Nathalie Mitton

+33 3 59 57 78 46   40, avenue Halley
nathalie.mitton@inria.fr   59650 Villeneuve d'Ascq, France

1 Profesionnal experiences

2024-... :	Head of Science for Inria Lille centre (*dlgue scientifique*)
2016-... :	Inria Senior Researcher (DR)
2012-... :	head of Inria research group FUN
2006-2016:	Inria Junior research (CR)

2 Diploma

Habilitation à diriger des recherches (HDR), *Internet des objets, auto-organisation et passage à l'échelle*
Université de Lille 1   26/05/2011
PhD, *Auto-organisation des réseaux sans fil multi-sauts* **INSA de Lyon**   27/03/2006
Engineer Diplomea, *es* Telecommunications **INSA de Lyon**   2003
MSC , **INSA de Lyon**   2003

3 Summary of research activities

Limited capacity communicating devices are invading our world. Relying on their communicating capacities allows for a large scale data collection through dynamic wireless networks. This is in this framework that I realised my research, focusing on communications and self-organisation of wireless sensor and robot networks, dealing with limited capacities (memory storage, computing resources, low energy autonomy, etc) and dynamic links subject to interference and link instability. My objective has been to propose simple, distributed, localised and efficient protocols that dynamically adapt by design to the environment specificities and care for final goal, usage, societal and environmental impact. In a nutshell, what (piece of) data to send, to whom, how, when, why, for what and for whom. Beyond research results, I have tried as mus as possible to combine an approach both theoretical and experimental.

4 Prizes and awards

Personal distinctions :

- April 2022: Nominated as among the 100 personalities in 2022 who are driving tech and innovation in the Hauts de France by The French Tech Lille.

- January 2021: Nominated as "Chevalier de l'ordre du mérite", national governmental distinction for her research in digital sciences,

- December 2020 : N2Women : Nominated as among the 10 stars in 2020, in networking and communications from ComSoc Society

Paper awards :

- Best Paper Award: ""Machine Learning Regression approach for Throughput Estimation in an IoT Environment" IEEE I-Things, 2021"

- Top Paper Award: "Towards a smart city based on cloud of things, a survey on the smart city vision and paradigm" [**??**] in ETT, 2016

- Best Paper Award: "A Thompson Sampling Approach to Channel Exploration-Exploitation Problem in Multihop Cognitive Radio Networks " [**??**] in Proc. 27th annual IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), 2016

- TPDS August 2012 **SpotLight Paper** of the month: forr "Hypocomb: Bounded-degree . Localized Planar Graphs for Wireless AdHoc Networks Ad Hoc Networks" [**??**].

- Best Demo Award: "Large scale geolocalization and routing experimentation with the SensLAB testbed" in IEEE International Conference on Mobile Ad hoc and Sensor Systems (MASS), 2011.

- Best Paper Award: "Adapting dynamically neighbourhood table entry lifetime in wireless sensor networks" [**??**] in Proc. 10th Inter. Conf. on Wireless Com. and Signal Processing, 2010.

Collective awards:

- Contribution by Inria FUN, S2 and ATOS in the CyberSane project nominated as a Key Innovator by the European Commission's Innovation Radar in August 2023

- TRACAVERRE project was finalist for the **Prix de l'Innovation VINCI 2015**.

- CENTR R&D award 2013 to the ANR Wings project by the Council of European National Top Level Domain registries (CENTR) in October 2013

- European RFID Award : for the DECARTE project by RFID European Lab of ESCP Europe in March 2012.

5 Research activities supervision

PhD supervision:

Undergoing PhD

- **Marwa Slimene** - *Blockchain-based security and audit for IoT and V2X communications.* Co-supervision with P. Sondi and A. Meddahi IMT . (**June 2023-...**).

- **Hazem Chaabi** - *Intelligent IoT devices management and functionalities virtualization on the edge* (**Dec. 2022-...**).

- **Jana Koteich** - *Context aware communication protocols* (**oct 2021-...**).

PhD defended

- **Nina Santi** - *Adaptive and dynamic edge gateways IoT-oriented deployments* **(oct 2020-dec 2023)**.

- **Edward Staddon** - *Threat detection, identification and quarantine in wireless IoT based Critical Infrastructures.* **(oct 2019-dec.2022)**.

- **Brandon Foubert** - *Polymorphical Wireless Communication for Smart Agriculture.* **(sept 2018-sept 2021)**.

- **Abdoul Aziz Mbacke** - *Optimized deployment and scheduling for RFID-Wireless sensor networks networks in a Smart City .* **(nov 2015- Oct 2018)**.

- **Jad Nassar** - *Ubiquitous network for Smart Grid.* **(nov 2015- Oct 2018)**. Supervision at 50% with Nicolas Gouvy, HEI.

- **Viktor Toldov** - *Interference and energy consumption in wireless networks.* **(oct. 2013-Jan 2017)**. Co-supervision with Laurent Clavier, Telecom Lille 1.

- **Riccardo Petrolo** - *Towards a uniformization of Internet of Things in Smart Cities.* **(sept. 2013-oct. 2016)**.

- **Mouna Rekik** - *Optimization of Smart Grids with sensor networks.* **(april 2013-july 2016)**. Co-supervision with Zied Chtourou, Académie militaire de Sfax, Tunisia.

- **Natale Guzzo** - *Design and Implementation of a communication stack for wireless sensor network based container monitoring.* **(nov. 2012-dec 2015)**. PhD funded by the TRAXENS company.

- **Roudy Dagher** - *Geolocalisation with wireless sensor networks.***(oct. 2012-oct 2015)**.

- **Tony Ducrocq** - *Toward a mixe architecture RFID and sensor networks..* **(nov 2010-nov 2013)**.

- **Nicolas Gouvy** - *Geographic routing in robot and sensor networks.* **(oct 2010-sept 2013)**.

- **Jovan Radak** - *Experimenting wireless sensor networks.* **(janv. 2010- dec. 2011)**.

- **Loc Schmidt** - *Distributed filtering and collect in RFID middlewares.* **(janv. 2008- dec. 2010)**.

6 Collectives responsibilities

- Participation to Inria collective tasks (only ongoing tasks)-:

  - Head of science for Inria Lille since January 2024
  - Deputy head of science for Inria Lille from 2022 to 2023
  - Elected member of Evaluation committee of Inria since 2015

- Expertise activities:

  - Thesis and HDR committees :
    * Reviewer the following (8) HdR defense committees : 2022: S. Hemour Univ. Bordeaux, J. Montavont Univ. Strasbourg, F. Bouabdallah Unv. Paris Est, 2021: F. Sailhan Paris Sorbonne, H. Lakhlef UTC, G. Papdopoulos Rennes, 2020: P. Sondi ULCO, 2019: T. Watteyne Universit Paris Sorbonne
    * Reviewer for the following (55) PhD defense committees : 12 en 2023 (D. Mishra, Universit de Lorraine, V. Basnavake, Universit de Franche Comt, L. Javet, universit de Paris Saclay, J. Bassil, Universit de Franche Comt, H. Yakan, Universit de Paris Saclay, D. Aouladhaj,, Universit Gustave Eiffel, O. Lourme, Universit de Lille, B. Senel Sorbonne Universit, I. Mokhtari INSA Lyon, H. Hadjur ENS Lyon, L. Chasserat Univ. Toulouse, R. Azu-Aisheh Sorbonne Universit). 5 en 2022 (E. Siratie Paris Saclay, S. Dai ENS Lyon, K. Jiokleng Toulouse, D.

