

Achievements and Activities

as of December 20 2024

Dongyuan Xiao

Sendai city, Miyagi, 982-0826

Phone 070-4747-0131 e-mail dongyuanx@hotmail.com

Published Papers

1. (refereed) Dongyuan Xiao (corresponding author), Sufficient conditions for determining the sign of the wave speed in the Lotka-Volterra competition system, arXiv:2408.10481. (to appear in J. Differ. Equ.)
2. (refereed) Dongyuan Xiao (corresponding author), Matthieu Alfaro, Lotka–Volterra competition-diffusion system: the critical competition case, Commun. Partial Differ. Equ., 48:2 (2023), 182-208.
3. (refereed) Dongyuan Xiao (corresponding author), Chang-Hong Wu, Maolin Zhou, Sharp estimates for the spreading speeds of the Lotka-Volterra competition-diffusion system: the strong-weak type with pushed front, J. Math. Pures Appl., 172 (2023), 236-264.
4. (refereed) Dongyuan Xiao (corresponding author), Ryunosuke Mori, Spreading properties of a three-component reaction-diffusion model for the population of farmers and hunter-gatherers, Ann. Inst. Henri Poincaré (C) Anal. Non Linéaire, 38: 4 (2021), 911-951.
5. (refereed) Dongyuan Xiao (corresponding author), Ryunosuke Mori, A variational problem associated with the minimal speed of traveling waves for spatially periodic KPP type equations, Proc. London Math. Soc., 119:3 (2019), 654-680.
6. (refereed) Dongyuan Xiao, Hua Chen, Ronghua Qiao, Peng Luo, Lower and upper bounds of Dirichlet eigenvalues for totally characteristic degenerate elliptic operators, Sci. China Math., 57:11(2014), 2235-2246.

Misc

1. (non-refereed) Dongyuan Xiao (corresponding author), Matthieu Alfaro, Thomas Giletti, The Bramson correction in the Fisher-KPP equation: from delay to advance, arXiv:2410.07715.
2. (non-refereed) Dongyuan Xiao (corresponding author), Maolin Zhou, Complete classification on traveling waves in monotone dynamical systems, arXiv:2409.12463.
3. (non-refereed) Dongyuan Xiao (corresponding author), Chang-Hong Wu, Maolin Zhou, On the propagation speed of the single monostable equation, arXiv:2408.10480.
4. (non-refereed) Dongyuan Xiao (corresponding author), Ryunosuke Mori, The long-time behavior of solutions of a three-component reaction-diffusion model for the population dynamics of farmers and hunter-gatherers: the different motility case, arXiv:2404.00907.

Conference Activities & Talks

1. Conference presentation (domestic, with invitation), Division Conference, Division of Functional Equations, The Mathematical Society of Japan, Nagoya University, 2024. 12. (Hideo Takaoka, Setsuro Fujiie)
2. Conference presentation(international, with invitation), Special Session "Recent Advances in the Mathematical Analysis of Particle Interactions and Nonlocal PDEs", KSIAM 2024 Annual Meeting, BEXCO, Busan, Korea, 2024 .12. (Seung Yeal Ha, Young-Pil Choi)
3. Conference presentation(international, with invitation), "International Conference on Reaction-Diffusion Equations with Applications", Shanghai Jiao Tong University, 2024.10. (Yuan Lou, King-Yeung Lam)
4. Conference presentation(international, with invitation), "Propagation and Stability in Evolution Equations", The Banff International Research Station, 2024. 05. (Hiroshi Matano, Hirokazu Ninomiya, Peter Polacik, Léo Girardin, Luca Rossi)
5. Conference presentation(international, with invitation), "East Asia Workshop on Nonlinear Evolution Equations", The University of Tokyo, 2024. 03. (Kazuhiro Ishige, Ki-Ahm Lee, Maolin Zhou)
6. Conference presentation (domestic, with invitation), "Young Mathematicians' Challenge", Visitor center Nishishinjuku, 2024. 03. (Takashi Sakajo)
7. Conference presentation (international, with invitation), "Tandem-workshop 2024 at MATRIX and RIMS", Kyoto University, 2024. 03. (Hiroshi Matano, Harunori Monobe, Michiaki Onodera, Asuka Takatsu)
8. Conference presentation (domestic, with invitation), RIMS workshop "sharp analysis on nonlinear problems", Kyoto University, 2024. 03. (Satoshi Tanaka, Yuki Naito)

9. Conference presentation (international, with invitation), "The 25th Northeastern Symposium on Mathematical Analysis", Hokkaido University, 2024. 02. (Hideo Kubo, Hiroyuki Takamura, Tadahiro Miyao)
10. Conference presentation (international, with invitation), ICIAM 2023 Tokyo, Minisymposia "Reaction-Diffusion models in Ecology and Evolution", Waseda University, 2023. 08. (Yuan Lou)
11. Seminar presentation, Applied Analysis Seminar, The University of Tokyo, 2021. 07. (Kazuhiro Ishige)
12. Conference presentation (international, with invitation), "China-Japan Workshop for Younger Researchers on Nonlinear Diffusion Equations", Capital Normal University(China), 2019. 10. (Yapin Wu, Shin-Ichiro Ei)

Research Grants & Projects

1. Grant-in-Aid for JSPS Fellows "Propagation phenomena and asymptotic behavior of solutions of reaction-diffusion systems", Co-Investigator (Principal Investigator: Kazuhiro Ishige), 2023. 09~2025. 09.
2. MIMS Joint Research Project for Mathematical Sciences "Two species Lotka-Volterra competition-diffusion system: the propagation phenomena of the solutions", Principal Investigator, 2022. 05~2023. 03.

Others

1. 2024. 10, organized the conference "China-Japan Conference on Nonlinear Elliptic and Parabolic Equations" at Nankai University (China).
2. 2024. 03, organized the conference "East Asia Workshop on Nonlinear Evolution Equations" at the University of Tokyo.
3. 2023. 08, organized ICIAM 2023 Tokyo, Minisymposia "Reaction-Diffusion Models in Ecology and Evolution" at Waseda University.
4. 2022. 10, organized the online conference "International Conference on Nonlinear Partial Differential Equations 2022(In honor of Professor Hiroshi Matano's 70th Birthday)".