

RÉSUMÉ

updated on December the 5th, 2018

1 Personal Information

Personal coordinates

Name : THOMAS BEGIN
Birthday : April 30th, 1980
Citizenship : French
Marital status : Civil union

Professional coordinates

Teaching : UFR d'Informatique, Bat. Nautibus
43 Bd du 11 novembre 1918
69622 Villeurbanne Cedex - France
Room 226
Phone : +33(0)4 72 44 81 91
E-Mail : thomas.begin@univ-lyon1.fr

Research : Research Team DANTE
Laboratoire de l'Informatique du Parallélisme (LIP) UMR 5668
École Normale Supérieure de Lyon (ENS Lyon)
46 allée d'Italie
69364 Lyon Cedex 07 - France
Room 26, Floor 1H, Building M7
Phone : +33 (0) 4 26 23 38 03
E-Mail : thomas.begin@ens-lyon.fr

2 Current position

Since 2009 **Assistant Professor - Université Claude Bernard Lyon 1 (UCBL)**
Computer Science
Laboratoire de l'Informatique du Parallélisme (LIP)
UMR CNRS - ENS Lyon - UCB Lyon 1 - Inria 5668
DANTE team

3 Former positions

- 2015-2016 **Visiting Researcher - University of Ottawa**
DIVA laboratory led by Pr. A. BOUKERCHE
The research leave is funded by the CNRS
- Since 2009 **Assistant Professor - Université Claude Bernard Lyon 1 (UCBL)**
Computer Science
Laboratoire de l'Informatique du Parallélisme (LIP)
UMR CNRS - ENS Lyon - UCB Lyon 1 - Inria 5668
DANTE team
- 2008-2009 **PostDoc** at University of California, Santa Cruz (UCSC)
Jack Baskin School of Engineering
Fellow with Pr. A. BRANDWAJN
- 2005-2008 **Ph.D student** at the Université Pierre et Marie Curie (UPMC)
Laboratoire d'Informatique de Paris 6
Network and Performance Analysis team
Teaching Assistant at Université du Val de Marne (UVM)

4 Diplomas

- 2018 **HDR from Université Claude Bernard Lyon 1 (UCBL)**
Guarantor :
Isabelle GUÉRIN LASSOUS (UCBL)
Specialization : Computer Science
Title : *Contributions to the Performance Modeling of Computer Networks*
Obtained on December 10, 2018
Members of the jury :
- André-Luc BEYLOT, Professor, ENSEEIHT (Univ. Toulouse), Reviewer
 - Andrzej DUDA, Professor, ENSIMAG (Univ. Grenoble Alpes), Reviewer
 - Nihal PEKERGIN, Professor, Univ. Paris-Est, Reviewer
 - Mohand-Saïd HACID, Professor, Univ. Claude Bernard Lyon 1 (Univ. Lyon), Examiner
 - Catherine ROSENBERG, Professor, Univ. of Waterloo (Canada), Examiner
 - Fabrice VALOIS, Professor, INSA Lyon (Univ. Lyon), Examiner

- 2008 **Ph.D. from Université Pierre et Marie Curie (UPMC)**
Under the supervision of :
Serge FDIDA and Bruno BAYNAT (UPMC)
Specialization : Computer Science, Telecommunication, and Electronics
Title : *Automatic Modeling and Calibrating of Systems*
Obtained on December 5, 2008
Awarded with : *Highest Honors*
Members of the jury :
- Raymond MARIE, Professor, Univ. Rennes 1, Reviewer
 - Philippe NAIN, Directeur de Recherche, Inria, Reviewer
 - Alexandre BRANDWAJN, Professor, Univ. of California, Santa Cruz (USA), Examiner
 - Philippe CHRÉTIENNE, Professor, Univ. Pierre et Marie Curie, Examiner
 - Bernd WOLFINGER, Professor, Univ. of Hamburg (Allemagne), Examiner
 - Serge FDIDA, Professor, Univ. Pierre et Marie Curie, Director
 - Bruno BAYNAT, Associate Professor, Univ. Pierre et Marie Curie, Director
- 2005 **Master of Computer Science - Specialization : Computer Networks**
Université Pierre et Marie Curie (UPMC)
Awarded with : *High Honors* (ranked 2nd)
- 2003 **Engineer Degree in Telecommunication and network**
ISEP (Insitut Supérieur d'Electronique de Paris)
Awarded with : *High Honors*
5th year spent at **Michigan Technical University**

