

ECQT 2014
First European Conference on Queueing Theory

August 20-22, 2014, Ghent, Belgium

Tuesday 19/08/2014

17:00 Start of registration

17:30-19:00 Welcome reception

Wednesday 20/08/2014

08:30-09:00 Registration

09:00-09:15 Opening session (Room Vermeyleylen)

09:15-10:15 Keynote talk 1 (Room Vermeyleylen)

Chair: O. Boxma

M. Olvera

Queueing networks with synchronization requirements

10:15-10:45 Coffee break

10:45-12:25 Parallel sessions WA

WA1 – Models with impatient customers (Room Vermeyleylen)

Chair: D. Fiems

M. Tschaikowski, M. Tribastone

Fluid limits for transient and steady state regimes of queueing networks with Coxian-distributed service and abandonment times

G.C. Mytalas, M.A. Zazanis

An M/G/1 queueing model with a gated service and impatient customers

B. Kim, J. Kim

A batch arrival $M^X/G/1$ queue with impatient customers

O. Kella, W. Stadjé

A clearing system with impatient passengers: asymptotics and estimation in a bus stop model

WA2 - Two-dimensional models (Room Blancquaert)

Chair: D. Claeys

E.S. Badila, J.A.C. Resing

Queueing systems that have simultaneous arrivals, with and without coupled processors

M. Kobayashi, M. Miyazawa, H. Shimizu

Structure-reversibility of a two dimensional reflecting random walk

I. Dimitriou

A retrial queue with two-types of customers and paired services

WA3 - Optimization and control (Room Prior)

Chair: A. Economou

D. Efrosinin, J. Sztrik

Optimal allocation problem in a finite-source multi-server heterogeneous queueing system

E.A. Feinberg, F. Yang

Optimal pricing for a GI/M/k/N queue with several customer types and holding costs

B. Balcioglu, G. Kahvecioglu

Designing a practical dynamic lead-time quotation policy in a make-to-stock queue

J. Sanders, R. van Bijnen, E. Vredenburg, S. Kokkermans

Wireless network control of interacting Rydberg atoms

12:30-14:00 Lunch

14:00-15:40 Parallel sessions WB

WB1 – Polling models (Room Vermeulen)

Chair: M. Boon

J.-P. Dorsman

Analysis and optimisation of polling systems with Markovian server routing

E. Perel, U. Yechiali

A two-queue polling system with threshold-based switching policy

P. Kovács

Proportionally fair scheduling for traffic light networks

J. Resing, O. Boxma

Vacation and polling models with retrials

WB2 - Numerical techniques (Room Blancquaert)

Chair: M. Telek

M.A. Yazici, N. Akar

The finite-horizon ruin problem with reserve-dependent premiums and its connection to continuous feedback Markov fluid queues

W. Mélanche, J. Walraevens, D. Claeys, B. Steyaert, H. Bruneel

Effect of presorting on the number of customers in multiclass queues with dedicated servers and a global FCFS service discipline

N. Akar

Transient solutions of Lindley processes

J. Selen, I. Adan, J. van Leeuwen

Many-server systems with customer slowdown

WB3 - Multi- and infinite-server models (Room Prior)

Chair: I. Dimitriou

M. De Muynck, S. Wittevrongel, H. Bruneel

A discrete-time queue with finite-support service capacities

J. Gai, M.L. Chaudhry

On the queueing system $GI/M^{a,b}/c$

M. Jansen, K. De Turck, M. Mandjes, S. Wittevrongel

Overflow probabilities for Markov-modulated infinite-server queues: a large-deviations approach

L. Sakalauskas, M. Ramanauskas

Stalling in queueing systems with different processors

15:45-16:15 Coffee break

16:15-17:55 Parallel sessions WC

WC1 - Inventory models (Room Vermeulen)