Molla UGE, M. Fekih INSA Lyon) 10 in 2021 (W. Smit Univ. Stellenbosch, Afrique du Sud, L. Amichi Paris Saclay, N. Djidi Rennes, N. Makaren Paris Sorbonne, U. Coutaud Grenoble, A. Artega, Univ. Chile, D. Thomas, Macquarie Australie, S. Sibide, Clermont-Ferrand, C. Berenger Aix-Marseille, R. Grunblatt, Lyon), 6 in 2020 (T. Lagos, Rennes, J. Garcia, Toulouse, V. Kotosious Strasbourg, G. Bou Tayed, UBFC, D. Komguen, Insa Lyon), 6 in 2019 (G. Bu, Paris, F.J. Fabra Collado, Valencia Spain, M. Harmassi, La Rochelle, L. Besson, Rennes, P. Pittolo, Strasbourg, M. Naas, UBO), 5 in 2018 (S. Le Roux, Afrique du Sud, W. Badreddine, Paris, Y. Zguira, INSA Lyon, D. Shehadeh, IMT Rennes, H. Tall Clermont-Ferrand), 8 in 2017 (JG Kriek Toulouse, L. Reynaud, Lyon, R. Ben Messadou, La Rochelle; F. Ait Aoudia, Rennes 1, A. Sfar, UTC, D. Shehadeh, Rennes, C. Gonzales, Reims, P.O. Kamgueu, Nancy), 2 in 2016 (R. Leone Thales, Q. Bramas UPMC) and 12 older.

  * Members of 29 PhD and 4 HDR committees (other than reviewer role) between 2008 and 2023.

- Project evaluation

  * Evaluator for projects for French ANR, FWO-Research project, Amstic-Sud, South Africa National Research Fondation, Polish National Science Centre, Heinz Maier-Leibnitz-Prize (and much other before)
  * Member of the Advisory board of the H2020 SMARTLAGOON project and of the H2020 NGI pointer project.
  * Ambassador for the H2020 PLATOON project.

- Project evaluation

  * Member of several Maitre de Confrence committees (2 in 2023, 4 in 2022, 5 in 2021, 16 between 2016 and 2020), CPJ (1 in 2024, 2 in 2023) and Full Professor position committees (1 in 2024, 2 in 2023, 3 in 2022, 2 in 2021, 8 between 2016 and 2020) ,
  * Member of several research positions committees (2 CR (Inria and INRAe) and 1 DR in 2024, 1 CR and 1 DR in 2023, 18 committees between 2016 and 2022)

- Revues : Member of the editorial boards of Future Internet Section Internet of Things (since 2018), Journal of Interconnection Networks (JOIN) since 2021, **AdHocNetworks** (since 2012), IET Wireless Sensor Systems (WSS) (since 2013), **ComCom** (since 2014), Wireless Communications and Mobile Computing (WCMC) (since 2016) and Wiley Transactions Emerging Telecommunications Technologies (ETT) (since 2016).

- Conferences :

  * program co-chair of DCOSS 2024, WiMob 2024 and ICIN 2024
  * workshop and tutorial co-chair for EWSN 2024
  * TPC member for several conferences like : **Infocom** since 2020, **PerCom** since 2019, **DCOSS** since 2019, **WiMob** since 2017, **WCNC** since 2018, **CCNC** since 2017.
  * Conference organisation AdHocNow 2016, Algotel 2010 (co-organised with Tahiry Razafindralambo), JDIR 2008 and ICTF 2008 et 2009.

- Schools : co-program chair of the following summer schools Rescom 2021 and 2015 and EPRA 2012.

7 Management

7.1 Research group management

- Head of the Inria FUN team since January 2012 ($\tilde{1}5$ persons).

7.2 On-going Research Projects

- **HORIZON - Europe SLICES-PP (2022-2025).** Coordinator. As part of the construction of the European research infrastructure (ESFRI) SLICES-RI, several stages are being followed, including the

setting up of the legal and financial structure. This is the role of the SLICES-PP project (25 partners from 15 countries), which I am coordinating. I am also co-coordinating the construction of the French SLICES-RI node (SLICES-FR) with C. Perez, based on the FIT and Grid5k platforms.

- **DEFI ROAD-AI (2021-2025).** Co-coordinator. I am co-coordinating this DEFI project for Inria, which brings together 6 Inria teams in collaboration with Cerema. The aim of this project is to instrument roads and engineering structures in order to collect data and provide digital tools for a better understanding of changes in pavements and structures in order to improve predictive maintenance actions.

- **EA AGRINET (2018-2023).** Coordinator - The aim of this collaboration with the University of Stellenbosch, South Africa, is to manage resources (water, fertilisers, pesticides) more accurately by collecting plot-based data. My work focuses on frugal data feedback via heterogeneous networks.

- **Horizon Europe NEPHELE (2022 - 2025).** WP leader - NEPHELE ambitionne l'orchestration efficace, fiable et scurise de bout en bout d'applications hyper-distribues sur une infrastructure programmable qui s'tend sur tout le continuum de calcul, du Cloud l'Edge en passant par l'IoT. Ma contribution porte sur l'intgration des aspects IoT htrognes dans ce continuum. Je suis coordinatrice du WP sur l'tablissement des pr-requis et d'un cas d'usage.

8 Teaching

For the sake of clarity, I only mention here teaching activities active between 2012 and now.

- **Years 2011-2016** : Course in RFID Systems in Master at Telecom Sud Paris.

- **Years 2015-2016** : Cours on Contactless Technologies sur les technologies sans contact for bachelors in Université de Valenciennes.

- **Years 2012-2014**: Course in Autonomous networks in Master Université de Lille 1

- **Years 2010-2018** : Course in RFID Systems in Master (remote)

- **Years 2012-2023**: Course in Wireless Networks for Master at Telecom Lille 1

- **Years 2012-2023**: Course in Wireless Networks for Master at Université de Lille 1

- **Year 2017-20213**: Course in Internet of Things for Master at Central Lille

- **MOOC** : Co-chairing of the realization of a MOOC on Smart Cities (3 sessions in French, 2 in English, now open in self-paced mode.)

- **MOOC** : Participation to a MOOC "Internet of Things with Microcontrollers: a hands-on course" (more than 6300 registrations for the first session)

9 Patents

- Procédé d'adhésion à une grappe de dispositifs électroniques communiquant via un réseau sans fil. Pascal Daragon, Natale Guzzo, Nathalie Mitton et Arulnambi Nandagoban. Submitted on 21 june 2014 and accepted in December 2015. *Exploited by the TRAXENS company.*

- Procédé d'affiliation à une grappe de dispositifs électroniques communiquant via un réseau sans fil. Pascal Daragon, Natale Guzzo, Nathalie Mitton et Arulnambi Nandagoban. Submitted on 27 november 2014. *Exploited by the TRAXENS company.*

- Procédé de communication au sein d'une grappe de profondeur dynamique de dispositifs électroniques communicants. Pascal Daragon, Natale Guzzo, Nathalie Mitton et Arulnambi Nandagoban. Submitted on 25 March 2015.*Exploited by the TRAXENS company.*

- Géolocalisation passive, non intrusive et mono-ancre par réseau de capteurs. Roudy Dagher et Nathalie Mitton. Submitted on 31 March 2015.

10 Publications

My publications are available here : http://researchers.lille.inria.fr/ mitton/publications_hal.html.

