

Stefanie Kosuch

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58238 Linköping (Sweden)

Born: March 18, 1983 (Germany)**Nationality:** German

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Post-Doc in Theoretical Computer Science

Professional Experience

Research

Oct. 2010 - present

Linköpings Universitet, SwedenPost-Doc at [IDA](#)

Oct. 2007 - Sept. 2010

Université Paris Sud, FrancePh.D. student at the [LRI](#)

September 2008

Chinese University of Hong KongResearch visit at the [SEEM](#)

July/August 2007

Université Paris VI, FranceResearch internship at the [LIP6](#)

Nov. 2006 - June 2007

Universität Hamburg, GermanyDiploma student in the research group of [Reinhard Diestel](#)*Teaching*

2007 - 2010

Graduate Teaching Assistant

at the Université Paris Sud, France:

- ✓ Graph Theory (School of Engineering (4th year): lecture, exercises)
- ✓ Algorithmics and Complexity (School of Engineering (3rd year) & Undergraduate course (3rd year): exercises)
- ✓ Introduction to language translation (Undergraduate course (2nd year): exercises, Lex/Yacc laboratories)
- ✓ Imperative Programming (Undergraduate course (1st year): C programming laboratories)

Other

- Member of the Organizing Committee for the [8th French Combinatorial Conference](#)
- Reviewer for [Mathematical Programming \(Series A\)](#) and the [7th International Conference on Distributed Computing and Internet Technologies](#)

Awards and Scholarships

- 2007 - 2010 **Allocation MENRT**
Scholarship of the French Ministry of National Education, Research and Technology for a three-year doctoral program
- 2005 - 2006 **DAAD: Jahresstipendien für Studierende aller Fächer**
Scholarship of the [Deutscher Akademischer Austausch Dienst](#) for a one-year study abroad program
- 2002 **DPG Buchpreis**
Award of the [Deutsche Physikalische Gesellschaft](#) for excellent school achievements in physics

Education

- 10/2007 - 10/2010 **Ph.D. studies in Computer Science**
Université Paris Sud, France
- Ph.D. supervisor: Abdel Lisser
 - Subject: "Stochastic Combinatorial Optimization"
 - "Mention: Très Honorable"
- 10/2002 - 08/2007 **Diploma studies in Mathematics
(Diplomstudiengang Mathematik)**
Universität Hamburg, Germany
- Minor: Physics
 - Diploma thesis in Graph Theory
 - Final Grade: "excellent"
- 09/2005 - 05/2006 **Studies abroad: M.Sc. Mathematics**
Université de Montréal, Canada
- Concentration: Applied Mathematics
- 06/2002 **Abitur (University Entrance Qualification)**
Gymnasium Hittfeld, Seevetal, Germany
- Final Grade: "excellent"

Skills

Programming Languages: C, C++, MATLAB, PHP

Optimization Tools: CPLEX, MATLAB, Mosek, Mathematica

Languages: German (native), English (fluent), French (fluent), Swedish (basic)

List of Publications

Publications in scientific journals (peer-reviewed)

- [1] S. K., P. Le Bodic, J. Leung, A. Lisser: *On a Stochastic Bilevel Programming Problem with Knapsack Constraints*. Networks (2010) (to appear). [[link to pre-revision version](#)]
- [2] S. K. and A. Lisser: *On Two-Stage Stochastic Knapsack Problems with or without Probability Constraint*. Discrete Applied Mathematics (2010) (to appear). [[link to pdf](#)]
- [3] S. K. and A. Lisser: *Upper bounds for the 0-1 stochastic knapsack problem and a B&B algorithm*. Annals of Operations Research 176(1) (2010), 77–93.
[A more recent version by S. Kosuch (with a little bit more insight information and some important corrections made) can be found at <http://www.kosuch.eu/stefanie/veroeffentlichungen/SRKP.pdf>].
- [4] H. Bruhn, S. K., M. Win Myint: *Bicycles and left-right tours in locally finite graphs*. European Journal of Combinatorics 30 (2009), 356-371. [[link to pdf](#)]

Extended abstracts, published or accepted for publication (peer-reviewed)

- [5] S. K.: *An Ant Colony Optimization Algorithm for the Two-Stage Knapsack Problem*. Proc. of the 10th Biannual International Conference on Artificial Evolution.
- [6] S. K.: *Approximability of the Two-Stage Knapsack problem with discretely distributed weights*. Proc. of the 10-th Cologne-Twente Workshop on graphs and combinatorial optimization. [[link to pdf](#)]
- [7] S. K.: *Towards an Ant Colony Optimization algorithm for the Two-Stage Knapsack problem*. Proc. of the VII. ALIO/EURO Workshop on Applied Combinatorial Optimization (2011), [[Proceedings](#)] [[link to pdf](#)].
- [8] S. K., M. Letournel, A. Lisser: *On a Stochastic Knapsack Problem*. Proc. of the 9th Cologne Twente Workshop on Graphs and Combinatorial Optimization (2010), <http://ctw.uni-koeln.de/CTW2010.pdf>.
- [9] S. K. and A. Lisser: *Stochastic Shortest Path Problem with Delay Excess Penalty*. Proc. of the Intern. Symposium on Combinatorial Optimization (2010). Electronic Notes of Discrete Mathematics 36(1) (2010), 511–518. [[link to pdf](#)]
- [10] S. K. and A. Lisser: *On a Two-Stage Stochastic Knapsack Problem with Probabilistic Constraint*. Proc. of the 8th Cologne Twente Workshop on Graphs and Combinatorial Optimization (2009), <http://www.lix.polytechnique.fr/ctw09/ctw09-proceedings.pdf>.
- [11] S. K., P. Le Bodic, J. Leung, A. Lisser: *On a stochastic bilevel programming problem with knapsack constraints*. Proc. of the Intern. Network Optimization Conf. (2009), 356-371. [[link to pdf](#)]

List of Publications (continued)*Others*

- [12] S. K. and M. Latapy: *Modèle multiparti pour les grands graphes de terrain*. 9èmes Journées Graphes et Algorithmes (2007), Paris, France, <http://www.liafa.jussieu.fr/jga07/JGA07.pdf>.

Papers in preparation

- [13] S. K., M. Letournel, A. Lisser: *Stochastic Knapsack Problem with expectation constraint*. (2011).
- [14] S. K.: *Approximability of Two-Stage Knapsack problems*. (2011).
- [15] J. Cheng, S. K., A. Lisser: *Stochastic Shortest Path Problems with Uncertain Delays*. (2011).