



# Chris Köcher

## Curriculum Vitae

### Personal Details

Date of Birth 13.05.1991  
Place of Birth Pößneck, Germany

### Research Interests

Algebra, Automata Theory, Data Structures, Logics, Theory of Computation, Verification

### Education

2007–2010 **Abitur**, *Gymnasium “Am Weißen Turm”*, Pößneck, 1.7.  
2011–2014 **Bachelor of Science in Computer Science**, *Technische Universität Ilmenau*, 1.2.  
2014–2016 **Master of Science in Computer Science**, *Technische Universität Ilmenau*, 1.0.

### Master’s Thesis

Title Einbettungen in das Transformationsmonoid einer vergesslichen Warteschlange  
Supervisors Prof. Dr. Dietrich Kuske, k. f.-m. n. Olena Prianychnykova

### Employment

2010–2011 **Civilian Service**, *Kinder- und Jugendheim Ranis*.  
2014–2016 **Student Assistant**, *Technische Universität Ilmenau*.  
From 2016 **Research Fellow**, *Technische Universität Ilmenau*.

### Languages

German Mother Tongue  
English Good Knowledge  
Russian Basic Knowledge  
French Basic Knowledge

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🌐 <https://www.tu-ilmenau.de/en/al/staff/m-sc-chris-koecher/>

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## Teaching Activities

- Exercises “Automaten, Sprachen und Komplexität” (WT 15/16 – WT 20/21)  
“Automaten und Komplexität” (ST 20 – ST 21)  
“Automatentheorie” (ST 19 – ST 20)  
“Logik und Logikprogrammierung” (ST 17 – ST 19)  
“Verifikation” (WT 16/17 – WT 19/20)
- Lectures “Automaten und Komplexität” (ST 21)  
“Logik und Logikprogrammierung” (ST 21)

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## Publications

### Fully Refereed Papers

- 2018 **The Inclusion Structure of Partially Lossy Queue Monoids and their Trace Submonoids**  
with Dietrich Kuske and Olena Prianychnykova  
RAIRO - Theoretical Informatics and Applications vol. 52(1), pages 55-86
- 2021 **Reachability Problems on Reliable and Lossy Queue Automata**  
Theory of Computing Systems, to appear

### Refereed Conference Papers

- 2017 **The Transformation Monoid of a Partially Lossy Queue**  
with Dietrich Kuske  
CSR 2017, Springer, LNCS vol. 10304, pages 191–205
- 2018 **Rational, Recognizable, and Aperiodic Sets in the Partially Lossy Queue Monoid**  
STACS 2018, Dagstuhl Publishing, LIPIcs vol. 96, pages 45:1–45:14
- 2018 **The Cayley-Graph of the Queue Monoid: Logic and Decidability**  
with Faried Abu Zaid  
FSTTCS 2018, Dagstuhl Publishing, LIPIcs vol. 122, pages 9:1–9:17
- 2019 **Reachability Problems on Partially Lossy Queue Automata**  
RP 2019, Springer, LNCS vol. 11674, pages 149–163