Yan Liu

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Research Interests

Mathematical Statistics	(1) Asymptotic difference of the evaluation between i.i.d. and dependent variables (2) Sufficient conditions for CLT (3) Generalized CLT (4) Asymptotic expansion of statistics
Time Series Analysis	(1) Analysis on the linear process with infinity variance (2) Robust methods on the time series analysis (3) Estimation of the tail index of the innovation process (4) Time series analysis under non-regular case
Financial Engineering	(1) Theory of Optimal portfolio (2) Optimal portfolio under the multi-period model

Education

2013 —	**Ph.D., Mathematical Statistics, Waseda University, Tokyo**
2011 — 2013	Master of Science, Mathematical Statistics, Waseda University, Tokyo Thesis: Nonparametric Methods in Time Series Analysis Supervisor: Dr. Masanobu Taniguchi
2008 — 2011	Bachelor of Science, Applied Mathematics, Waseda University, Tokyo

Professional Experience

2014 — 2016	**JSPS Research Fellowship for Young Scientists (DC2)**

Languages

Chinese	Mother tongue
Japanese	**Bilingual**
English	**Fluent**
French	Some knowledge
Italian	Some knowledge

Grants and Fellowships

2013 — 2014	Early Bird Program Fellowships, ”On the properties of tail index estimators by self-nomrlazed method”, ¥700,000

Publications

2013	**Liu, Y.** ”Asymptotic moments of symmetric self-normalized sums” *Scientiae Mathematicae Japonicae Online*, 561-569.

Presentations

Jan 2014	**Liu**, “Robust Spectral Estimation in Time Series Analysis”, High Dimensional Statistical Analysis and Related Topics, Waseda University
Nov 2013	(Poster)“On the properties of tail index estimators by self-nomrlazed method” , WINeST Symposium, Waseda University
Nov 2013	**Liu**, “Asymptotics for M-Estimators in Time Series”, Workshop in Statistical Applications and Time Series, Kanazawa University
Sept 2013	**Liu**, “A New Way to Estimate Tail Index”, the Mathematical Society of Japan, Ehime University
Aug 2013	**Liu**, “The New Class of Estimating Tail Index by Self-normalization”, Bird Meeting, Waseda University
May 2013	**Liu**, “Asymptotic Moments of Symmetric Self-normalized Sums”, Project Research Seminar on Financial and Pension Mathematics, Waseda University
Mar 2013	**Liu** and Taniguchi, “Hypothesis Testing for Vector Stable Processes”, the Mathematical Society of Japan, Kyoto University
Apr 2012	**Liu**, “Introduction to Rank Tests”, Seminar of Physics and Mathematics, Waseda University
Dec 2010	**Liu**, “From Probability Distribution to Black-Scholes Model”, Seminar of Physics and Mathematics, Waseda University

Teaching Experience

2011 — 2013	Teaching Assistant as a Mathematics Tutor in school of FSE, Waseda University
2012 — 2013	Teaching Assistant as a Statistics Tutor in school of ILS, Waseda University
2010 — 2013	Teaching Assistant as a English Tutor in school of CSE, Waseda University

Memberships

2012 —	Mathematical Society of Japan
2013 — 2014	Early Bird Program, Waseda University

Manuscripts in Progress

1 Akashi, Liu and Taniguchi, “An Empirical Likelihood Approach for Symmetric α-stable Processes”

2 Liu, “Asymptotics for M-estimators in Time Series”