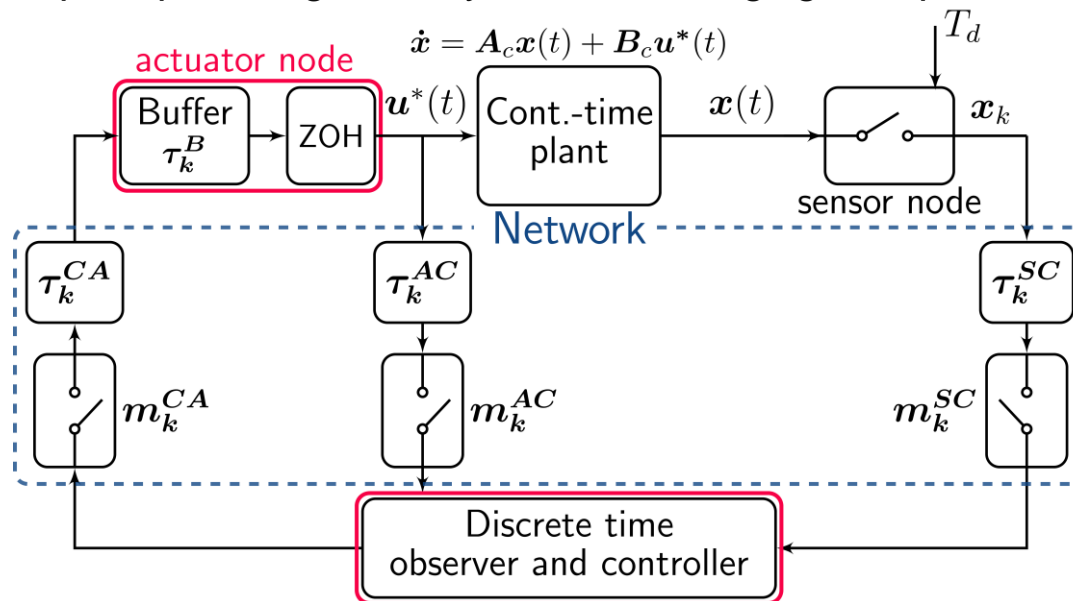


Robust Control of Networked Systems: Buffering, Control Design and State Estimation

Challenges:

- Network effects – uncertain delays and data loss
- High computational effort of existing control strategies ensuring stability under the uncertainty
- Out-of-order arrival of data packets
- Observer strategies typically rely on the availability of both input and output data information
- Separation principle is significantly more challenging compared to LTI systems



- Switched System representation
- Networked Control System framework
- Linear Matrix Inequality control and observer approaches
- Different strategies to compensate for network effects

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