5 Teaching Duties

Courses responsibilities are highlighed in grey

2018-2019 : Total amount of teaching : 234 hours

L3 (UCBL)	Networks	18.5h (tutorials)
M1 Info (UCBL)	Distributed Algorithms	18h (tutorials & practical works)
M1 Info (UCBL)	Networking	44h (lectures, tutorials & practical works)
M2 CCI (UCBL)	System Administration and Security	10.5h (lectures & practical works)
M2 CCI (UCBL)	Advanced Networks	38h (lectures, tutorials & practical works)
M2 SRIV (UCBL)	Advanced Networks	20h (lectures, tutorials & practical works)
M2 TIW (UCBL)	Cloud Computing - Performance Evaluation	9h (lectures & practical works)
M1 Info (UCBL)	Fellowship management	20h
M1 Info (UCBL)	Project	20h
M2 SRIV (UCBL)	Fellowship management	36h

2017-2018 : Total amount of teaching : 202 hours

L3 (UCBL)	Networks	20h (tutorials)
M1 Info (UCBL)	Distributed Algorithms	9h (tutorials)
M1 Info (UCBL)	Networking	44h (lectures, tutorials & practical)
M2 CCI (UCBL)	Advanced Networks	43h (lectures, tutorials & practical)
M2 SRIV (UCBL)	Advanced Networks	21h (lectures, tutorials & practical)
M2 TIW (UCBL)	Cloud Computing - Performance Evaluation	10.5h (lectures & practical works)
M1 Info (UCBL)	Project	12h
M2 SRIV (UCBL)	Fellowship management	39h

2016-2017 : Total amount of teaching : 204 hours

L3 (UCBL)	Networks	22h (tutorials)
M1 Info (UCBL)	Distributed Algorithms	18h (tutorials & practical works)
M1 Info (UCBL)	Networking	47h (lectures, tutorials & practical)
M2 CCI (UCBL)	Advanced Networks	39h (lectures, tutorials & practical)
M2 SRIV (UCBL)	Advanced Networks	18h (lectures, tutorials & practical)
M2 TIW (UCBL)	Cloud Computing - Performance Evaluation	7.5h (lectures & practical works)
M1 Info (UCBL)	Fellowship management	20h
M1 Info (UCBL)	Project	12h
M2 SRIV (UCBL)	Fellowship management	18h

2015-2016 : Research leave at University of Ottawa

2014-2015 : Total amount of teaching : 210 hours

L3 (UCBL)	Networks	18h (tutorials)
M1 Info (ENSL)	Networks and Performance Evaluation	18h (lectures)
M1 Info (UCBL)	Networking	63h (lectures, tutorials & practical)
M2 Info (INSA)	Future networks	15h (lectures)
M2 SIR (UCBL)	Network Architecture	16.5h (lectures, tutorials & practical)
M2 SIR (UCBL)	Advanced Networks	36h (lectures, tutorials & practical)
M1 Info (UCBL)	Project	21h
M2 SIR (UCBL)	Fellowship management	24h

2013-2014 : Total amount of teaching : 196 hours

L3 (UCBL)	Networks	20.5h (tutorials)
M1 Info (UCBL)	Networking	60h (lectures, tutorials & practical)
M2 Info (INSA)	Future networks	12h (lectures)
M2 SIR (UCBL)	Network Architecture	9h (lectures, tutorials & practical)
M2 SIR (UCBL)	Advanced Networks	54h (lectures, tutorials & practical)
M1 Info (UCBL)	Project	18h
M2 SIR (UCBL)	Fellowship management	23h

2012-2013 : Total amount of teaching : 219 hours

L3 (UCBL)	Networks	20.5h (tutorials)
M1 Info (ENSL)	Network Algorithms	6h (lectures)
M1 Info (UCBL)	Networking	54h (lectures, tutorials & practical)
M2 Info (ENSL)	Performance Evaluation	22.5h (lectures)
M2 SIR (UCBL)	Network Architecture	18h (lectures, tutorials & practical)
M2 SIR (UCBL)	Advanced Networks	61.5h (lectures, tutorials & practical)
M1 Info (UCBL)	Project	12h
M2 SIR (UCBL)	Fellowship management	27h