Peer-reviewed International revues

1. Nathalie Mitton, Yasir Saleem, Valeria Loscri, Christophe Bureau " *Adaptive HELLO Protocol for Vehicular Networks.*" *ITU Journal on Future and Evolving Technologies, 2024, 5 (1).*

2. Bingying Wang, Jun Zheng, Nathalie Mitton, Cheng Li " *InP-CRS: an Intra-Platoon Cooperative Resource Selection Scheme for C-V2X Networks.*" *IEEE Communications Letters, 2023*

3. Chaima Zidi, Patrick Sondi, Nathalie Mitton, Martine Wahl, Ahmed Meddahi " *Review and Perspectives on the Audit of Vehicle-to-Everything Communications.*" *IEEE Access, 2023, 11, pp.81623-81645.*

4. Jana Koteich, Christian Salim, Nathalie Mitton " *Image processing based data reduction technique in WVSN for smart agriculture.*" *Computing, 2023*

5. Leonardo Militano, Adriana Arteaga, Giovanni Toffetti, Nathalie Mitton " *The Cloud-to-Edge-to-IoT Continuum as an Enabler for Search and Rescue Operations.*" *Future internet, 2023, 15 (2), pp.55.*

6. Damien Wohwe Sambo, Jens Dede, Nathalie Mitton, Anna Frster " *FuzDeMa: A portable Fuzzy-based Decision-Making tool for reliable communication in Wireless Underground Sensor Networks.*" *ITU Journal on Future and Evolving Technologies, 2023, 4 (3), pp.419-433.*

7. Edward Staddon, Valeria Loscri, Nathalie Mitton " *A Consensus-Based Approach to Reputational Routing in Multi-Hop Networks*" *ITU Future Journal on Future and Evolving Technologies , 2023*

8. Aroosa Hameed, John Violos, Aris Leivadeas, Nina Santi, Rmy Grnblatt, Nathalie Mitton " *Towards QoS Prediction based on Temporal Transformers for IoT Applications*" *IEEE Transactions on Network and Service Management, 2022*

9. Yasir Saleem, Nathalie Mitton, Valeria Loscri " *DIVINE: Data Offloading In Vehicular Networks with QoS Provisioning*", *Ad Hoc Networks, Elsevier, 2021, 123*

10. Edward Staddon, Valeria Loscri, Nathalie Mitton " *Attack Categorisation for IoT Applications in Critical Infrastructures, a Survey*", *Applied Sciences, MDPI, 2021, 11 (16), pp.7228.*

11. Firdose Saeik, Marios Avgeris, Dimitrios Spatharakis, Nina Santi, Dimitrios Dechouniotis, John Violos, Aris Leivadeas, Nikolaos Athanasopoulos, Nathalie Mitton, Symeon Papavassiliou " *Task Offloading in Edge and Cloud Computing: A Survey on Mathematical, Artificial Intelligence and Control Theory Solutions*", *Computer Networks, Elsevier, 2021, 19*

12. Brando Foubert, Nathalie Mitton " *RODENT: a flexible TOPSIS based routing protocol for multi-technologies devices in wireless sensor networks* ", *ITU Journal on Future and Evolving Technologies, ITU, 2021*

13. Christian Salim, Nathalie Mitton " *K-Predictions Based Data Reduction Approach in WSN for Smart Agriculture*", *Computing, Springer Verlag, 2020*

14. Ana Elisa Ferreira, Fernando Ortiz, Lus Henrique M. K. Costa, Brandon Foubert, Ibrahim Amadou, Nathalie Mitton " *A study of the LoRa signal propagation in forest, urban, and suburban environments*", *Annals of Telecommunications - annales des tlcommunications*, Springer, 2020

15. Dimitrios Dechouniotis, Nikolaos Athanasopoulos, Aris Leivadeas, Nathalie Mitton, Raphael Jungers, Symeon Papavassiliou " *Edge Computing Resource Allocation for Dynamic Networks: The DRUID-NET Vision and Perspective*", *Sensors, MDPI*, 2020, 20 (8)

16. Brandon Foubert, Nathalie Mitton " *Long-Range Wireless Radio Technologies: A Survey*", *Future Internet, MDPI*, 2020, 12 (1)

17. Farouk Mezghani, Nathalie Mitton " *Opportunistic multi-technology cooperative scheme and UAV relaying for network disaster recovery*", *Information, MDPI*, 2020, 11 (1)

18. Joo Pinto Neto, Lucas Gomes, Fernando Ortiz, Thales Almeida, Miguel Elias Mitre Campista, Luis Henrique Maciel Kosmalski Costa, Nathalie Mitton " *An Accurate Cooperative Positioning System for Vehicular Safety Applications*", *Computers and Electrical Engineering, Elsevier*, 2020, 83

19. Jad Nassar, Matthieu Berthom, Jrmy Dubrulle, Nicolas Gouvy, Nathalie Mitton, Bruno Quoitin " *Multiple Instances QoS Routing In RPL: Application To Smart Grids*", *Sensors, MDPI*, 2018, 18 (8)

20. Abdoul Aziz Mback, Nathalie Mitton, Herve Rivano "*A survey of RFID readers anticollision protocols*", *IEEE Journal of Radio Frequency Identification, IEEE,* 2018, 2 (1), pp.11.

21. Arun Das, Arunabha Sen, Chunming Qiao, Nasir Ghani, Nathalie Mitton "*RAPTOR: a network tool for mitigating the impact of spatially correlated failures in infrastructure networks*", *Annals of Telecommunications, Springer*, 2018

22. Farouk Mezghani, Nathalie Mitton "*Opportunistic Disaster Recovery*", *Internet Technology Letters, Wiley*, 2018

23. Farouk Mezghani, Nathalie Mitton "*Alternative opportunistic alert diffusion to support infrastructure failure during disasters*", *Sensors, MDPI*, 2017

24. Medeiros, Dianne S. V. and Elias Mitre Campista, Miguel and Mitton, Nathalie and Dias De Amorim, Marcelo and Pujolle, Guy " *The Power of Quasi-Shortest Paths: ρ-Geodesic Betweenness Centrality*", *IEEE Transactions on Network Science and Engineering*, 2017

25. Rekik, Mouna and Mitton, Nathalie and Chtourou, Zied " *GRACO: a geographic GReedy routing with an ACO-based void handling technique*", *International Journal of Sensor Networks*, 2017

26. Roberto Morabito, Riccardo Petrolo, Valeria Loscri, Nathalie Mitton " *LEGIoT: a Lightweight Edge Gateway for the Internet of Things*", *Future Generation Computer Systems, Elsevier, 2017*

27. Mbacké, Abdoul Aziz and Mitton, Nathalie and Rivano, Hervé " *RFID Reader Anticollision Protocols for Dense and Mobile Deployments* ", *MDPI Electronics Special Issue "RFID Systems and Applications"*, 2016

28. Erdelj, Milan; Mitton, Nathalie; Razafindralambo, Tahiry " *Robust Wireless Sensor Network Deployment* ", *Discrete Mathematics and Theoretical Computer Science (DMTCS)*, 2016, 17 (3), pp.105-130

29. Petrolo, Riccardo; Morabito, Roberto; Loscri, Valeria; Mitton, Nathalie " *The design of the gateway for the Cloud of Things*", *Annals of Telecommunications - annales des tlcommunications, Springer*, 2016

30. Wang, Yu; Zheng, Jun; Mitton, Nathalie. **"*Delivery Delay Analysis for Roadside Unit Deployment in Vehicular Ad Hoc Networks with Intermittent Connectivity*"**, *IEEE Transactions on Vehicular Technology* (2016).

31. Militano, Leonardo ; Erdelj, Milan; Molinaro, Antonella; Mitton, Nathalie; Iera, Iera. **"*Recharging vs. Replacing Sensor Nodes Using Mobile Robots for Network Maintenance*"**, *Telecommunications Systems* (2016).

32. Rekik, Mouna; Chtourou, Zied; Mitton, Nathalie; Atieh, Ahmad. **"*Geographic routing protocol for the deployment of virtual power plant within the smart grid*"**, *Sustainable Cities and Society, Elsevier* (2016).

