Reinis Cirpons
PhD Student

Education

2021/09- Present	**PhD in Mathematics** *University Of St Andrews* - St Andrews, UK • Expected to graduate 2025/09
2017/09- 2021/05	**Master of Mathematics (hons.) 1st class** *University Of St Andrews* - St Andrews, UK • Dean's List for academic excellence 2017-2021 • President of the St Andrews Mathematics Society.
2011/09- 2017/06	**High school diploma** *Riga State gymnasium no. 1* - Riga, LV • The Latvian Republic prime minister's distinction for achievements in studies.

Publications

1. R. Cirpons and J.D. Mitchell. Polynomial time multiplication and normal forms in free bands. *Theoretical Computer Science*, 953:113783, 2023. doi:10.1016/j.tcs.2023.113783

Invited talks

- **Computing with free bands**,
  York Semigroup seminar, York, U.K., November 2023.

- **Making the Knuth-Bendix algorithm exponentially slower**,
  Semigroups Day, St Andrews, U.K., June 2023.

Experience

2021/09- Present	**Tutor** *University Of St Andrews* - St Andrews, UK I tutor multiple small group tutorials each semester. I am also involved a a lead demonstrator for the computing components of various modules.
2019/06- Preset	**Contributor** *Digraphs* package and *libsemigroups* C++ library Have made many contributions to the Digraphs package and libsemigroups library as part of the team of contributors at the University of St Andrews. Gained valuable experience in Git, test driven development and learned a lot about the practical programming workflow.
2020/07- 2022/08	**Junior Researcher** *Whitecryption* - Riga, LV Worked on whitebox cryptography and obfuscation. Analyzed the state of the art, prototyped possible solutions in Python, and found flaws in existing implementations to strengthen the security of the product.
2020/06- 2020/07	**Research Assistant** *University Of St Andrews* - St Andrews, UK Worked under prof. James Mitchell implementing a linear time algorithm for the word problem in free bands into the Semigroups package for GAP.

Inquisitive problem solver with experience working in both an academic and corporate setting. Great at learning about large scale systems and improving them. Good at communicating complex concepts and solutions in a simple manner to a broad audience by way of writing as well as presentation.

--- **Contact** ---

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--- **Links** ---

Personal webpage
reinisc.id.lv

ORCiD
0000-0001-7238-1576

Github
reinscirpons

--- **Languages** ---

English
Latvian
Russian