2011-2012 : Total amount of teaching : 195 hours

L3 (UCBL)	Networks	20h (tutorials)
M1 Info (UCBL)	Networking	60h (lectures, tutorials & practical)
M2 Info (ENSL)	Performance Evaluation	18h (lectures)
M2 SIR (UCBL)	Network Architecture	18h (lectures, tutorials & practical)
M2 SIR (UCBL)	Advanced Networks	55.5h (lectures, tutorials & practical)
M1 Info (UCBL)	Project	3h
M2 SIR (UCBL)	Fellowship management	18h
M2 CCI (UCBL)	Fellowship management	3h

2010-2011 : Total amount of teaching : 193 hours

L3 (UCBL)	Networks	20h (tutorials)
M1 Info (UCBL)	Networking	66h (lectures, tutorials & practical)
M2 SIR (UCBL)	WAN and high-performance networks	63h (lectures, tutorials & practical)
M1 Info (UCBL)	Project	18h
M2 SIR (UCBL)	Fellowship management	24h
M2 CCI (UCBL)	Fellowship management	3h

2009-2010 : Total amount of teaching : 150 hours

L3 (UCBL)	Networks	44h (tutorials & practical works)
M1 Info (UCBL)	Networking	60h (lectures, tutorials & practical)
M2 CCI (UCBL)	Algorithm and Programming	3h (practical works)
M2 SIR (UCBL)	Client-Server Model, Network Administrator	22h (practical works)
M2 SIR (UCBL)	Internet Protocols	15h (practical works)
M2 TIW (UCBL)	Applicative Protocols for Internet	10h (practical works)
M1 Info (UCBL)	Project	12h

2005-2008 : Total amount of teaching : 260 hours

L1 (UVM)	Imperative Programming (C language)	32h (practical works)
L1 (UVM)	Experimental Algorithm	66h (tutorials & practical works)
L2 (UVM)	Computer Architecture	32h (practical works)
L3 (UVM)	Computational complexity theory	66h (tutorials & practical works)
L3 (UVM)	Operating Systems	64h (tutorials & practical works)

6 Teaching Responsibilities

- **Elected member** of the **Computer Science Departement council of UCBL** since March 2018.
- **Member** of the **Educational Commission of the Computer Science Departement of UCBL** since March 2018.
- **Elected member** of the **Advisory Committee** for the department of Computer Science for University Lyon 1 since January 2012.
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- Member of the **jury of Master 1** in Computer Science at the Université Claude Bernard Lyon 1 since 2010.
- Member of the **jury of Master 2 SRIV** in Computer Science at the Université Claude Bernard Lyon 1 since 2016.
- Member of the **educational team Systems & Networks** at the Université Claude Bernard Lyon 1 since 2010.
- Presenting the academic degrees in Computer Science proposed by the Université Claude Bernard Lyon 1 at **salon de l'étudiant** since 2016.

7 Research Activity

My research is in the area of performance evaluation, queueing theory, system modeling as applied to computer networks and computer systems. Examples include :

- Designing an **automatic approach** to get **calibrated models** based on measurements,
- Proposing efficient **semi-numerical methods** to solve some classical **queueing models**,
- Developing **probabilistic policies** to dynamically allocate resources in the **Clouds**,
- Devising a general framework for modeling the performance of an **IEEE 802.11 network**.

8 Participation to Research Projects

European project

- **SAIL** (FP7, Inria, 2009-2012).
Context : 25 partners with Ericsson as leader.
For more information : <http://www.sail-project.eu/>
Goals : Demonstrating the potential brought by the networking virtualization and by the dynamic allocation of resources.
Main results : A Ph.D. degree (2014) and several publications.

National projects

- **REFLEXION** (ANR Generic Call, ENS Lyon 2015-2017).
Context : partners : Thalès, Orange, Inria Sophia, LIP6, 6WIND, TPT.
For more information : <http://anr-reflexion.telecom-paristech.fr/>
Goals : Designing efficient and dynamic allocation of the switches resources (CPUs and RAM)

based on the actual networking activities.

Main results : Several publications.

I am the site leader for ENS Lyon.

