

MATTHIEU JONCKHEERE

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Cursus

- Jan 2008** **Technische University – Eindhoven**
Assistant Professor
Department of Mathematics and computer science, Group of **Onno Boxma**
- Buenos Aires University**
Visitor Researcher
- Nov 2005-
Nov2007** **CWI – Amsterdam**
Post doc fellow in *PNA2* Advance Communications Network group
Collaborations with **Sem Borst**, **Urtzi Ayesta**, **Lasse Leskela**, **Sindo Nunez-Queija**, **Rob van der Mei**.
- Nov 2002-
Nov 2005** **FRANCE TELECOM - Research et Development (FTR&D)**
PhD with **T. Bonald** (FTR&D) & **F. Baccelli** (ENS): Insensitive load balancing and bandwidth allocation in telecommunication networks, university: Ecole polytechnique.
- 1999-2002** **Graduated from ÉCOLE NATIONALE SUPÉRIEURE DES TÉLÉCOMMUNICATIONS PARIS (ENST)**
Specializations in Queueing theory, signal processing and financial mathematics
- 2002** **Graduated from PARIS 6 UNIVERSITY: DEA (Masters) in applied probability**
Stochastic calculus, Non parametric estimation, Point processes and Palm calculus, Markov processes,...
- 2000-2001** **Maîtrise and Licence (B.S.) of applied mathematics at Paris 6 University**

Teaching

- 2002-2005** **NANTERRE** (Paris X), **teaching assistant** (~170h), Introduction to Scilab, probability and statistics.
- 2001-2002** **LA SORBONNE** (Paris I), **teaching assistant** (40h) of probability and statistics.
- 2000-2001** **Lycée Condorcet** (Paris), teaching assistant in mathematics

International experience

- Dec 2006** **BUENOS AIRES UNIVERSITY : Probability department**
Mini-course on insensitive queueing networks.
- Sep-Dec 2004** **MITTAG-LEFFLER INSTITUTE (Stockholm)**
Member of the research program: **Queueing theory and teletraffic theory**.
Collaboration with Sem Borst, Lasse Lekela, Jorma Virtamo.
- Jun-Oct 2001** **STANFORD UNIVERSITY – Département de Statistiques**
Nearest neighbors algorithms in high dimension, curse of dimensionality, application to database of sounds.
Research trainee with **David Donoho**.

Talks in international conferences

Insensitive load balancing, New York (US), Sigmetrics/Performance, June 2004.

Balanced fairness and Insensitive load balancing for single class systems, Zakopane (Pologne), Eurongi Juillet 2004.

Optimal insensitive routing and bandwidth sharing in data networks, Banff (Canada), Sigmetrics July 2005.

Stability of multi-class queuing networks with state-dependent service rates, Pisa (Italy), Valuetools, October 2006

Stability of multi-class queuing networks Amsterdam (Pays Bas) Queuing colloquium CWI, and Dutch Korean queuing colloquium, UVA, October 2006

Stochastic comparaisons and stability of multi-class queuing networks with coupled service rates, Buenos Aires (Argentine), ERPEM November 2006

Some seminar talks

Insensitive dynamic load balancing, Paris, Arc-tcp, Septembre 2003.

Insensitive allocation and load balancing in communication networks, Stockholm, Institut Mittag-Leffler, September 2004.

Formules d'Erlang pour les réseaux de télécommunications : Efficacité et limitations des modèles insensibles, Lille, Journées MAS, September 2006

Insensitive models for telecommunication networks, Amsterdam, Vrije University Novembre 2006

Industrial projects

FTRD/ORANGE

Conception of a software for dimensioning and predicting waiting times for call centres of the customer service of Orange, in collaboration with Lise George.

Supervision

FTRD: Supervision of a research trainee (DEA) on the performance evaluation of overflow routing in call centers

Reviewing activity

Reviewer for:

- Sigmetrics
- Performance Evaluation,
- ITC,
- Infocom,
- Queueing systems,
- IEEE information theory,...

Participation in international research projects

- **FTRD/CWI: European networks of excellence/ Eurongi**,
- **CWI : BRICKS project**,
- **University of Buenos Aires**: Participation in the project RAICES (in collaboration with P. Ferrari and P. Groisman)

Computer skills

Langages C, C++, Java, Matlab, Maple, Mathematica

Systèmes Windows, Unix, Mac

Langues

French Mother tongue

English fluent

Spanish spoken

Dutch basics

Publications

Journal or reviews:

-Stochastic coupling techniques for two-layers loss systems

with L. Leskela,
submitted,

-Stability of parallel queueing systems with coupled rates

with S. Borst and L Leskela,
to appear in **Journal of Discrete events and dynamic systems**,

-Insensitive versus efficient dynamic load balancing in networks without blocking
Queueing systems 2006, Volume 54, 193-202

-Insensitive load balancing

With T. Bonald & A. Proutière,
Performance evaluation review, Sigmetrics/Performance 2004, 367-378.

-Optimal insensitive routing and bandwidth sharing in simple data networks

With J. Virtamo,
Performance evaluation review, Sigmetrics 2005, 193-204.

In preparation:

-Stability and throughput in a networks with routing and shared resources,

With W. Van der Weij and Rob van der Mei,

International conference with proceedings:

-Stability of multi-class queuing networks with state-dependent service rates

With S. Borst
Valuetools IEEE 2006

-Flow-level stability of channel aware scheduling algorithms

With S. Borst
WIOPT 2006

-Does redirection improve performance of overflow routing in heterogeneous loss network?

With L. George, L. Leskela
ITC 2005, 1365-1374.

European project proceeding:

-Insensitive load balancing for single class systems

With T. Bonald & A. Proutière,
Proceedings of Eurongi 2004, Zakopane conference.

PhD Dissertation (in french):

Partage de charge et allocation de capacité insensibles dans les réseaux de communication,
Ecole Polytechnique.