



## Yukio NAGAHATA, Ph.D.

Professor

Program: Electrical and Information Engineering

Area: Information Engineering

Undergraduate: Dept. of Engineering

### Professional Expertise

Probability theory

Stochastic process

### Research Fields of Interest

- Scaling limit of stochastic processes
- Hydrodynamic limit
- Lattice gas
- Spectral gap
- Markov process

### Education

2001: Ph.D., Graduate School of Science and Technology, Tokyo Institute of Technology, Japan

1997: M.S., Graduate School of Science and Technology, Tokyo Institute of Technology, Japan

1995: B.S., School of Science, Tokyo Institute of Technology, Japan

### Professional Societies and Activities

1. The Mathematical Society of Japan

### Major Publications

#### Papers

[1] "Functional central limit theorem for tagged particle dynamics in stochastic ranking process", Y.Nagahata *Kodai Math.J.*, vol.36, pp.409-427, 2013

[2] "Tagged particle dynamics in stochastic ranking process", Y.Nagahata, *Kodai Math. J.*, vol.36, pp.397-408, 2013.

[3] "Lower bound estimate of the spectral gap for simple exclusion process with degenerate rates", Y.Nagahata, *Electron. J. Probab.*, vol.17 no 92, pp.1-19, 2012.

[4] "Spectral gap for multi-species exclusion processes", Y.Nagahata, M.Sasada, *Journal of Statistical Physics*, vol.143, pp.381-398, Year 2011