- **DISCO** (ANR Appel Infra, ENS Lyon 2014-2016).
Context : partners : Thalès, Inria Sophia et 6WIND.
For more information : <http://anr-disco.ens-lyon.fr/>
Goals : Developing measurement and analytics algorithms to enhance the resource utilization of SDN networks.
Main results : A Ph.D. degree (2017) and several publications.
I am the site leader for ENS Lyon.
- **RESCUE** (ANR Appel Verso, ENS Lyon 2010-2013).
Context : partners : Inria Lille, LAAS (Toulouse), UPMC et Orange (FT).
For more information : <http://rescue.lille.inria.fr/>
Goals : Modeling the performance of a wireless substitution network.
Main results : A Ph.D. degree (2014) and several publications.
- **MISSION** (ARC, Inria, 2010-2011).
Context : partners : Inria Lille et LIP6.
For more information : <http://arcmission.lille.inria.fr/>
Goals : Characterizing the behavior of a wireless substitution network.
Main results : Several publications.

Industrial contract

- **Alcatel Lucent Bell Labs joint research lab.**
Context : Contributing to the Semantic Networks Task between 2008 and 2012.
Goals : Discovering necessary information to be included in a Knowledge plane for an efficient Admission Control.
Main results : A Ph.D. degree (2012), several publications, and a Demo at the Open Days of Alcatel Lucent in May 2012.

Miscellaneous

- **ENS Lyon project**, 2017-2020.
Context : Collaboration with the network Research Team from UPC (Polytechnic University of Catalonia)
Goals : Designing tools to improve the sharing of resources in vehicular networks.
I am the scientific leader for this project.
Main results : A publication in a conference.
- **Interdisciplinary project at LIP6**, 2006-2007.
Context : Collaboration with the Operational Research Team from LIP6 between 2006 and 2007
Goals : Designing a robust and efficient optimization method for calibrating queueing models.
I am the scientific leader for this project.
Main results : A publication in a journal.

9 International Collaborations and Mobility

I have close long-standing collaborations with :

- **University of California, Santa Cruz (UCSC)**. I work closely with Pr. A. BRANDWAJN. Since 2009, I visit his team for 2-4 weeks each year. Pr. A. BRANDWAJN was four times invited by Milyon Labex, ENS Lyon and Inria, spending almost 11 months in Lyon between 2010 and 2018. We design methods to solve queueing systems.
- **Polytechnic University of Catalonia (UPC)**. I work with Assoc. Pr. M. AGUILAR and Ass. Pr. Luis J. de la CRUZ LLOPIS. In June 2017, I visited her team for 1 week. We study vehicular networks.
- **LIP6 - NPA team**. I work closely with Ass. Pr. B. BAYNAT on several projects such as ANR RESCUE, DISCO and REFLEXION.
- The **University of Ottawa**. I collaborate closely with the laboratory headed by Pr. A. BOUKERCHETO to evaluate the behavior of communications in vehicular networks. I spent a full year there in 2015-2016 and a week in 2018.

I was the recipient of a mobility grant delivered by Inria for the academic year 2015-2016.

10 Supervision of Ph.D. Students

Former Ph.D. students

- **Doreid AMMAR**, "*Knowledge plane for semantic networking*", co-directed with I. Guérin-Lassous (2009-2012). Follow-up position : PostDoc at VTT (Finland) .
- **Roy SHUBHABRATA**, "*A Complete Framework for Modelling Workload Volatility of a VoD System : a Perspective to Probabilistic Management*", co-directed with P. Gonçalves (2010-2014). Follow-up position : Research engineer at RealEyes (Hungary) .
- **Thiago ABREU**, "*Modeling and performance analysis of IEEE 802.11-based chain networks*", co-directed with I. Guérin-Lassous (2011-2014). Follow-up position : PostDoc at LIP6 (France) .
- **Huu Nghi NGUYEN**, "*Estimating the end-to-end delay through passive methods*", co-directed with I. Guérin-Lassous and A. Busson (2014-2017). Follow-up position : Research engineer at SCOR (France) .

Current Ph.D. student

- **Marija STOJANOVA**, "*Adaptative solutions for multi-hop wireless networks*", (2016-), encadrée seul (100%).

