

Some new simple heuristics for load balancing with routing and information delays

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The talk will be devoted to the very well-known problem – load-balancing in systems of parallel queues, when (i) the dispatcher has access only to information about the delayed states of the queues or (ii) the time it takes a customer to travel between the dispatcher and its assigned queue is nonnegligible, or both (i) and (ii). Some experimental results will be discussed, which show that certain (simple-to-implement) mixing of conventional static and dynamic policies may lead (at least in single-flow systems) to visible reduction in mean response times. Multi-flow systems will be discussed in short.

Rostislav Razumchik is the acting deputy director for scientific research at Federal Research Center «Computer Science and Control» of the Russian Academy of Sciences. Graduated from the Peoples' Friendship University (RUDN University), held early research positions at the Central Research Institute for Telecommunications from 2006-2011. Received his Ph.D. in 2011, joined the same year the Institute of Informatics Problems of the Russian Academy of Sciences and served as the research fellow from 2011-2022. Winner of the ERUDITE 2017 (Scholar in Residence Programme), he participated in various European Cooperation in Science and Technology Actions (2015-2020). His research interests are in queueing theory and simulation, and its applications for performance evaluation of stochastic systems.