33. Adjih, Cédric; Baccelli, Emmanuel; Fleury, Eric; Harter, Gaetan; Mitton, Nathalie; Noel, Thomas; Pissard-Gibollet, Roger; Saint-Marcel, Frederic; Schreiner, Guillaume; Vandaele,Julien; Watteyne; Thomas **"*FIT IoT-LAB: A Large Scale Open Experimental IoT Testbed – A valuable tool for IoT deployment in Smart Factories*"**, *IEEE ComSoc Multimedia Technical Committee E-Letter* (2015).

34. Fleury, Eric; Mitton, Nathalie; Noel, Thomas; Adjih, Cédric. **"*FIT IoT-LAB: The Largest IoT Open Experimental Testbed*"**, *ERCIM News* (2015).

35. Tonneau, Anne-Sophie; Mitton, Nathalie; Vandaele, Julien.. **"*How to choose an experimentation platform for wireless sensor networks?*"**, *Elsevier Adhoc networks*, 30:12, (2015).

36. Petrolo, Riccardo; Loscri, Valeria; Mitton, Nathalie, **"*Towards a smart city based on cloud of things, a survey on the smart city vision and paradigms*"**, *Transactions on Emerging Telecommunications Technologies* (2015)

37. Loscri, Valeria; Marchal, César; Mitton, Nathalie; Fortino, Giancarlo; Vasilakos, Athanasios, **"*Security and Privacy in Molecular Communication and Networking: Opportunities and Challenges*"**, *IEEE Transactions on NanoBioscience* (2014)

38. Petrolo, Riccardo; Loscri, Valeria; Mitton, Nathalie, **"*Towards a Cloud of Things Smart City*"**, *IEEE COMSOC MMTC E-Letter* (2014)

39. Schiele, Gregor; Soldatos, John; Mitton, Nathalie, **"*Moving Towards Interoperable Internet-of-Things Deployments in Smart Cities*"**, *Ercim News (98)* (2014)

40. Anciaux, Nicolas; Bouganin, Luc; Delot, Thierry; Ilarri, Sergio; Kloul, Leïa; Mitton, Nathalie; Pucheral, Philippe, **"*Opportunistic Data Services in Least Developed Countries: Benefits, Challenges and Feasibility Issues*"**, *ACM SIGMOD Record* (2014)

41. Ducrocq, Tony; Hauspie, Michaël; Mitton, Nathalie, **"*Balancing energy consumption in clustered wireless sensor networks*"**, *ISRN Sensor Networks* (2013)

42. Li, Xu; Mitton, Nathalie; Simplot-Ryl, Isabelle; Simplot-Ryl, David, **"*Hypocomb: Bounded-degree Localized Geometric Planar Graphs for Wireless Ad Hoc Networks*"**, *IEEE Transactions on Parallel and Distributed Systems (TPDS)* - Spotlight Paper August 2012 (2013) **24**, **7**

43. Mitton, Nathalie; Simplot-Ryl, David; Zheng, Jun, **"*Guaranteed Delivery in k-Anycast Routing in Multi-Sink Wireless Networks*"**, *ICST Mobile Communications and Applications* (2013)

44. Mitton, Nathalie; Razafindralambo, Tahiry; Simplot-Ryl, David; Stojmenovic, Ivan, **"*Towards a Hybrid Energy Efficient Multi-Tree-Based Optimized Routing Protocol for Wireless Networks*"**, *Sensors* (2013) **12**

45. Li, Xu; Mitton, Nathalie; Stojmenovic, Ivan; Nayak, Amiya, **"Achieving Load Awareness in Position-based Wireless Ad Hoc Routing"**, *Journal of Convergence (JOC)* (2012) **3**, **3**

46. Gouvy, Nicolas; Hamouda Elhafsi, Essia; Mitton, Nathalie; Simplot-Ryl, David, **"Minimising Energy Consumption through Mobility with Connectivity preservation in Sensor Networks"**, *The International Journal of Parallel, Emergent and Distributed Systems* (2012)

47. Li, Xu; Mitton, Nathalie; Simplot-Ryl, Isabelle; Simplot-Ryl, David, **"Dynamic Beacon Mobility Scheduling for Sensor Localization"**, *IEEE Transactions on Parallel and Distributed Systems (TPDS)* (2012) **23**, **8**

48. Mitton, Nathalie; Papavassiliou, Symeon; Puliafito, Antonio; Trivedi, Kishor, **"Combining Cloud and sensors in a smart city environment"**, *EURASIP Journal on Wireless Communications and Networking* (2012) **1**

49. Delot, Thierry; Mitton, Nathalie; Ilarri, Sergio; Hien, Thomas, **"GeoVanet: A Routing Protocol for Query Processing in Vehicular Networks."**, *Mobile Information Systems* (2011) **7**, **4**

50. Gluhak, Alex; Krco, Srdjan; Nati, Michele; Pfisterer, Daniel; Mitton, Nathalie; Razafindralambo, Tahiry, **"A Survey on Facilities for Experimental Internet of Things Research"**, *IEEE Communications Magazine,* (2011) **49**, **11**.

51. Mitton, Nathalie; Simplot-Ryl, David, **"From the Internet of things to the Internet of physical world"**, *Comptes rendus - Physique de l'Académie des sciences* (2011) **12**

52. Mitton, Nathalie; Sericola, Bruno; Tixeuil, Sébastien; Fleury, Eric; Guérin Lassous, Isabelle, **"Self-stabilization in Self-organized Wireless Multihop Networks"**, *Ad Hoc & Sensor Wireless Networks (AHSWN)* (2011) **11**, **1-2**

53. Hamouda, Essia; Mitton, Nathalie; Pavkovic, Bogdan; Simplot-Ryl, David, **"Energy-aware Georouting with Guaranteed Delivery in Wireless Sensor Networks with Obstacles"**, *International Journal of Wireless Information Networks (IJWIN).* (2009) **16**, **3**

54. Mitton, Nathalie; Paroux, Katy; Sericola, Bruno; Tixeuil, Sébastien, **"Ascending runs in dependent uniformly distributed random variables: Application to wireless networks"**, *Methodology And Computing In Applied Probability* (2008) **0802.1387**, **11009**

55. Mitton, Nathalie; Busson, Anthony; Fleury, Eric, **"Efficient Broadcasting in Self-Organizing Sensor Networks"**, *International Journal on Distributed Sensor Networks (IJDSN)* (2006) **2**, **2**

Peer-reviewed International Conferences

56. Dataset Collection of Multi-Communication Technologies Monitored in Different Mobility Contexts " **Jana Koteich, Nathalie Mitton"**, 20th International Wireless Communications & Mobile Computing Conference (IWCMC), May 2024, Ayia Napa, Cyprus

57. Machine Learning Approach for Mobility Context Classification using Radio Beacons " **Jana Koteich, Nathalie Mitton"**, MASCOTS 2023 IEEE, Oct 2023, New York, United States

58. Nour El Hoda Djidi, Damien Wohwe Sambo, Matthieu Gautier, Olivier Berder, Nathalie Mitton " **WUBBLE: Energy Efficient BLE Neighborhood Discovery Leveraging Wake-up Radio"**, Algorithmics of Wireless Networks, 19th International Symposium on Algorithmics of Wireless Networks (ALGOWIN 2023), Sep 2023, Amsterdam, Netherlands

59. Brandon Foubert, Christian Salim, Nathalie Mitton " **Chained estimation for data reduction-driven routing in wireless sensor networks"**, WiMob 2023 - 19th International Workshop on Selected Topics in Wireless and Mobile computing, Jun 2023, Montreal, Canada

60. Francois-Xavier Molina, Vincent Roca, Roudy Dagher, Emmanuel Baccelli, Nathalie Mitton, Antoine Boutet, Mathieu Cunche " *PEPPER: Precise Privacy-Preserving Contact Tracing with Cheap, BLE/UWB Capable Tokens*", WoWMoM 2023 - 24th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks, Jun 2023, Boston, United States.

