

# Chang-Han Rhee

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CONTACT	Centrum Wiskunde & Informatica Science Park 123, M342 Amsterdam, 1098 XG, Netherlands	+31.(0)6.1263.6664 rhee@cw.i.nl
RESEARCH INTEREST	Lévy Processes, Applied Probability, Stochastic Simulation, Experimental Design, Computational Finance.	
EDUCATION	<b>Centrum Wiskunde &amp; Informatica</b> , Amsterdam, Netherlands <i>Postdoctoral Fellow in Stochastics</i> Supervisor: Bert Zwart	2015–Present
	<b>Georgia Institute of Technology</b> , Atlanta, GA, USA <i>Postdoctoral Fellow in Industrial &amp; Systems Engineering and Biomedical Engineering</i> Supervisor: Enlu Zhou, Peng Qiu	2013–2015
	<b>Stanford University</b> , Stanford, CA, USA <i>Ph.D. in Computational and Mathematical Engineering</i> Advisor: Peter W. Glynn Thesis title: <i>Unbiased Estimation with Biased Samplers</i>	2008–2013
	<b>Stanford University</b> , Stanford, CA, USA <i>M.S. in Computational and Mathematical Engineering</i>	2006–2008 (Officially awarded in 2013)
	<b>Seoul National University</b> , Seoul, Korea <i>B.S. in Mathematics and Computer Science</i>	1998–2006 (Alternative military service: 2002–2005)
PUBLICATIONS	“Sample path large deviation for heavy-tailed Lévy processes” with B. Zwart. In preparation.  “Unbiased estimation with square root convergence for SDE models,” with P. W. Glynn. <i>Operations Research</i> , 63(5): 1026–1043 . <b>2013 George Nicholson Student Paper Competition Finalist.</b>  “Exact estimation for Markov chain equilibrium expectations,” with P. W. Glynn. <i>Journal of Applied Probability</i> , 51A(Special Jubilee Issue): 377–389, 2014.  “A new approach to unbiased estimation for SDEs,” with P. W. Glynn, <i>Proceedings of the 2012 Winter Simulation Conference</i> , 2012. <b>Best MS/OR focused Student Paper.</b>  “An iterative algorithm for sampling from manifolds,” with E. Zhou and P. Qiu, <i>Proceedings of the 2014 Winter Simulation Conference</i> , 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.  “Importance sampling of heavy-tailed stochastic perpetuities” with B. Chen and B. Zwart. 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

### *Large Deviation Principle for Heavy-tailed Lévy Processes*

- Queueing Colloquium, Centrum Wiskunde & Informatica, May 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 Science 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
- Retrospective Monte Carlo Workshop, The University of Warwick, July 2016 (scheduled)
- MCQMC 2016, Stanford University, August 2016 (Scheduled)

### *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

### *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.