11 Supervision of Postdoc. Students

Former Postdoc student

- **Guillaume ARTERO GALLARDO**, "*Performance modeling of virtual switching systems*", (2015-2016), encadré seul (100%). Follow-up position : Research engineer at Sysoco (France)

12 Supervision of M.Sc Students

Former M.Sc. students

- **Rémi DRUILHE**, ” *Communications in parallel applications : the Hadoop study case*”, co-directed with O. Glück and I. Guérin-Lassous (Feb - Jun 2010). Follow-up position : Ph.D. student at Orange Labs.
- **Aurélien LAFRANCHISE**, ” *Multiclass routing. Differentiated routing for real-time and elastic traffic*”, co-directed with I. Guérin-Lassous (Feb - Jun 2010). Follow-up position : Engineer at Snype Consulting.
- **The Quang BUI**, ” *Failover wireless network in the crisis context*”, co-directed with P. Gonçalves (Apr - Nov 2010). Follow-up position : Ph.D. student at Université Clermont-Ferrand II.
- **Van Dan NGUYEN**, ” *Multi-constrained routing : a first step toward a more realistic evaluation*”, co-directed with I. Guérin-Lassous (Apr - Nov 2010). Follow-up position : Research engineer in Mascotte team (Inria).
- **Nghi NGUYEN**, ” *Investigating the numerical behavior of matrix geometric methods for solving queueing systems*”, (Apr - Sep 2011), encadré seul (100%). Follow-up position : Research engineer in RESO team (Inria).
- **Omar DAHMANI**, ” *Experiments in multi-hop wireless networks*”, co-directed with I. Guérin-Lassous (Feb - Jun 2015). Follow-up position : Systres Consulting.
- **Zidong SU**, ” *Performance Evaluation of Virtual Switch By Polling System*”, co-directed with B. Baynat (Feb - Jun 2016). Follow-up position : Research engineer in Dante team (Inria).
- **Marija STOJANOVA**, ” *Studying the performance of the VANETs networks*”, co-directed with A. Busson (Feb - Jun 2016). Follow-up position : preparing a Ph.D. under my supervision .

Current M.Sc. students

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13 Dissemination, Collective Responsibilities, and Awards

Program Committees

I was co-chair of Program Committee for the following conference

- **Algotel 2019** (Conférence Francophone sur les aspects Algorithmiques appliquée aux problèmes des Télécommunications).

I was a member of Program Committee for the following conferences

- **IEEE LCN 2018, 2017, 2016, 2015** (IEEE Local Computer Networks Conference).
- **ACM MSWiM 2017** (ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems).
- **ACM PE-WASUN 2015, 2014, 2013, 2012** (ACM International Symposium on Performance Evaluation of Wireless Ad Hoc, Sensor, and Ubiquitous Networks).
- **IEEE CIF 2014** (IEEE International Workshop on Complex Information Flows).
- **NOTERE / CFIP 2012** (Nouvelles Technologies de la Répartition / Colloque Francophone sur l’Ingénierie des Protocoles).

Refereeing Activity

I have refereed articles submitted to :

- **Elsevier COR** - Computers & Operations Research
- **Elsevier JPDC** - Journal of Parallel and Distributed Computing
- **IEEE TMC** - Transactions on Mobile Computing
- **Elsevier AMM** - Applied Mathematical Modeling
- **Informa OR** - Operations Research
- **RAIRO** - Operations Research
- **IEEE CL** - Communications Letters

Participation to Juries of Ph.D. Thesis

I have been a member of the juries of the following Ph.D. Thesis :

- **Syed Zubair AHMAD**, “*QoS Optimization through Capacity Aggregation of multiple links in Heterogeneous Wireless Networks*”, delivered by Faculty of Engineering and Applied Sciences, Mohammad Ali Jinnah University, Islamabad, Pakistan, February 2011.
- **Ahmed HERBAOUI**, “*Towards automatic modeling and provisioning for distributed applications*” (“*Vers une modélisation et un dimensionnement automatiques des applications réparties*” in french), delivered by the Université de Grenoble, Grenoble, France, October 2011
- **El Hachemi BENDAHMANE**, “*Introduction Of Self-Optimization Features in a Selbenchmarking Architecture*” (“*Introduction de fonctionnalités d’auto-optimisation dans une architecture de selbenchmarking*” in french), delivered by the Université de Grenoble, Grenoble, France, September 2012.

Participation to Recruitment Committee

I have been a member of the recruitment committee for the following position :

- Assistant Professor at the Université Claude Bernard Lyon 1, Composante Informatique, Laboratory LIP, May 2013.
- Assistant Professor at the Université de Nice, Composante Informatique, Laboratory I3S, May 2015.
- Assistant Professor at the Université Claude Bernard Lyon 1, Composante Informatique, Laboratory LIP, May 2017.

