

Pr. Colette Johnen

Current Position: since 1st September 2020 to the 31 august 2021 : I am in delegation at INRIA, Paris in the [Delys](#) project - Delys is a joint research group between [Inria](#) Paris France and CNRS/Sorbonne University Paris France through the “Laboratoire d’Informatique de Paris 6”, [LIP6](#) (UMR 7606).

Professional Experience: Since September 2008, I am full professor at the University of Bordeaux. I am member of Combinatorics and Algorithms team of “Laboratoire Bordelais de Recherche en Informatique” [LaBRI](#), UMR 5800.

2020-2024: Elected Member of CNU (French National Council of Universities for Computer Science).

Diplomas: at the University Paris-Sud (now called University Paris-Saclay)

- November 2007, HdR, title of manuscript: « Some contributions to self-stabilization », reviewers: Marc Bui (EPHE, France), Shlomi Dolev (Univ. of the Negev, Israel), Masafumi Yamashita (Kyushu University, Japan)
- December 1987, PhD, Title of dissertation: “Algorithmic Analysis of Petri Net: home space, rewriting systems”

Summary of my Research Activities

My research activities are focused on:

- o the design of efficient self-stabilizing algorithms,
- o the algorithm for highly dynamic networks,
- o Concurrent algorithm in shared memory.

H-index of 19 on all my publications (more than 1125 citations), and an H-index of 9 on publications published since 2015 (reference: Google Scholar). Most of my recent publications are available on HAL: <https://cv.archives-ouvertes.fr/colette-johnen>.

- 45 papers in international conferences with reading committees (dblp reference)
- Co-direction of 7 PhD thesis.
- Member of 17 French PhD jury without the theses I co-supervised (I was 6 times president of PhD jury and 6 times, I reviewer the PhD manuscript).
- Since 2009, I have been a member of 14 recruiting board of tenure position in French University (2 times for a full Professor position, and 12 times for an associated professor position).

Tasks relatively to teaching duties: 2015 to the end of August 2020

I taught in the computer science department of IUT of Bordeaux, University of Bordeaux in the DUT cursus.

Teaching collective responsibilities

- January 2016 - November 2019: elected member of the council of the IUT of Bordeaux, member of the management commission.
- 2013 - 2016, I was in charge of the recruitment (selection) process of the students in initial training of the DUT Computer Science at the IUT of Bordeaux.
- 2016 - until the end of August 2020, I was director of studies for the DUT computer science training "Special Year". This one-year training course allows to the attendees to obtain the diploma "computer science DUT"; this formation is dedicated to continuing training.

Teaching activities during 2015-2020

I was teaching in the computer science department of IUT de Bordeaux, University of Bordeaux.

The list of courses, for which I was responsible (I realized all the TD sheets related to these courses (UML, design pattern, ...) with their corrections:

- “Fundamentals of object-oriented design” course of 2nd semester of the DUT, 28h, since its implementation at the beginning of the 2013-14 academic year.
- “Advanced Object Design and Programming”, course of 3th semester of the DUT, 32h, since its implementation at the beginning of the academic year 2014-15.
- “Design and object-oriented programming” course of the DUT "special year ", 32h since the academic year 2012-13.

The courses, which I taught:

- Java Enterprise Edition (Java EE) course of 4th semester of the DUT, 16h, since the academic year 2015-16.
- Tutored project of 3th semester of the DUT, 10h, since the academic year 2016-17.
- Programming Object module of 2nd semester of the DUT, 8h since the academic year 2017-18.

Every year,

- of the IUT; I participated in the open house day
- fair to represent the computer science department; I spent an afternoon at the student
- least 5 end-of-study internships at the end of the DUT. I was a pedagogical referent for at

Collective responsibilities since 2015

2014- end of December 2017, I was deputy head at the Bordeaux doctoral School of Mathematics and Computer Science - EDM (ED39) in charge of computer science specialty.

Participation in scientific projects of French National Research Agency's (ANR) since 2015

- 2016-2022 : ANR [ESTATE](#) (Enhancing Safety and self-Stabilization in Time-Varying distributed Environments), the coordinator of the project is Pr. Franck Petit (LIP6).
- 2016-2022 : ANR [DESCARTES](#) (Abstraction Layers for Distributed Computing), the coordinator of the project is Pr. Cyril Gavaille (LaBRI).
- 2011-2015: ANR Blanc [DISPLEXITY](#) - Distributed Computing: computability and complexity - the project coordinator is Pr. Carole Delporte (LIAFA).

PhD supervision since 2015

- **Claire Capdevielle**, date of PhD defense: 3th November 2016, title manuscript « On the complexity of wait-free, abortable and/or solo-fast concurrent object implementations».
- **Yessin M. Neggaz**, date of PhD defense: 24th October 2016. « Automatic Classification of Dynamic Graphs ».
- **Matthieu Barjon** date of PhD defense: 1st December 2016, title of manuscript «On Delay-Tolerant Groups in Communicating Mobile Fleets».

