Chang-han Rhee

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RESEARCH Interest Applied Probability, Stochastic Simulation, Experimental Design, Systems Biology, Computational Finance.

EDUCATION

Georgia Institute of Technology, Atlanta, GA, USA

2013-Present

Postdoctoral Fellow in Industrial & Systems Engineering and Biomedical Engineering Supervisor: Enlu Zhou (Industrial & Systems Eng.), Peng Qiu (Biomedical Eng.)

Stanford University, Stanford, CA, USA

2008 - 2013

Ph.D. in Computational and Mathematical Engineering

Advisor: Peter W. Glynn

Thesis title: Unbiased Estimation with Biased Samplers

Stanford University, Stanford, CA, USA

2006-2008

M.S. in Computational and Mathematical Engineering

(Officially awarded in 2013)

Seoul National University, Seoul, Korea

1998 - 2006

B.S. in Mathematics and Computer Science

(Alternative military service: 2002–2005)

PUBLICATIONS

"Unbiased estimation with square root convergence for SDE models," with P. W. Glynn. To appear in *Operations Research*. **2013 George Nicholson Student Paper Competition Finalist.**

"Exact estimation for Markov chain equilibrium expectations," with P. W. Glynn. *Journal of Applied Probability*, 51A(Special Jubilee Issue):377-389, 2014.

"A new approach to unbiased estimation for SDEs," with P. W. Glynn, *Proceedings of the 2012 Winter Simulation Conference*, 2012. **Best MS/OR focused Student Paper.**

"An iterative algorithm for sampling from manifolds," with E. Zhou and P. Qiu, *Proceedings of the 2014 Winter Simulation Conference*, 2014.

"Lyapunov conditions for differentiability of Markov chain expectations: the absolutely continuous case," with P. W. Glynn. In preparation.

"Lyapunov conditions for differentiability of Markov chain expectations: the contracting case," with P. W. Glynn. In preparation.

"Response-surface-filling design," with E. Zhou and P. Qiu. In preparation.

AWARDS

- Finalist, George Nicholson Student Paper Competition, 2013
- Best Student Paper Award (MS/OR focused), Winter Simulation Conference, 2012
- Samsung Fellowship, 2008–2012
- Seoul National University Merit Scholarship, 2005–2006
- ACM SIGSIM Travel Award, 2012
- NSF Financial Support for WSC 2012

Talks

Unbiased estimation with square root convergence for SDE models

- INFORMS Annual Meeting 2013, Minneapolis, October 2013

Perfect estimation with imperfect samplers

- ICME Colloquium, Stanford, February 2013
- INFORMS Annual Meeting 2013, Minneapolis, October 2013
- ISysE department, Korean Advanced Institute of Sceince and Technology, December 2013
- IE department, Seoul National University, December 2014
- IME department, Pohang University of Science and Technology, December 2014
- SME department, Sungkyunkwan University, December 2014

Unbiased estimation with biased samplers

- ISE department, Virginia Tech, March 2014
- Applied Probability Seminar, Georgia Tech, September 2014

A new approach to unbiased estimation for SDEs

- 2012 Winter Simulation Conference, Berlin, December 2012

Sensitivity analysis for Markov chains

- SIAM Seminars on Current Research in Engineering & Applied Mathematics, Stanford, March 2012
- INFORMS Annual Meeting 2014, San Francisco, November 2014

An iterative algorithm for sampling from manifolds

- 2014 Winter Simulation Conference, Savannah, December 2014

Perfect estimation and response-surface-filling design

- ISE department, University of Illinois at Urbana-Champaign, February 2015
- IME department, Pohang University of Science and Technology, February 2015

TEACHING EXPERIENCE

Stanford University, Stanford, CA, USA

Instructor

Summer 2011

Taught math refresher course for the incoming students at Stanford Engineering School.

Duties: Developing course contents and giving lectures.

- CME 001: Math Refresher Course, Probability and Statistics Session

Teaching Assistant

Autumn 2012, Spring 2012

Duties: Holding office hours, writing problem sets, final exams and their solutions, grading, and giving supplementary lectures and review sessions

- CME 100: Vector Calculus
- MS&E 322: Stochastic Calculus and Control

Course Assistant Winter 2007

Duties: Holding office hours, helping writing exams, and grading.

- MS&E 121: Introduction to Stochastic Modeling

Professional Experience

Gamevil Inc., Seoul, Korea

2003-2005

Software Engineer (Alternative military service)

- Worked on: Developing software libraries for mobile games. Developing mobile games. Administering online game server and user database.

Wisefree Inc., Seoul, Korea

2002-2003

Software Engineer (Alternative military service)

- Worked on: Developing knowledge portals for LG Siltron and Korean national police.