61. Bingying Wang, Nathalie Mitton, Jun Zheng " *PreZcast: A Preferred-Zone Based Broadcast Protocol for Urban Areas of VANETs*", IEEE ICC 2023 - IEEE International Conference on Communications, May 2023, Roma, Italy

62. Aroosa Hameed, John Violos, Nina Santi, Aris Leivadeas, Nathalie Mitton " *A Machine Learning Regression approach for Throughput Estimation in an IoT Environment*", 14th IEEE International Conference on Internet of Things (I-Things), December 2022, Melbourne, Australia **Best paper**

63. Edward Staddon, Valeria Loscri, Nathalie Mitton " *AODV-Miner: Consensus-Based Routing Using Node Reputation*", 18th International Conference on Wireless and Mobile Computing, Networking and Communications (Wimob), October 10-12 2022, Thessaloniki, Greece

64. Nina Santi, Rmy Grnblatt, Brandon Foubert, Aroosa Hameed, John Violos, Aris Leivadeas, Nathalie Mitton " *Automated and Reproducible Application Traces Generation for IoT Applications*", ACM Symposium on QoS and Security for Wireless and Mobile Networks (Q2SWinet), November 22–26, 2021, Alicante, Spain

65. Yasir Saleem, Nathalie Mitton, Valeria Loscri " *A QoS-Aware Hybrid V2I and V2V Data Offloading for Vehicular Networks*", IEEE Vehicular Technology Conference (VTC-Fall), Sep 2021, Virtual, United States

66. Christian Salim, Nathalie Mitton " *Image Similarity based Data Reduction Technique in Wireless Video Sensor Networks for Smart Agriculture*", IEEE AINA, May 2021, Virtual

67. Roudy Dagher, Francois-Xavier Molina, Alexandre Abadie, Nathalie Mitton, Emmanuel Baccelli " *An Open Experimental Platform for Ranging, Proximity and Contact Event Tracking using Ultra-Wide-Band and Bluetooth Low-Energy*", IEEE INFOCOM Workshop on Computer and Networking Experimental Research using Testbeds (CNERT), May 2021, Virtual

68. Brandon Foubert, Nathalie Mitton " *Lightweight network interface selection for reliable communications in multi-technologies wireless sensor networks* ", IEEE International Conference on the Design of Reliable Communication Networks (DRCN), April 2021, Virtual

69. Christian Salim, Nathalie Mitton " *On-Node Correlation Based Data Reduction in WSN for Smart Agriculture*", IEEE ANTS, December 2020, Virtual

70. Morgan O'kennedy, Thomas Niesler, Riaan Wolhuter, Nathalie Mitton " *Practical evaluation of carrier sensing for a LoRa wildlife monitoring network*", IFIP Networking, June 2020, Virtual

71. Christian Salim, Nathalie Mitton " *Multi-channel Distributed MAC protocol for WSN-based wildlife monitoring*", 1AINA 2020 - 34th International Conference on Advanced Information Networking and Applications, APRIL 2020, VIRTUAL

72. Farouk Mezghani, Nathalie Mitton "*Using Fuzzy Logic for data priority aware collection in RFID sensing wireless networks*", Information and Communication Technologies for Disaster Management (ICT-DM), Dec. 2019, Paris, France.

73. Jelena Stanulovic, Nathalie Mitton, Ivan Mezei "*Robot Task Allocation based on Greedy-Face-Greedy Algorithm*", Telecommunications Forum (TELFOR), Nov 2019, Belgrade, Serbia

74. Ibrahim Amadou, Brandon Foubert, Nathalie Mitton **"LoRa in a haystack: a study of the LoRa signal behavior"**, WiMob 2019 - 15th International Conference on Wireless and Mobile Computing, Networking and Communications, Oct 2019, Barcelona, Spain

75. Farouk Mezghani, Pranvera Kortoi, Nathalie Mitton, Mario Di Francesco **"Using Fuzzy Logic for data priority aware collection in RFID sensing wireless networks"**, PIMRC 2019 - IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, Sep 2019, Istanbul, Turkey.

76. Francesca Guerriero, Luigi Di Puglia Pugliese, Nathalie Mitton **"Efficient wireless sensor deployment at minimum cost"**, AdHoc-Now 2019 - 18th International Conference on Ad Hoc Networks and Wireless,Oct. 2019, Luxembourg.

77. Antoine Gallais, Thin-Hinen Hedli, Valeria Loscri, Nathalie Mitton **"Denial-of-Sleep Attacks against IoT Networks"**, CoDIT 2019 - 6th International Conference on Control, Decision and Information Technologies, Apr 2019, Paris, France

78. Viktor Toldov, Laurent Clavier, Nathalie Mitton **"Multi-channel Distributed MAC protocol for WSN-based wildlife monitoring"**, WiMob 2018 - 14th International Conference on Wireless and Mobile Computing, Networking and Communications, Oct 2018, Limassol, CyprusSpain

79. Farouk Mezghani, Nathalie Mitton **" Open problem: Energy-and time-efficient dynamic drone path planning for post-disaster network servicing"**, ODS 2018 - International Conference on Optimization and Decision Science, Sep 2018, Taormina, Italy. 2018

80. Abdoul Aziz Mback, Nathalie Mitton, Herv Rivano **"Using Fuzzy Logic for data priority aware collection in RFID sensing wireless networks"**, PIMRC 2018 - IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, Sep 2018, Bologne, Italy.

81. Abdoul Aziz Mback, Nathalie Mitton, Herv Rivano **"DACAR: Distributed & Adaptable Cross-layer Anticollision and Routing protocol for RFID"**, AdHoc-Now 2018 - 17th International Conference on Ad Hoc Networks and Wireless, Sep 2018, St Malo, France. 2018,

82. Farouk Mezghani, Nathalie Mitton **" Benchmarking smartphone performances for cooperative disaster alert diffusion"**, AdHoc-Now 2018 - 17th International Conference on Ad Hoc Networks and Wireless, Sep 2018, Saint Malo, France

83. Jad Nassar, Karen Miranda, Nicolas Gouvy, Nathalie Mitton **"Heterogeneous data reduction in WSN: Application to Smart Grids"**, SMARTOBJECTS 2018 - 4th Workshop on Experiences with the Design and Implementation of Smart Objects, Jun 2018, Los Angeles, California, United States

84. **"Dead Reckoning Using Time Series Regression Models"**, Joo Pinto Neto, Nathalie Mitton, Miguel Elias M. Campista, Lus Henrique M. K. Costa MobiHoc 2018 - 4th ACM MobiHoc Workshop on Experiences with the Design and Implementation of Smart Objects, Jun 2018, Los Angeles, United States. 18, 2018,

85. Jad Nassar, Nicolas Gouvy, Nathalie Mitton **" QoS-compliant Data Aggregation for Smart Grids "**, ENERGY 2018 - The Eighth International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies, Nice, France (2018)

86. Mohamed El Amine Seddik, Viktor Toldov, Laurent Clavier, Nathalie Mitton **" From Outage Probability to ALOHA MAC Layer Performance Analysis in Distributed WSNs "**, IEEE Wireless Communications and Networking Conference (WCNC), Barcelona, Spain (2018)

87. Rekik, Mouna and Mitton, Nathalie and Chtourou, Zied " *QoS-aware routing for real-time and reliable wireless sensor network based Smart Grid NAN communications* ", IEEE Smart World Congress (SmartWorld), San Francisco, United States (2017)

88. Farouk Mezghani, Nathalie Mitton " *Opportunistic Alert Diffusion in Disaster Scenario - Stay Alive Longer !* ", IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), Montreal, Canada (2017)