Technical Program committee

International Conference :

- [2018](#): womENCourage 2018
- [2018](#): ICDCN'18 (19th International Conference on Distributed Computing and Networking)
- [2018](#): SSS'18 (20th Symposium on Stabilization, Safety, and Security of Distributed Systems).
- [2017](#): womENCourage 2017
- [2017](#): IPDPS 2017 (31st IEEE International Parallel & Distributed Processing Symposium).

Francophones Conference :

- [2020](#): Algotel 20 (22ème Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications)

Projet evaluation since 2015

- project BSF (United States-Israel Binational Science Foundation) 2017
- project of Kuwait University 2019

PhD Defense committees: 11 since 2015 (5 times chair of the committee and 5 times reviewer of the manuscript)

1. [2020](#): Marie Laveau, Université Paris Saclay – **reviewer of the manuscript**
2. [2019](#): Fabien Defoulon, Université Paris Saclay – *chair of the committee*
3. [2018](#): Christelle AL Hasrouty, Université de Bordeaux & University College Dublin
4. [2017](#): Thomas Geffroy, Université de Bordeaux - *chair of the committee*
5. [2017](#): Stamatina Petrolia, Université de Bretagne - **reviewer of the manuscript**
6. [2017](#): Anaïs Durand, Université Grenoble Alpes
7. [2016](#): Fadwa Boubekeur, Surbonne Univerversité - **reviewer of the manuscript**
8. [2016](#): Thanh-Tung, Université de Bordeaux - *chair of the committee*
9. [2015](#): François Avril, Université de Versailles Saint-Quentin - **reviewer of the manuscript**

10. 2015: Brahim Neggazi, Université de Lyon1 Université - **reviewer of the manuscript**
11. 2015 : Anna Zhukova, Université de Bordeaux - *chair of the committee*

HdR defense committees: 1 since 2015

- 2018 : Alessia Milani, Université Bordeaux.

Recruiting board of tenure position in French University: 7 since 2015

1. 2020: MCF, Université de Paris
2. 2020: MCF, Université Paris-Saclay
3. 2019 : MCF, Université Amiens Jules Verne
4. 2017: Pr, Université Versailles Saint Quentin en Yvelines
5. 2017: MCF, Université Grenoble-Alpes
6. 2016: Pr, Université de Chambéry
7. 2015: MCF, IUT d'Orsay, Université Paris-Saclay

List of my publication since 2015
<https://cv.archives-ouvertes.fr/colette-johnen>

Publication in International Journals since 2015

1. (SJR Q2) *Polynomial Silent Self-Stabilizing p -Star Decomposition*. Mohammed Haddad, Colette Johnen, Sven Köhler, Computer Journal(CJ), vol. 63, no. 2, pages 253-266, 2020.
<https://doi.org/10.1093/comjnl/bxz102>
2. (SJR Q2) *Disconnected components detection and rooted shortest-path tree maintenance in networks*. Christian Glacet, Nicolas Hanusse, David Ilcinkas, Colette Johnen. Journal of Parallel and Distributed Computing (JPDC), vol. 132, pages 299-309, 2019.
<https://doi.org/10.1016/j.jpdc.2019.05.006>
3. (SJR Q2) *Maintaining a Distributed Spanning Forest in Highly Dynamic Networks*. Matthieu Barjon, Arnaud Casteigts, Serge Chaumette, Colette Johnen, Yessin M. Neggaz, Computer Journal (CJ) , vol. 62, no. 2, pages 231-246, 2019, <https://doi.org/10.1093/comjnl/bxy069>
4. (SJR Q1) *On the complexity of basic abstractions to implement consensus*. Claire Capdevielle, Colette Johnen, Alessia Milani. Theoretical Computer Science (TCS), vol. 715, pages 86-96, 2018, <https://doi.org/10.1016/j.tcs.2017.12.039>
5. (SJR Q2) *Self-Stabilizing Disconnected Components Detection and Rooted Shortest-Path Tree Maintenance in Polynomial Step*. Stéphane Devismes, David Ilcinkas, Colette Johnen. Discrete Mathematics & Theoretical Computer Science (DMTCS), Vol. 19 no. 3, 2017, <http://dmtcs.episciences.org/4116>
6. (SJR Q1) *On the uncontended complexity of anonymous agreement*. Claire Capdevielle, Colette Johnen, Petr Kuznetsov, Alessia Milani. Distributed Computing (DC), vol. 30, no. 6, pages 459-468, 2017, <https://doi.org/10.1007/s00446-017-0297-z>
7. (SJR Q2) *Silent self-stabilizing BFS tree algorithms revisited*. Stéphane Devismes, Colette Johnen. Journal of Parallel and Distributed Computing (JPDC), vol 97, pages 11-23 2016.
<https://doi.org/10.1016/j.jpdc.2016.06.003>

