Chang-Han Rhee

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	Science Park 123, M342	rhee@cwi.nl
	Amsterdam, 1098 XG, Netherlands	

RESEARCH INTEREST
Applied Probability, Stochastic Simulation, Statistical Inference for Stochastic Processes, Experimental Design.

EDUCATION

Centrum Wiskunde & Informatica, Amsterdam, Netherlands   2015–Present
Postdoctoral Fellow in Stochastics
Supervisor: Bert Zwart

Georgia Institute of Technology, Atlanta, GA, USA   2013–2015
Postdoctoral Fellow in Industrial & Systems Engineering and Biomedical Engineering
Supervisor: Enlu Zhou, Peng Qiu

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

"Sample path large deviation for heavy-tailed Lévy processes and random walks," with B. Zwart and J. Blanchet. Submitted for publication. `arXiv:1606.02795`.

"Importance sampling of heavy-tailed stocahstic perpetuities" with B. Chen and B. Zwart. Submitted for publication. `arXiv:1609.03182`.

"Unbiased estimation with square root convergence for SDE models," with P. W. Glynn. *Operations Research*, 63(5): 1026–1043, 2015. **George Nicholson Student Paper Competition Finalist (2013).**

"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.

WORKING PAPERS

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

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

"Importance Sampling for heavy-tailed Lévy processes and random walks," with B. Chen, J. Blanchet, and B. Zwart.

"Sample path large deviation for heavy-tailed Lévy processes: the Weibull case," with B. Zwart and J. Blanchet.

"Unbiased multilevel Monte Carlo with optimal subcanonical convergence" with P. Glynn.

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

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

SERVICES
Program Committee:
- Winter Simulation Conference 2016 (Analysis and Methodology Track)

Referee:
- Operations Research, Mathematics of Operations Research, Bernoulli, IIE Transactions, Journal of Simulation, Winter Simulation Conference

TALKS
Large Deviation Principle for Heavy-tailed Lévy Processes
   - INFORMS Annual Meeting 2016, Nashville, November 2016 (Scheduled)

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
   - ISE department, Virginia Tech, March 2014
   - Applied Probability Seminar, Georgia Tech, September 2014
   - IE department, Seoul National University, December 2014
   - IME department, Pohang University of Science and Technology, December 2014
   - SME department, Sungkyunkwan University, December 2014
   - OR Department, Naval Postgraduate School, August 2015
   - Scientific Meeting, Centrum Wiskunde & Informatica, November 2015
   - IMS-ISBA Joint Meeting MCMSki 2016, Lenzerheide, January 2016
   - Applied Mathematics Department, Ecole Polytechnique, Paris, June 2016
   - Retrospective Monte Carlo Workshop, The University of Warwick, July 2016

Unbiased estimation with square root convergence for SDE models
   - INFORMS Annual Meeting 2013, Minneapolis, October 2013

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
- Queueing Colloquium, Centrum Wiskunde & Informatica, May 2016

An iterative algorithm for sampling from manifolds
- 2014 Winter Simulation Conference, Savannah, December 2014

Unbiased MLMC for rare event simulation of stochastic recursions
- MCQMC 2016, Stanford University, August 2016

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.