89. Merle, Philippe and Gourdin, Christophe and Mitton, Nathalie "*Mobile Cloud Robotics as a Service with OCCIware* ", IEEE International Congress on Internet of Things (ICIOT), Honolulu, Hawaii, United States (2017) **Best paper**

90. Morabito, Roberto and Petrolo, Riccardo and Loscri, Valeria and Mitton, Nathalie and Ruggeri, Giuseppe and Molinaro, Antonella "*Adaptive Filtering as a Service for Smart City Applications* ", International Symposium on Integrated Network Management (IM), Lisbon, Portugal (2017)

91. Wang, Zhenyu and Zheng, Jun and Wu, Yuying and Mitton, Nathalie "*A Centrality-based RSU Deployment Approach for Vehicular Ad Hoc Networks* ", IEEE International Conference on Communication 2017 Ad-Hoc and Sensor Networking Symposium (ICC), Paris, France (2017)

92. Petrolo, Riccardo and Loscri, Valeria and Mitton, Nathalie and Herrmann, Elisa "*Adaptive Filtering as a Service for Smart City Applications* ", IEEE International Conference on Networking, Sensing and Control (ICNSC), Cosenza, Italy (2017)

93. Mbacké, Abdoul Aziz and Mitton, Nathalie and Rivano, Hervé " *RFID Anticollision in Dense Mobile Environments*", IEEE Wireless Communications and Networking Conference (WCNC), San Francisco, USA (2017)

94. Morabito, Roberto and Petrolo, Riccardo and Loscri, Valeria and Mitton, Nathalie "*Demo: Design of a Virtualized Smart Car Platform* ", International conference on embedded wireless systems and networks (EWSN), Uppsala , Sweden (2017)

95. Vandaële, Julien and Duquennoy, Simon and Mitton, Nathalie "*Demo: Large-scale Sensing, Mobility, and Monitoring with the FIT IoT-LAB Testbed* ", International conference on embedded wireless systems and networks (EWSN), Uppsala , Sweden (2017)

96. Merle, Philippe and Gourdin, Christophe and Mitton, Nathalie "*Mobile Cloud Robotics as a Service with OCCIware* ", IEEE International Congress on Internet of Things (ICIOT),Honolulu, Hawaii, United States (2017)

97. Mbacké, Abdoul Aziz and Mitton, Nathalie and Rivano, Hervé " *Data gathering solutions for dense RFID deployments*", IEEE International Conference on Ubiquitous Intelligence and Computing (UIC), San Francisco, USA (2017)

98. Rekik, Mouna and Mitton, Nathalie and Chtourou, Zied " *QoS-aware routing for real-time and reliable wireless sensor network based Smart Grid NAN communications*", IEEE Smart World Congress (SmartWorld 2017), San Francisco, USA (2017)

99. Morabito, Roberto and Petrolo, Riccardo and Loscri, Valeria and Mitton, Nathalie and Ruggeri, Giuseppe and Molinaro, Antonella " *Enabling a lightweight Edge Gateway-as-a-Service for the Internet of Things*", International Conference on Network of the Future (NoF), Buzios, Rio de Janeiro, Brazil (2017)

100. Morabito, Roberto; Petrolo, Riccardo; Loscri, Valeria; Mitton, Nathalie " ***Lightweight Virtualization as Enabling Technology for Future Smart Cars*** ", International Symposium on Integrated Network Management (IM), Lisbon, Portugal (2016)

101. Sen, Arunabha ; Das, Arun; Zhou, Chenyang; Mazumder, Anisha ; Mitton, Nathalie; Mback, Abdoul Aziz"***Reader Scheduling for Tag Access in RFID Systems***", International Conference on Network of the Future (NoF), Buzios, Rio de Janeiro, Brazil (2016)

102. Medeiros, Dianne S. V.; Campista, Miguel Elias; Mitton, Nathalie; Dias de Amorim, Marcello; Pujolle, Guy "***Weighted Betweenness for Multipath Networks***", Global Information Infrastructure and Networking Symposium (GIIS), Porto, Portugal (2016)

103. Mback,Abdoul Aziz; Mitton, Nathalie; Rivano, Herv "***Distributed Efficient & Fair Anticollision for RFID protocol***",

    International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob), New York, United States. (2016)

104. Toldov, Viktor; Clavier, Laurent ; Loscr, Valeria; Mitton, Nathalie "***A Thompson Sampling Approach to Channel Exploration-Exploitation Problem in Multihop Cognitive Radio Networks***", International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), Valencia, Spain (2016) **Best paper**

105. Petrolo, Riccardo; Roukounaki, Aikaterini ; Loscri, Valeria; Mitton, Nathalie; Soldatos, John "***Connecting physical things to a SmartCity-OS***", International IEEE SECON Workshop on Toward a city-wide pervasive environment (CowPer), London, United Kingdom (2016)

106. Toldov, Viktor; Igual-Prez, Romn ; Vyas,Rahul; Bo, Alexandre ; Clavier, Laurent ; Mitton, Nathalie "***Experimental Evaluation of Interference Impact on the Energy Consumption in Wireless Sensor Networks*** ", International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM), Coimbra, Portugal (2016)

107. Toldov, Viktor; Meijers, JP; Igual-Prez, Romn ; Wolhuter, Riaan; Mitton, Nathalie; Clavier, Laurent "***Performance evaluation of LoRa radio solution for PREDNET wildlife animal tracking project***" LPWAN, Paris Roissy, France (2016)

108. Petrolo, Riccardo; Guzzo Bonifacio, Salvatore; Loscri, Valeria; Mitton, Nathalie "***The discovery of relevant data-sources in a Smart City environment***", International IEEE SMARTCOMP Workshop on Sensors and Smart Cities (SSC), St. Louis, Missouri, United States (2016)

109. Petrolo, Riccardo; Loscri, Valeria; Mitton, Nathalie "***Confident-based Adaptable Connected objects discovery to HArmonize smart City Applications.***", IFIP Wireless Days (WD), Toulouse, France (2016)

110. Maskooki, Arash; Toldov, Viktor; Clavier, Laurent; Loscri, Valeria; Mitton, Nathalie "***Competition: Channel Exploration/Exploitation Based on a Thompson Sampling Approach in a Radio Cognitive Environment.***", International Conference on Embedded Wireless Systems and Networks (dependability competition) (EWSN), Graz Austria (2016)

111. Das, Arun; Sen, Arunabha; Qiao, Chunming, Ghani, Nasir, Mitton, Nathalie. "***A Network Planning and Management Tool for Mitigating the Impact of Spatially Correlated Failures in Infrastructure Networks.***", International Conference on Design of Reliable Communication Networks (DRCN), Paris, France (2016)

112. Das, Arun; Sen, Arunabha; Mitton, Nathalie; Mazumder, Anisha. "***On Mobile Sensor Data Collection Using Data Mules***", 9th International Workshop on Wireless Sensor, Actuator and Robot Networks (WiSARN) Kauai, United States (2016)

113. Adjih, Cédric; Baccelli, Emmanuel; Fleury, Eric; Harter, Gaetan; Mitton, Nathalie; Noel, Thomas; Pissard-Gibollet, Roger; Saint-Marcel, Frederic; Schreiner, Guillaume; Vandaele, Julien; Watteyne; Thomas **"FIT IoT-LAB: A Large Scale Open Experimental IoT Testbed"**, IEEE World Forum on Internet of Things (IEEE WF-IoT) Milan, Italy (2015)

114. Miranda, Karen; Mitton, Nathalie; Ramos, Victor. **"An autoregressive estimator for overhead reduction in Substitution Networks"**, International Conference on Next Generation Mobile Applications, Services and Technologies (NGMAST) Cambridge, United Kingdom (2015)