Softwares development

- An online tool for solving classical queueing models (nearly 15 new visitors per day).
For more information : <http://queueing-systems.ens-lyon.fr>
- A demo during the “Open Days” of Alcatel Lucent in May 2012, for publicizing our work on admission control selected by a program committee.
For more information : <http://queueing-systems.ens-lyon.fr/kp/>

Session Chair

- **IEEE ASMTA 2011** (International Conference on Analytical and Stochastic Modelling Techniques and Applications).
- **IEEE MSWiM 2016** (ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems).
- **PE-WASUN 2016** (ACM International Symposium on Performance Evaluation of Wireless Ad Hoc, Sensor, and Ubiquitous Networks).
- **IEEE MSWiM 2018** (ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems).

Distinction

I am a recipient of the Scientific Excellence Award (Prime d'Excellence Scientifique) since 2012.

Miscellaneous

1. **Elected member** of the **LIP laboratory council** since February 2010.
2. Member of the LIP computer device commission since February 2018.
3. Coordinator for the **Research School** entitled "**Optimization and convexity**" held in ENS-Lyon in Winter 2011 and taught by J. Malick (Researcher CNRS) and C. Lemaréchal (Researcher Inria).
4. Technical expert for ANR on program INFRA 2013.
5. Coordinator for the **working groups** of Inria RESO team from 2009 to 2013.
6. Member of the Organizing Committee for **GRETSI 2015** (main francophone Conference on Image and Signal Processing). <http://gretsi.fr/colloque2015/>
7. Co-chair for tutorials scheduled during the conference **ACM MSWiM 2016**.
8. Technical expert for a joint PhD program between a french university and industry.

Talks ¹

- "*A brief tour of Machine Learning techniques*" at LIP Lab (ENS Lyon) (ENS Lyon), Lyon, France, December 2018.
- "*A modeling framework for the performance evaluation of DPDK-based virtual switches*" at Diva Lab (university Ottawa) (University of Ottawa), Ottawa, Canada, June 2018.
- "*Modeling WiFi in a multihop wireless network : feedback on experience*" at CITI Lab (INSA Lyon), Lyon, France, April 2018.
- "*Performance Modeling of Virtual Switching Systems*" at Napital University of Science and Technology (CUST) and Capital University of Science and Technology (CUST), Islamabad, Pakistan, August 2017.
- "*High-Level Modeling of the Communications between RSUs and vehicles - A preliminary study*" at the 5th NSERC DIVA workshop, Ottawa, Canada, February 2016.

1. Talks for presenting accepted papers at conferences & workshops are not listed here.

- “*Performance Modeling of Virtual Switching Systems*” at the Workshop Reflexion, GdR RSD - Journées Cloud 2016, Nice, France, September 2016.
- “*High-Level Modeling of the Communications between RSUs and vehicles - A preliminary study*” at the 5th NSERC DIVA workshop, Ottawa, Canada, February 2016.
- “*Modeling the Performance of an IEEE 802.11 path*” at Diva Lab (University of Ottawa), Ottawa, Canada, October 2015.
- “*An Admission Control based on a time-varying Queueing Model*” at IXXI (Institute for Complex Systems), Lyon, France, January 2013.
- “*A new approach to automatically get calibrated models based on performance measurements*” at LIP laboratory, Lyon, France, February 2011.
- “*New results for the Numerical Solutions of some classical Queueing Models*” at IFI (French Institute for the Computer Science), Hanoi, Vietnam, October 2010.

14 Publications

International Journals (15)

