Large- and Small-Scale Modeling of User Traffic in 5G Networks

Abstract:
Along with many other novel features, the fifth generation of mobile networks (5G) aims at highly flexible and dynamic network management, as well as reduced cost for operators. In order to enable both features, rapid and efficient adaptation to environmental changes is needed. This requires a complete knowledge of the characteristics of the user traffic at all time scales, but state-of-the-art research clearly differentiates between large-scale and small-scale traffic behavior. In this work, we propose a traffic model that connects large-scale and small-scale phenomena. We show that the standard small-scale models may produce inaccurate results in case of network congestion. We propose a strategy to mitigate this problem and evaluate it through simulations.
Occurences:

· Einrichtungen > Fakultäten > Fakultät für Elektrotechnik und Informationstechnik > Lehrstühle und Professuren > Kommunikationsnetze (Prof. Kellerer) > 2019

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