Development and Implementation of a Simulation Model for a State of the Art Time Synchronization Approach

- Language: German or English
- Prerequisites:
  - C/C++ programming and/or Python programming
  - Networking technology
  - Beneficial: Knowledge about the OMNeT++ network simulator or Python SciPy
- Tasks:
  - Understand and evaluate a state of the art (SOTA) approach for time synchronization using a given research paper
  - Develop and implement a simulation model for this approach
  - The implementation tasks can be done using numerical simulation (e.g., using Python SciPy) or network simulation (e.g., using OMNeT++)
  - Evaluate the approach under various conditions:
    - Different network topologies
    - Different network sizes
    - Different background traffic conditions
    - Different clock stabilities
  - Verify your implementation: the results shall be comparable to the paper
- Literature:
  - The paper describing the actual SOTA approach will be provided
- Contact: henning.puttnies@uni-rostock.de

https://www.imperva.com/blog/a-quick-start-introduction-to-database-security-an-operational-approach/

http://marino.lv/industrialautomation/