Resource Public Key Infrastructure (RPKI) has become the defacto tool to protect internet networks from BGP hijacking. Routing hijacks are a billion dollar loophole in our security infrastructure, the community is already deploying protection, and we want to build a tool to evaluate said protection. The goals of this thesis are:

1. Model Autonomous System relationships.
2. Collect live RPKI and BGP routing data.
3. Design an algorithm to simulate internet coverage and range of RPKI protection.
4. Create an interactive tool to run these simulations periodically and perform longitudinal analysis.
5. Bonus: if the results are good, your work could be featured in a publication! 😊

If you are interested in this topic, email us at lehre@sit.tu-darmstadt.de.