Publication International Conferences since 2015

1. (Core A) *Self-Stabilizing Distributed Cooperative Reset*. Stéphane Devismes, Colette Johnen. 39th International Conference on Distributed Computing Systems (ICDCS 2019), pages 379-389, 2019. <https://doi.org/10.1109/ICDCS.2019.00045>
2. (Core2018 B) *Silent self-stabilizing scheme for spanning-tree-like constructions*. Stéphane Devismes, David Ilcinkas, Colette Johnen. 20th International Conference on Distributed Computing and Networking (ICDCN 2019), pages 158-167. 2019.
<https://doi.org/10.1145/3288599.3288607>
3. (Core B) *Self-Stabilizing Disconnected Components Detection and Rooted Shortest-Path Tree Maintenance in Polynomial Steps*. Stéphane Devismes, David Ilcinkas, Colette Johnen. 20th International Conference on Principles of Distributed Systems, (OPODIS 2016), 2016.
<https://doi.org/10.4230/LIPIcs.OPODIS.2016.10>
4. (Core B) *On the Uncontended Complexity of Anonymous Consensus*. Claire Capdevielle, Colette Johnen, Petr Kuznetsov, Alessia Milani. 29th International Symposium on Distributed Computing (OPODIS 2015), 2015.
<https://doi.org/10.4230/LIPIcs.OPODIS.2015.12>
5. *Memory Efficient Self-stabilizing Distance- k Independent Dominating Set Construction*. Colette Johnen. Third International Conference on Networked Systems (NETYS 2015) 354-366, 2015
https://doi.org/10.1007/978-3-319-26850-7_24

Short publications in international conferences since 2015

1. (Core A*) *Brief Announcement: Self-stabilizing Systems in Spite of High Dynamics*. Karine Altisen, Stéphane Devismes, Anaïs Durand, Colette Johnen, Franck Petit, in ACM Symposium on Principles of Distributed Computing (PODC'20), 2020.
<https://doi.org/10.1145/3382734.3404502>
2. (Core C) *Brief Announcement: Analysis of a Memory-Efficient Self-stabilizing BFS Spanning Tree Construction*. Ajoy K. Datta Stéphane Devismes, Colette Johnen, Lawrence L. Larmore, in 21th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS 2019), LNCS, 11914, pages 99-104, 2020
https://doi.org/10.1007/978-3-030-34992-9_8
3. (Core C) *Polynomial Silent Self-Stabilizing p -Star Decomposition (Short Paper)*. Mohammed Haddad, Colette Johnen, Sven Köhler, in Proc. of 18th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS 2016), LNCS 10083, pages 185-189, 2016 https://doi.org/10.1007/978-3-319-49259-9_15
4. (Core A) *Brief Announcements: On the Space Complexity of Conflict Detector Objects*, Claire Capdevielle, Colette Johnen, Petr Kuznetsov, Alessia Milani, 30th International Symposium on Distributed Computing (DISC 2016), 2016.
<http://www.disc-conference.org/wp/disc2016/program/>
5. (Core A) *Brief Announcement: On the Uncontended Complexity of Anonymous Consensus*, Claire Capdevielle, Colette Johnen, Petr Kuznetsov, Alessia Milani, 29th International Symposium on Distributed Computing (DISC 2015), 2015.
<http://www.disc-conference.org/wp/disc2015/program/>

Short publications in francophone conferences since 2015

1. *Élection Autostabilisante dans les Réseaux à Haute Dynamacité*. Karine Altisen, Stéphane Devismes, Anaïs Durand, Colette Johnen, Franck Petit. 22èmes Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (*AlgoTel 2020*), 2020.
<https://hal.archives-ouvertes.fr/hal-02791667>
2. *Soyez efficace rembobinez*. Stéphane Devismes, Colette Johnen. 21èmes Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (*AlgoTel 2019*), 2019.
<https://hal.archives-ouvertes.fr/hal-02118440v1>
3. *Schéma général auto-stabilisant et silencieux de constructions de type arbres couvrants*. Stéphane Devismes, David Ilcinkas, Colette Johnen. 20èmes Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (*AlgoTel 2018*), 2018.
<https://hal.archives-ouvertes.fr/hal-01781338v1>
4. *Polynomial Silent Self-Stabilizing Maximal p -Star Decomposition*. Mohammed Haddad, Colette Johnen, Sven Kohler. 19èmes Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (*AlgoTel 2017*), 2017. <https://hal.archives-ouvertes.fr/hal-01516163v1>
5. *Complexité du consensus anonyme en l'absence de concurrence*. Claire Capdevielle, Colette Johnen, Petr Kuznetsov, Alessia Milani. 18èmes Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (*AlgoTel 2016*), 2016.
<https://hal.archives-ouvertes.fr/hal-01304268v2>