Chair: S. De Vuyst

S. Otten, R. Krenzler, H. Daduna

Models for queueing-inventory systems with base stock policy

E. De Cuyper, K. De Turck, D. Fiems

Coupled inventory management systems with perishable goods

Y. Barron

An $(s;S)$ reflected inventory process with order cancellations

A. Krishnamoorthy, R. Manikandan, S.S. Nair

Retrial of unsatisfied customers in a queueing-inventory system

WC2 – Networks (Room Blancquaert)

Chair: D. Worthington

D. Cerotti, M. Gribaudo, R. Pinciroli, G. Serazzi

Energy consumption in systems with multi-class workloads

C. Fricker, N. Serval

Two-choice regulation in heterogeneous bike-sharing systems

M. Fathi, O. Jouini

On the use of phase type distributions for modeling of trust relationships in communication networks

R. Krenzler, H. Daduna, S. Otten

Jackson network in a random environment

WC3 – Interruption models (Room Prior)

Chair: M. Chaudhry

A. Krishnamoorthy, A.S. Manjunath
On priority queues generated through customer induced service interruption

M. Senthil Kumar
Unreliable M/G/1 retrial queue with coupled switching

S. Ouazine, K. Abbas
Numerical approach for the analysis and optimization of GI/M/1/N queue with vacations

E. Yu. Kalimulina
On the convergence rate for unreliable queueing network

Thursday 21/08/2014

09:00-10:15 Parallel sessions TA

TA1 – Bounds and convergence (Room Vermeulen)

Chair: E. Morozov

A.I. Zeifman

Uniform approximation bounds for weakly ergodic birth-death queueing models

M. Miyazawa

Quality of a diffusion approximation for a two node generalized Jackson network with respect to stationary tail probabilities

R. Núñez-Queija, A.V. den Boer, M. Mandjes, P. Zuraniewski

Efficient model-based estimation of network load

TA2 - Batch systems (Room Blancquaert)

Chair: B. Kim

M.L. Chaudhry, A.D. Banik, A. Pacheco

A simple analysis of the batch arrival queue with infinite-buffer and Markovian service process using roots method: $GI^{[X]}/C-MSP/1/\infty$

F. Ferreira, A. Pacheco, H. Ribeiro

Characterization of the number of losses in nonpreemptive oscillating queueing systems

M.L. Chaudhry, J. Kim

A simple and elegant approach to $GI^X/M/c$

TA3 – Resequencing and reordering models (Room Prior)

Chair: N. Akar

R. Razumchik, M. Telek

Delay analysis of a queueing system with resequencing buffer

K. Van Hautegeem, W. Rogiest, H. Bruneel

Void-creating algorithms for fixed packet length in OPS/OBS

I. Caraccio, A.V. Pechinkin, R.V. Razumchik

Stationary characteristics of MAP-PH-2 resequencing queue

10:15-10:45 Coffee break

10:45-12:25 Parallel sessions TB

TB1 - Delay analyses (Room Vermeulen)

Chair: K. De Turck

J.-K. van Ommeren, N. Baer, N. Mishra, D. Roy

Batch service systems with heterogeneous servers

P. Vis, R. Bekker, R.D. van der Mei

Waiting time distributions for polling systems in heavy traffic

J. Kim, B. Kim

Waiting time distribution in an M/G/1 retrial queue with two classes of customers

S. De Vuyst, D. Fiems

The impact of lateness on waiting times in an outpatient clinic

TB2 - State-dependent models (Room Blancquaert)

Chair: J. Resing

H. Abouee-Mehrizi, O. Baron

Queue decomposition and its applications in state-dependent queueing systems

N. Izady

A state-dependent bulk service model for capacity planning in health care clinics

E. Hyytiä, R. Richter, S. Aalto

State-dependent and energy-aware control of a server farm

T. Phung-Duc

Batch arrival multiserver queues with state-dependent setup time

TB3 – Stability analyses (Room Prior)

