Masakazu YAMAMOTO, Ph.D.

Associate Professor
Program: Electrical and Information Engineering
Area: Information Engineering
Undergraduate: Dept. of Information Engineering

Professional Expertise

Mathematical Analysis
Functional Equations
Nonlinear Partial Differential Equations

Research Fields of Interest

Large-time behavior of solutions
Asymptotic profile
Fractional Laplacian
Anomalous diffusion

Education

2009: Ph.D. in Science, Graduate School of Science, Tohoku University, Japan
2006: M.S. in Science, Graduate School of Science, Tohoku University, Japan
2004: B.S. in Science, Faculty of Science, Ehime University, Japan

Professional Societies and Activities

1. The Mathematical Society of Japan

Major Publications

Papers

[1] Yamamoto, M., Asymptotic expansion of solutions to the nonlinear dissipative equation with the anomalous diffusion, J. Math. Anal. Appl., **427** (2015), 1027--1069.

[2] Sugiyama, Y., Yamamoto, M., Kato, K., Local and global solvability and blow up for the drift-diffusion equation with the fractional dissipation with the critical space, J. Differential Equations, **258** (2015), 2983--3010.

[3] Yamamoto, M., Kato, K., Sugiyama, Y., Existence and analyticity of solutions to the drift-diffusion equation with critical dissipation, Hiroshima Math. J. **44** (2014), 275-313.

[4] Yamamoto, M., Asymptotic expansion of solutions to the dissipative equation with fractional Laplacian, SIAM J. Math. Anal., **44** (2012), 3786--3805.

[5] Yamamoto, M., Large-time behavior of solutions to the drift-diffusion equation with fractional dissipation, Differential Integral Equations, **25** (2012), 731--758.

[6] Kobayashi, R., Yamamoto, M., Kawashima, S., Asymptotic stability of stationary solutions to the drift-diffusion model in the whole space, ESAIM Control Optim. Calc. Var., **18** (2012), 1097--1121.

[7] Yamamoto, M., Spatial analyticity of solutions to the drift-diffusion equation with generalized dissipation, Arch. Math. (Basel), **97** (2011), 261--270.

[8] Yamamoto, M., Asymptotic expansion of solutions to the drift-diffusion equation with large initial data, J. Math. Anal. Appl., **369** (2010), 144--163.

[9] Yamamoto, M., Asymptotic expansion of solution to the Nernst-Planck drift-diffusion equation, RIMS Kokyuroku Bessatsu, **B15** (2009), 189--208.

[10] Ogawa, T., Yamamoto M., Asymptotic behavior of solutions to drift-diffusion system with generalized dissipation, Math. Models Methods Appl. Sci., **19** (2009), 939-967.