

Mathematical models for Computer network protocols and security - a need for a new perspective

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In this talk, we will introduce how Internet Engineering Task Force (IETF) has designed network protocols and security over the past few decades. Mathematical models in these areas are being used to understand the behaviour of these protocols and design. Until now most of the models rely on discrete functions and have been quite useful in understanding the operations of the network. With increasing networking speeds will such models be useful in the future? Is it time to change our perspective and look at new ways of modelling the network / security protocols ?