

Gerardo Rubino - *INRIA Rennes*

## Transient analysis of Markovian queues

**Abstract:** Queuing models are usually analyzed in steady state, mainly for performance evaluation tasks. Recently, more interest on the transient behavior emerged, from performance but also from dependability questions, particularly in telecommunications. This talk focuses on techniques to develop transient analysis of Markovian queues. We present our initial contribution to the field, based on matrix transforms tools, then a second combinatorial methodology based on path counting techniques, with which we still work. We conclude with the description of current work where we came back to the initial approach using matrix transforms.

**Biosketch:** GERARDO RUBINO is a Senior Researcher at INRIA, where he is the scientific leader of the Dionysos group having research activities in networking, including quantitative analysis of networks using stochastic tools. He has been also full professor at the engineering school TELECOM Bretagne during 5 years, being the responsible of the research activities of the Networking Department. His main research areas are in performance, dependability and perceptual quality analysis. He is the author of the PSQA technology for perceptual quality of multi-media sequences sent through the Internet. He has been Scientific Responsible at INRIA Rennes, Associate Editor of NRL, and he serves at different structures related to Research Management in France. In the areas of the talk, he has co-edited and co-written two books published by John Wiley & Sons: "Performability Modelling: Techniques and Tools" in 2001 and "Rare event simulation using Monte Carlo methods" in 2009. His web page:

<http://www.irisa.fr/armor/lesmembres/Rubino/myPages/indexTmp.html>



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Information : Pierre L'Ecuyer, <http://www.iro.umontreal.ca/~lecuyer/>