Jimyeong Kim

Contact Infromation

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Research Interests

Decentralized Optimization, Reinforcement Learning, Control Theory(Robotcis, MPC), Harmonic Analysis, Machine Learning

Education

Sungkyunkwan University   Suwon, Republic of Korea
Progress in integrated PhD program   *2018.9 -*
- Advisors: Woocheol Choi, Ihyeok Seo

Sungkyunkwan University   Suwon, Republic of Korea
Bachelor of Mathematics   *2012.3-2018.8*

Publications

*:co-1st author, +:corresponding author

J. Ahn*, **J. Kim***, I. Seo[+], On the radius of spatial analyticity for the Klein-Gordon-Schrö dinger system, arXiv:2012.15514 (2020)

J. Ahn*, **J. Kim***, I. Seo[+], Lower bounds on the radius of spatial analyticity for the Kawahara equation, Anal. Math. Phys. 11 (1) (2021) 28

J. Ahn*, **J. Kim***, I. Seo[+], On the radius of spatial analyticity for defocusing nonlinear Schrödinger equations, Discrete Contin. Dyn. Syst. 40 (1) (2020) 423-439

Submitted Papers

J. Kim*, W. Choi[+], Gradient-push algorithm for distributed optimization with event-triggered communications, arXiv:2111.06315 (2021)

W. Choi*, **J. Kim**[+], On the convergence of decentralized gradient descent with diminishing stepsize, revisited, arXiv:2203.09079 (2022)

Research Experience

Youngjoon Hong/ Sungkyunkwan University, Hongkee Seol/ Chung-Ang University, SK C&C and KB Securities (February 2022 - September 2022)

- Developed the algorithm for optimal trade execution

Woocheol Choi/ Sungkyunkwan University (February 2022 -)

- Researched convergence analysis and developed algorithms for reinforcement learning

Woocheol Choi/ Sungkyunkwan University & Hancheol Choi/ Hyundai Robotics (February 2022 -)

- Researched optimal trajectory planning

Woocheol Choi/ Sungkyunkwan University (February 2021 -)

- Researched convergence analysis for decentralized optimization

Ihyeok Seo/ Sungkyunkwan University (September 2018 - December 2020)

- Researched Spatial Analyticity for dispersive systems

Talks

November 24, 2022, KSIAM 2022 Annual Meeting, Jeju SONO Calm, Jeju, Republic of Koreal

September 23, 2022, AORC Monthly Seminar, Sungkyunkwan University, Suwon, Republic of Korea

August 8, 2019, 7th East Asian Conference in Harmonic Analysis and Applications, Chung-Ang University, Seoul, Republic of Korea

Honors and Awards

2022, BK21 Research Encouragement Scholarship, Sungkyunkwan University

2021, URP(Undergraduate Research Program) TA Scholarship, Sungkyunkwan University

2021, BK21 Focused Research Scholarship, Sungkyunkwan University

2015, A bronze prize, Korean College Students Mathematical Competition, Korea Math Society

Teaching Assistant

Complex Analysis (Spring 2020 - 2021 & Fall 2019 - 2020), Sungkyunkwan Universtiy, Suwon, Republic of Korea

Partial Differential Equation (Spring 2019 - 2020), Sungkyunkwan Universtiy, Suwon, Republic of Korea

Linear Algebra (Spring 2021), Sungkyunkwan Universtiy, Suwon, Republic of Korea

Analysis (Fall 2020), Sungkyunkwan Universtiy, Suwon, Republic of Korea

Real Analysis (Spring 2020), Sungkyunkwan Universtiy, Suwon, Republic of Korea

Topology (Fall 2019), Sungkyunkwan Universtiy, Suwon, Republic of Korea

Differential Geometry (Fall 2019), Sungkyunkwan Universtiy, Suwon, Republic of Korea

Calculus (Spring 2019 & Fall 2018), Sungkyunkwan Universtiy, Suwon, Republic of Korea

Set Theory (Spring 2019), Sungkyunkwan Universtiy, Suwon, Republic of Korea

Discrete Mathematics (Fall 2018), Sungkyunkwan Universtiy, Suwon, Republic of Korea

References

Prof. Woocheol Choi

- Advisor
- Professor of Department of Mathematics, Sungkyunkwan University, Suwon, Republic of Korea
- choiwc@skku.edu

Prof. Youngjoon Hong

- Co-worker
- Professor of Department of Mathematics, Sungkyunkwan University, Suwon, Republic of Korea
- hongyj@skku.edu

Prof. Ihyeok Seo

- Advisor
- Professor of Department of Mathematics, Sungkyunkwan University, Suwon, Republic of Korea
- ihseo@skku.edu