

Kolloquium

am Freitag, 24.11.2023 ab 10:00 Uhr

im Raum 030, IM, Innstr. 33

der Universität Passau

auf Einladung von Prof. Dr. Hermann de Meer

zum Vortrag von

Prof. Dr.-Ing. Franz J. Hauck

(Institute of Distributed Systems, University Ulm)

mit dem Vortragstitel:

Linearizability and State-Machine Replication: Is it a match?

Abstract: Linearizability is a well-known correctness criterion for concurrent and distributed systems. State-machine replication (SMR) is a popular approach to achieve fault tolerance with high availability and with support for the Byzantine failure model. Unlike many previous work, we argue in this presentation that linearizability is not an appropriate correctness criterion for the implementations of SMR. After arguing against linearizability, we will consider less known relaxed correctness criteria and check their capabilities to validate the correctness of implementations for replicated state machines. The presentation is not only relevant for persons interested in replication but also for those interested in fundamentals of distributed system in general.