

A Comprehensive Formal Analysis of 5G Handover

A study of **handover protocols in 5G networks** and **fallback procedures for backwards compatibility with 4G**

- A **handover** procedure transfers an ongoing data connection between two networks
- Either from one 5G network to another, or fallback from 5G to 4G (or vice versa)
- Needs to be fast, reliable, seamless and **secure**
- We identify four main handover protocols in the 5G specification and **formally model** them in the security protocol verification tool **Tamarin**