115. Loscri, Valeria; Guzzo Bonifacio, Salvatore; Mitton, Nathalie; Fiorenza, Simone. **"Associative Search Network for RSSI-based Target Localization in Unknown Environments"**, International Conference on Ad Hoc Networks (AdHocNets) San Remo, Italy (2015)

116. Amadou, Ibrahim; Mitton, Nathalie. **"HAMAC: High Adaptive MAC Protocol for DenseR-FID reader-to-reader Networks"**, International Conference on Ad Hoc Networks (AdHocNets) San Remo, Italy (2015)

117. Dagher, Roudy; Mitton, Nathalie. **"Online Path Loss Estimation for Localization Using Large Aperture Array Signal Processing"**, 23rd European Signal Processing Conference (EUSIPCO) Nice, France (2015)

118. Quilez, Roberto; Zeeman, Adriaan; Mitton, Nathalie; Vandaele, Julien. **"Docking autonomous robots in passive docks withInfrared sensors and QR codes"**, International Conference on Testbeds and Research Infrastructures for the Development of Networks & Communities (TridentCOM) Vancouver, Canada (2015)

119. Rekik, Mouna; Chtourou, Zied; Mitton, Nathalie. **"A Scalable Geographic Routing Protocol for Virtual Power Plant Communications"**, The 15 IEEE International Conference on Environment and Electrical Engineering (EEEIC) Rome, Italy (2015)

120. Rekik, Mouna; Chtourou, Zied; Mitton, Nathalie. **"Geographic Routing Protocol for Peer-to-Peer Smart Grid Neighborhood Area Network"**, The 15 IEEE International Conference on Environment and Electrical Engineering (EEEIC) Rome, Italy (2015)

121. Rekik, Mouna; Chtourou, Zied; Mitton, Nathalie. **"Geographic GReedy routing with ACO recovery strategy GRACO"**, Ad Hoc Now Athens, Greece (2015)

122. Roukounaki, Aikaterini; Soldatos, John; Petrolo, Riccardo; Loscri, Valeria; Mitton, Nathalie; Serrano, Martin. **"Visual Development Environment for Semantically Interoperable Smart Cities Applications"**, EAI International Conference on Interoperability in IoT (InterIoT) Roma, Italy, (2015)

123. Miranda, Karen; Mitton, Nathalie; Razafindralambo, Tahiry, **"On the Impact of Routers' Controlled Mobility in Self-Deployable Networks "**, International Conference on Adaptive and Self-Adaptive Systems and Applications (ADAPTIVE) Nice, France (2015)

124. Rekik, Mouna; Chtourou, Zied; Mitton, Nathalie, **"Performance and Applicability of a new Geographic Routing Protocol for Virtual Power Plants "**, International Renewable Energy Congress (IREC) Sousse, Tunisia (2015)

125. Wang, Yu; Zheng, Jun; Mitton, Nathalie;, **"Delivery Delay Analysis for Roadside Unit Deployment in Intermittently Connected VANETs"**, Global Communication Conference (GlobeCom) Austin, United States (2014)

126. Zema, Nicola; Mitton, Nathalie; Ruggeri, Giuseppe, **"A GPS-less on-demand mobile sink-assisted data collection in wireless sensor networks"**, Wireless Days (WD) Rio de Janeiro, Brazil (2014)

127. Mitton, Nathalie; Rivano, Hervé, **"On the Use of City Bikes to Make the City Even Smarter"**, International SMARTCOMP Workshop on Sensors and Smart Cities (SSC) Hong-Kong, China (2014)

128. Guzzo, Natale; Mitton, Nathalie; Daragon, Pascal; Nandagoban, Arulnambi, **"A Cluster-based and On-demand routing algorithm for Large-Scale Multi-hop Wireless Sensor Networks"**, International Conference on Ad Hoc Networks (AdHocNets) Rhodes, Greece (2014)

129. Zema, Nicola; Mitton, Nathalie; Ruggeri, Giuseppe, **"Using location services to autonomously drive flying mobile sinks in Wireless Sensor Networks"**, International Conference on Ad Hoc Networks (AdHocNets) Rhodes, Greece (2014)

130. Petrolo, Riccardo; Loscri, Valeria; Mitton, Nathalie, **"Towards a Smart City based on Cloud of Things"**, International ACM MobiHoc Workshop on Wireless and Mobile Technologies for Smart Cities (WiMobCity) Philadelphia, United States (2014)

131. Petrolo, Riccardo; Loscri, Valeria; Mitton, Nathalie, **"Integrating Wireless Sensor Networks within a City Cloud"**, International IEEE SECON Workshop on Self-Organizing Wireless Access Networks for Smart City (SWANSITY) Singapore, Singapore (2014)

132. Loscri, Valeria; Mitton, Nathalie; Compagnone, Emilio, **"OpenCV WebCam Applications in an Arduino-based Rover"**, International Workshop on Wireless Sensor, Actuator and Robot Networks (WiSARN) Benidorm, Spain (2014)

133. Petrolo, Riccardo; Delot, Thierry; Mitton, Nathalie; Molinaro, Antonella; Campolo, Claudia, **"O-SPIN: an Opportunistic Data Dissemination Protocol for Folk-enabled Information System in Least Developed Countries"**, International Conference on Ad-Hoc Networks and Wireless (AdHocNow) Benidorm, Spain (2014)

134. Amadou, Ibrahim; Mbacké, Abdoul-Aziz; Mitton, Nathalie, **"How to improve CSMA-based MAC protocol for dense RFID reader-to-reader Networks?"**, International Conference on Ad-Hoc Networks and Wireless (AdHocNow) Benidorm, Spain (2014)

135. Anciaux, Nicolas; Bouganim, Luc; Delot, Thierry; Ilarri, Sergio; Kloul, Leïla; Mitton, Nathalie; Pucheral, Philippe, **"Folk-IS: Opportunistic Data Services in Least Developed Countries"**, International Conference on Very Large Data Bases (VLDB) Hangzhou, Chine (2014)

136. Tonneau, Anne-Sophie; Mitton, Nathalie; Vandaele, Julien, **"A Survey on (mobile) wireless sensor network experimentation testbeds"**, IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS) Marina Del Rey, United States (2014)

137. Xu, Wu; Zheng, Jun; Tong, Hui; Mitton, Nathalie, **"DAYcast: A Dynamic Transmission Delay Based Broadcast Protocol for Vehicular Ad Hoc Networks"**, IEEE International Conference on Communications (ICC) Sydney, Australie (2014)

138. Ducrocq, Tony; Hauspie, Michael; Mitton, Nathalie; Pizzi, Sara, **"On the Impact of Network Topology on Wireless Sensor Networks Performances Illustration with Geographic Routing"**, Workshop on Performance Analysis and Enhancement of Wireless Networks (PAEWN) Victoria, Canada (2014)

139. Loscri, Valeria; Natalizio, Enrico; Mitton, Nathalie, **"Performance Evaluation of Novel Distributed Coverage Techniques for Swarms of Flying Robots"**, IEEE Wireless Communications and Networking Conference (WCNC) Istanbul, Turquie (2014)

140. Dagher, Roudy; Mitton, Nathalie; Amadou, Ibrahim, **"*Towards WSN-aided Navigation for Vehicles in Smart Cities: An Application Case Study.*"**, IEEE Percom Workshop on Pervasive Systems for Smart Cities (PerCity) Budapest, Hongrie (2014)

141. Riahi, Arbia; Natalizio, Enrico; Challal, Yacine; Mitton, Nathalie; Iera, Antonio, **"*A systemic and cognitive approach for IoT security*"**, International Conference on Computing, Networking and Communications (ICNC) Honolulu, États-Unis (2014)

