Prof. Dr. Christian Scheideler
Universität Paderborn

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Advanced Distributed Algorithms and Data Structures
SS 2019
Homework Assignment 9

Problem 1:
Prove Theorem 6.11 on slide 35 of Chapter 6. As an application of it, suppose that the RLNC algorithm spreads messages as done in the Push Algorithm on slide 12. How long does it take until every node has received all k messages (with probability at least $1 - \delta$)?

Problem 2:
Complete the proof of Lemma 6.13 on slide 41 of Chapter 6.

Problem 3:
Propose an alternative strategy for the hybrid broadcasting problem and argue why it should be efficient (resp. close to an optimal solution) with respect to the number of global edges used.