019 – Mar. 2021 |
| | Dongbei University of Finance and Economics Bachelor of Management | Dalian, China Sep. 2013 – June 2017 |
| GRANTS | Research fellowship of <i>Support for Pioneering Research Initiated by the Next Generation</i> (SPRING), Japan Science and Technology Agency Sep. 2021 – Present | |
| WORKING PAPERS | CLAP: A Contrastive Learning Structure for App-usage Prediction Xin Yang, Zhijian Lai , Qian Wu, Maiko Shigeno. HGCL4REC: Hyperbolic Graph Contrastive Learning for Recommender System Xin Yang, Zhijian Lai , Qian Wu, Maiko Shigeno. | |
| PUBLICATIONS AND PREPRINTS | Completely Positive Factorization by a Riemannian Smoothing Method Zhijian Lai , Akiko Yoshise. <i>Computational Optimization and Applications</i> , 2022. Riemannian Interior Point Methods for Constrained Optimization on Manifolds Zhijian Lai , Akiko Yoshise. arxiv.org/abs/2203.09762 , 2023. (Submitted to JOTA) | |
| INTERNATIONAL CONFERENCE TALKS | ICIAM 2023 Zhijian Lai , Akiko Yoshise. <i>Riemannian Interior Point Methods for Constrained Optimization on Manifolds</i> , Tokyo. | Aug. 2023 |
| | SIAM OP23 Zhijian Lai , Akiko Yoshise. <i>Interior Point Methods for Nonlinear Optimization on Riemannian Manifolds</i> , Seattle. | June 2023 |
| | International Workshop on Continuous Optimization Zhijian Lai , Akiko Yoshise. <i>Riemannian Interior Point Methods for Constrained Optimization on Manifolds</i> , Tokyo (virtual). | Dec. 2022 |
| | SIAM OP21 Zhijian Lai , Akiko Yoshise. <i>Completely Positive Factorization via Orthogonality Constrained Problem</i> , Hong Kong (virtual). | July 2021 |
| DOMESTIC (JAPAN) CONFERENCE TALKS | RAOA: Gathering of Young Researchers for the Future 2023 Zhijian Lai , Akiko Yoshise. <i>Riemannian Interior Point Methods for Constrained Optimization on Manifolds</i> , Tsukuba, Japan. | May 2023 |

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| | The 2023 spring national conference of Operations Research Society of Japan Zhijian Lai , Akiko Yoshise. <i>Riemannian Interior Point Methods for Constrained Optimization on Manifolds</i> , Tokyo, Japan. | Mar. 2023 |
| | The 2022 autumn national conference of Operations Research Society of Japan Zhijian Lai , Akiko Yoshise. <i>On the Global Convergence of Riemannian Interior Point Method</i> , Niigata (virtual), Japan. | Sep. 2022 |
| | The Japan Society for Industrial and Applied Mathematics 2022 annual meeting Zhijian Lai , Akiko Yoshise. <i>On the Global Convergence of Riemannian Interior Point Method</i> , Sapporo, Japan. | Sep. 2022 |
| | The 2022 spring national conference of Operations Research Society of Japan Zhijian Lai , Akiko Yoshise. <i>Superlinear and Quadratic Convergence of Riemannian Interior Point Methods</i> , Gunma (virtual), Japan. | Mar. 2022 |
| | Meeting 2021 of Kyoto University Research Institute for Mathematical Sciences Zhijian Lai , Akiko Yoshise. <i>Application of Smoothing Methods for Completely Positive Matrices via Orthogonality Constrained Problem</i> , Kyoto (virtual), Japan. | Aug. 2021 |
| | The 2021 spring national conference of Operations Research Society of Japan Zhijian Lai , Akiko Yoshise. <i>Completely Positive Factorization via Orthogonality Constrained Problem</i> , Tokyo (virtual), Japan. | Mar. 2021 |
| | Meeting 2020 of Kyoto University Research Institute for Mathematical Sciences Zhijian Lai , Akiko Yoshise. <i>A New Approach to the Recognition Problem of Completely Positive Matrices</i> , Kyoto (virtual), Japan. | Aug. 2020 |
| POSTER | Poster Session of 2022 SPRING Fellowship Zhijian Lai . <i>Riemannian Interior Point Methods for Manifold Optimization</i> , Tsukuba, Japan. | Mar. 2023 |
| RESEARCH EXPERIENCE | Research Assistant, University of Tsukuba Supervisor: Prof. Akiko Yoshise | Apr. 2021 – Present |
| TEACHING EXPERIENCE | Teaching Assistant, College of Policy and Planning Sciences, University of Tsukuba - FH61141: Society and Optimization - FH35012: Problem Identification and Resolution - FH61141: Problem Identification and Resolution - 0AL5100: Supply Chain Management | Fall 2023 Fall 2022 Fall 2022 Fall 2021 |
| | Mathematics Tutoring for Graduate Admission Examination, Graduate School for Policy and Planning Sciences, University of Tsukuba - Linear Algebra - Calculus - Calculus | Aug. 2021 Dec. 2019 Aug. 2019 |
| ADDITIONAL EXPERIENCE | ARC Tokyo Japanese Language School Graduate School Preparation Class | Tokyo, Japan Jul. 2017 – Mar. 2019 |
| ACADEMIC SERVICE | Membership of - The Operations Research Society of Japan - Society for Industrial and Applied Mathematics - The Institute for Operations Research and the Management Sciences | |
| COMPUTER SKILLS | Matlab, Python, Latex, GuRoBi, Xpress. | |

LANGUAGES

Chinese (Native), English (Fluent), Japanese (Fluent): JLPT N1.