# Sebastian Berndt

Research Areas: steganography, cryptography, approximation algorithms, FPT algorithms

Publications: APPROX, IH&MMSEC, ISAAC, LATA (Link)

Teaching: Algorithm Design, IT-Security, Coding Theory (Link)

Education: B. Sc., M. Sc., Ph. D. Student (Link)

## Education

2010 BSc in Computer Science, University of Kiel
2012 MSc in Computer Science, University of Kiel
2012- Research Associate, Ph. D. Student, University of Lübeck

### Publications $\mathcal{E}$ talks

Rankings are from the 2014 edition of the Computing Research and Education Association of Australasia Conference Ratings Exercise (CORE 2014), ranging from A\* (exceptional) to C (sound and satisfactory).

2015 Berndt, Sebastian,

"Learnability does not imply Secure Steganography", Nordic Complexity Workshop

Berndt, Sebastian and Jansen, Klaus and Klein, Kim-Manuel (2015),

"Fully Dynamic Bin Packing Revisited", APPROX/RANDOM 2015, Rating: A

2015 Berndt, Sebastian,

"Fully Dynamic Bin Packing Revisited", Approximation Algorithms and Parameterized Complexity

Berndt, Sebastian and Reischuk, Rüdiger (2016).

"Steganography Based on Pattern Languages", LATA 2016, Rating: C

2016 Berndt, Sebastian and Liśkiewicz, Maciej (2016),

"Provable Secure Universal Steganography of Optimal Rate", ACM IH&MMSEC 2016, Acceptance Rate: 34% (21/61)

Awarded Best Student Paper.

Berndt, Sebastian and Liśkiewicz, Maciej (2016),

"Hard Communication Channels for Steganography", ISAAC 2016, Rating: A

# **Teaching**

2012	Exercises on "Algorithm Design"
2012	Exercises on "Introduction to IT Security and Reliability"
2013	Exercises on "Coding and Security"
2013	Exercises on "Algorithm Design"
2013	Exercises on "Introduction to IT Security and Reliability"
2014	Exercises on "Coding and Security"
2014	Exercises on "Algorithm Design"
2014	Exercises on "Introduction to IT Security and Reliability"

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2015	Exercises on "Coding and Security"
2015	Exercises on "Algorithm Design"
2015	Lectures and Exercises on "Introduction to IT Security and Reliability"
2015	Lectures on "Presentation and Documentation"
2016	Exercises on "Coding and Security"
2016	Exercises on "Algorithm Design"
2015	Lectures and Exercises on "Introduction to IT Security and Reliability"

## **Extracurricular Activities**

- Received the "Teaching Certificate I" by taking more than 10 courses in e.g. team leading, presentation techniques and others (Link)
- 2016 Organizing Commitee of Creative Mathematical Sciences Communication (Link)
- Taught a week-long summer course on algorithms to a group of pupils from age 14 to 17 based on *Computer Science Unplugged* (Link)
- Developed the tool *Jdrasil* to compute tree decompisitions which got the third place in the tracks "parallel exact solver" and "parallel heuristic solver" in the first *PACE* challenge on parameterized algorithms (Software, Challenge)

### **Awards**

Best Student Paper Award for "Provable Secure Universal Steganography of Optimal Rate"
Third place in the tracks »parallel exact solver« and »parallel heuristic solver« in the first PACE challenge on parameterized algorithms

#### Interests

Kayaking, Improvisational Theatre, Hiking

Last updated: October 27, 2016 • Typeset in http://nitens.org/taraborelli/cvtex

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