- [1] T. Begin, B. Baynat, G. Artero Gallardo, and V. Jardin. *An accurate and efficient modeling framework for the performance evaluation of DPDK-based virtual switches*. In *IEEE Transactions on Network and Service Management*, pages 1–14. 2018.
- [2] A. Brandwajn and T. Begin. *First-Come-First-Served Queues with Multiple Servers and Customer Classes*. *Performance Evaluation*, 2018.
- [3] A. Brandwajn, T. Begin, H. Castel-Taleb, and T. Atmaca. *A study of systems with multiple operating levels, probabilistic thresholds and hysteresis*. *IEEE Transactions on Parallel and Distributed Systems*, 29(4) :748–757, 2018.
- [4] M. Stojanova, T. Begin, and A. Busson. *Conflict graph-based model for IEEE 802.11 networks : A Divide-and-Conquer approach*. *Performance Evaluation*, 2018.
- [5] A. Brandwajn and T. Begin. *Multi-server preemptive priority queue with general arrivals and service times*. *Performance Evaluation*, 115 :150–164, 2017.
- [6] H. Soleimani, T. Begin, and A. Boukerche. *Safety message generation rate adaptation in lte-based vehicular networks*. *Computer Networks*, 128 :186–196, 2017.
- [7] T. Atmaca, T. Begin, A. Brandwajn, and H. Castel-Taleb. *Performance evaluation of cloud computing centers with general arrivals and service*. *IEEE Transactions on Parallel and Distributed Systems*, 27(8) :2341–2348, 2016.
- [8] T. Begin, B. Baynat, I. Guérin Lassous, and T. Abreu. *Performance analysis of multi-hop flows in IEEE 802.11 networks : A flexible and accurate modeling framework*. *Performance Evaluation*, 96 :12–32, 2016.
- [9] A. Brandwajn and T. Begin. *Breaking the dimensionality curse in multi-server queues*. *Computers & Operations Research*, 78 :141–149, 2016.

- [10] A. Brandwajn and T. Begin. *Reduced complexity in M/Ph/c/N queues*. *Performance Evaluation*, 78 :42–54, 2014.
- [11] A. Brandwajn and T. Begin. *A recurrent solution of Ph/M/c/N-like and Ph/M/c-like queues*. *Journal of Applied Probability*, 49(1) :84–99, 2012.
- [12] P. Gonçalves, S. Roy, T. Begin, and P. Loiseau. *Dynamic resource management in clouds : A probabilistic approach*. *IEICE Transactions on Communications, special session on Networking Technologies for Cloud Services*, 95(8) :2522–2529, 2012. Invited paper.
- [13] T. Begin, A. Brandwajn, B. Baynat, B. Wolfinger, and S. Fdida. *High-level approach to modeling of observed system behavior*. *Performance Evaluation*, 67(5) :386–405, 2010.
- [14] T. Begin, B. Baynat, A. Brandwajn, and F. Sourd. *A DFO technique to calibrate queueing models*. *Computers & Operations Research*, 37(2) :273–281, 2009.
- [15] T. Begin and A. Brandwajn. *Higher-order distributional properties in closed queueing networks*. *Performance Evaluation*, 66(11) :607–620, 2009.

Articles in Proceedings of International Conferences with Program Committee (27)

- [1] T. Begin, A. Busson, I. Guérin Lassous, and A. Boukerche. *Video on Demand in IEEE 802.11p-based Vehicular Networks : Analysis and Dimensioning*. In *Proceedings of the 21st International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems, ACM MSWiM'18*, pages 1–8. Montréal, Canada, 2018.
- [2] M. Stojanova, T. Begin, and A. Busson. *Conflict graph-based markovian model to estimate throughput in unsaturated ieee 802.11 networks*. In *Proceedings of the 15th International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks, IEEE/IFIP WiOpt'17*, pages 1–8. Paris, France, 2017.
- [3] Z. Su, B. Baynat, and T. Begin. *A new model for dpdk-based virtual switches (short paper)*. In *Proceedings of the 3rd Conference on Network Softwarization, IEEE NETSOFT'17*, pages 1–5. Bologna, Italy, 2017.
- [4] Z. Su, T. Begin, and B. Baynat. *Towards including batch services in models for dpdk-based virtual switches*. In *Proceedings of the 9th Conference on Global Information Infrastructure and Networking Symposium, IEEE GIIS'18*, pages 37–44. Saint Pierre, France, 2017.
- [5] G. Artero Gallardo, B. Baynat, and T. Begin. *Performance modeling of virtual switching systems*. In *Proceedings of the 24th IEEE International Symposium on Modelling, Analysis and Simulation of Computer and Telecommunication Systems, MASCOTS'16*, pages 125–134. London, England, 2016.
- [6] T. Begin and A. Boukerche. *A note on the causes degrading communication between RSUs and vehicles in overloaded conditions*. In *Proceedings of the 13th ACM International Symposium on Performance Evaluation of Wireless Ad Hoc, Sensor, and Ubiquitous Networks, ACM PE-WASUN'16*, pages 27–31. Valletta, Malta, 2016. Invited paper.
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15 Foreign Languages

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