Chair: W. Rognest

K. Avrachenkov, E. Morozov, R. Nekrasova, B. Steyaert

Stability analysis of retrial systems with constant retrial rates

L. Berdjoudj, D. Aïssani

Approximation in batch arrivals retrial queues

A.S. Rumyantsev, E.V. Morozov

Necessary and sufficient stability condition of multiserver model with simultaneous multiple server use

M. Cherfaoui, A. Bareche, D. Aïssani, S. Adjabi

Strong stability of an M/M/∞ queue

12:30-14:00 Lunch

14:00-15:15 Parallel sessions TC

TC1 - Models with periodicity (Room Vermeulen)

Chair: M. Miyazawa

L. Lakatos

Differences and similarities in continuous and discrete cyclic-waiting systems

B.H. Margolius, M.M. O'Reilly

Stochastic fluid flows with time varying transition rates

L. Rojas-Nandayapa, M. Jonckheere, Y. Nazarathy

Scaling limits of cyclically varying birth-death processes

TC2 - Game theory (Room Blancquaert)

Chair: O. Baron

A. Economou

Strategic passengers in an observable transportation station: When is it optimal to join?

Y. Kerner, E. Schertzer

Strategic reneging from an M/G/1 queue

H. Van den Bossche, K. De Turck, B. Prabhu, D. Fiems, H. Bruneel

Rush hour roulette and the public transport choice

TC3 - Scaling limits (Room Prior)

Chair: J.-K. van Ommeren

M.A.A. Boon, E.M.M. Winands

Heavy-traffic analysis of k-limited polling systems

G. Weiss, D. Zhan

Many server scaling of the N-system under FCFS-ALIS

B.W.J. Mathijssen, A.J.E.M. Janssen, J.S.H. van Leeuwen, A.P. Zwart

Heavy-traffic analysis for queues with many correlated sources

16:00-18:00 Guided city tour

19:00 Conference dinner

Friday 22/08/2014

09:15-10:15 Keynote talk 2

Chair: S. Wittevrongel

M. Mandjes

Timescaling results for Markov modulated infinite-server systems and OU processes

10:15-10:45 Coffee break

10:45-12:25 Parallel sessions FA

FA1 - Non-stationary models (Room Vermeulen)

Chair: B. Margolius

G. Selinka, R. Stolletz

Time-dependent performance analysis of heterogeneous queueing systems

D. Suen, D. Worthington

Consolidating, simplifying and extending results for networks of time-dependent infinite server queues

S. Lopatzidis, J. De Bock, G. de Cooman, S. De Vuyst, J. Walraevens

Robustness in queueing systems

D. Worthington, X. Chen

Staffing of time-varying queues using a geometric discrete time modelling approach

FA2 - Communication systems (Room Blancquaert)

Chair: M. Gribaudo

B. Steyaert, H. Bruneel

Some notes on the burstiness of data sources, and its impact on the performance of queueing networks

Y. Kim, G. Hwang

Delay analysis of the renewal access protocol

D. Fiems, W. Rogiest

Mind the gap - performance of void-avoiding schedules for fiber loop optical buffers

K. De Turck, O. Salameh, H. Bruneel, D. Fiems, S. Wittevrongel

Scaling limits for Erlang-B-like systems with space priority

FA3 – Approximations (Room Prior)

Chair: T. Phung-Duc

F. Rahmoune, D. Aissani

Analytic approach to the performances measurements of the $M/G/1//N$ reliability model with corrective maintenance

E. Vatamidou, I.J.B.F. Adan, M. Vlasiou, B. Zwart

Improved approximations for performance measures of stochastic models

J. Pender, S. Engblom

A spectral Galerkin approach for nonstationary queues

F. Poloczek, F. Ciucu

Scheduling with martingales

12:30-14:00 Lunch

14:00-15:00 Keynote talk 3

Chair: J. Walraevens

P. Robert

An asymptotic study of stochastic networks with failures

15:00-15:15 Closing session

15:15-15:45 Goodbye coffee