142. Ducrocq, Tony; Hauspie, Michael; Mitton, Nathalie, **"*Geographic Routing with Partial Position Information*"**, International Conference on Sensor Networks (SensorNets) Lisbon Portugal (2014)

143. Amadeo, Marica; Campo, Claudia; Molinaro, Antonella; Mitton, Nathalie, **"*Named Data Networking: a Natural Design for Data Collection in Wireless Sensor Networks*"**, IEEE Wireless Days (WD) Valencia, Espagne (2013)

144. He, Danping; Mitton, Nathalie; Simplot-Ryl, David, **"*An Energy Efficient Adaptive HELLO Algorithm for Mobile Ad Hoc Networks*"**, ACM/IEEE International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWIM) Barcelona, Espagne (2013)

145. Shu, Qihang; Hu, Qiang; Zheng, Jun; Mitton, Nathalie, **"*A Dependable Slepian-Wolf Coding Based Clustering Algorithm for Data Aggregation in Wireless Sensor Networks*"**, International Conference on Wireless Communications and Signal Processing (WCSP) Hangzhou, Chine (2013)

146. Zheng, Jun; Huang, Zhenzhong; Shu, Qihang; Mitton, Nathalie, **"*A Distributed Rate Allocation Algorithm for Slepian-Wolf Coding based Data Aggregation in Wireless Sensor Networks*"**, International Conference on Wireless Communications and Signal Processing (WCSP) Hangzhou, Chine (2013)

147. Amadou, Ibrahim; Mitton, Nathalie, **"*Revisiting Backoff algorithms in CSMA/CA based MAC for channel Reservation in RFID reader Networks through broadcasting*"**, International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob) Lyon, France (2013)

148. Gouvy, Nicolas; Mitton, Nathalie; Zheng, Jun, **"*Greedy Routing Recovery Using Controlled Mobility in Wireless Sensor Networks*"**, International Conference on Ad Hoc Networks and Wireless (AdHocNow) Wroclaw, Pologne (2013)

149. Mitton, Nathalie; Natalizio, Enrico; Wolhuter, Riaan, **"*Beacon-less mobility assisted energy efficient georouting in energy harvesting actuator and sensor networks*"**, International Conference on Ad Hoc Networks and Wireless (AdHocNow) Wroclaw, Pologne (2013)

150. Botta, Miroslav; Simek, Milan; Mitton, Nathalie, **"*Comparison of Hardware and Software Based Encryption for Secure Communication in Wireless Sensor Networks*"**, International Conference on Telecommunications and Signal Processing (TSP) Rome, Italie (2013)

151. Wu, Xu; Tong, Hui; Mitton, Nathalie; Zheng, Jun, **"*MEDAL: a moving direction and destination location based routing algorithm for vehicular ad hoc networks*"**, IEEE International Conference on Communications (ICC) Budapest, Hongrie (2013)

152. Ducrocq, Tony; Mitton, Nathalie; Hauspie, Michaël, **"*Energy-based Clustering for Wireless Sensor Network Lifetime Optimization*"**, IEEE Wireless Communications and Networking Conference (WCNC) Shanghai, Chine (2013)

153. Gouvy, Nicolas; Hamouda Elhafsi, Essia; Zorbas, Dimitrios; Mitton, Nathalie, **"*Energy Efficient Multi-Flow Routing in Mobile Sensor Networks.*"**, IEEE Wireless Communications and Networking Conference (WCNC) Shanghai, Chine (2013)

154. Jumira, Oswald; Wolhuter, Riaan; Mitton, Nathalie, **"*Prediction Model For Solar Energy Harvesting Wireless Sensors*"**, International IEEE EAI Conference on Infrastructure and e-Services for Developing Countries (Africomm) Yaoundé, Cameroun (2012)

155. Radak, Jovan; Mitton, Nathalie, **"*Transmission Power Adaptation Based Energy Efficient Neighborhood Discovery*"**, ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWIM) Paphos, Chypre (2012)

156. Pieterse, Johan; Mitton, Nathalie; Wolhuter, Riaan, **"*Implementation and Analysis of FMIPv6, an Enhancement of MIPv6*"**, International Conference on Ad Hoc Networks (AdHocNets) Paris, France (2012)

157. Mitton, Nathalie; Simplot-Ryl, David; Voge, Marie-Emilie; Zhang, Lei, **"*Energy efficient k-anycast routing in multi-sink wireless networks with guaranteed delivery*"**, International Conference on Ad-Hoc Networks and Wireless (AdHocNow) Belgrade Serbie (2012)

158. Pavkovic, Bogdan; Radak, Jovan; Mitton, Nathalie; Rousseau, Franck; Stojmenovic, Ivan, **"*Emulation of Large Scale Wireless Sensor Networks: From Real Neighbors to Imaginary Destination*"**, International Conference on Ad-Hoc Networks and Wireless (AdHocNow) Belgrade, Serbie (2012)

159. Hamouda, Essia; Mitton, Nathalie; Simplot-Ryl, David, **"*An Optimal Scheduling Policy for a Multi-flow Priority Queue with Multiple Paths*"**, International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS) Genoa, Italie (2012)

160. Li, Xu; Mitton, Nathalie; Nayak, Amiya; Stojmenovic, Ivan, **"*Localized Load-aware Geographic Routing in Wireless Ad Hoc Networks*"**, IEEE International Conference on Communications - Wireless Networks Symposium (ICC-WN) Ottawa, Canada (2012)

161. Quilez, Roberto; Mitton, Nathalie; Dias De Amorim, Marcelo; Pauvre, Nicolas, **"*Prototyping a Multi-Root ONS*"**, IEEE Wireless Communications and Networking Conference - Internet of Things Enabling Technologies 2012 (WCNC - IOT-ET) Paris, France (2012)

162. Zhang, Lei; Mitton, Nathalie, **"*Advance Internet of Things*"**, iThings Dalian, Chine (2011)

163. Li, Xu; Mitton, Nathalie; Simplot-Ryl, Isabelle; Simplot-Ryl, David, **"*Mobile-Beacon Assisted Sensor Localization with Dynamic Beacon Mobility Scheduling*"**, IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS) Valencia, Espagne (2011)

164. Hamouda, Essia; Mitton, Nathalie; Simplot-Ryl, David, **"*Reader Anti-Collision in Dense RFID Networks With Mobile Tags*"**, IEEE International Conference on RFID-Technologies and Applications (RFID-TA) Barcelona, Espagne (2011)

165. Schmidt, Loïc; Mitton, Nathalie; Simplot-Ryl, David; Dagher, Roudy; Quilez, Roberto, **"*DHT-based distributed ALE engine in RFID Middleware*"**, IEEE International Conference on RFID-Technologies and Applications (RFID-TA) Barcelona, Espagne (2011)

166. Gouvy, Nicolas; Mitton, Nathalie, **"*MobileR : Multi-hop energy efficient localised mobile georouting in wireless sensor and actuator networks*"**, International ICST Conference on Ad Hoc Networks (AdHocNets) Paris, France (2011)

167. Hamouda, Essia; Mitton, Nathalie; Simplot-Ryl, David, **"*Energy Efficient Mobile Routing in Actuator and Sensor Networks with Connectivity preservation.*"**, International Conference on Ad Hoc Networks and Wireless (AdHocNow) Padderborn, Allemagne (2011)

168. Radak, Jovan; Mitton, Nathalie; Simplot-Ryl, David, **"*Using Battery Level as Metric for Graph Planarization*"**, International Conference on Ad Hoc Networks and Wireless (AdHocNow) Padderborn, Allemagne (2011)

169. Razafindralambo, Tahiry, M.; Begin, Thomas; Dias De Amorim, Marcelo; Guérin-Lassous, Isabelle; Mitton, Nathalie; Simplot-Ryl, David, **"*Promoting Quality of Service in Substitution Networks with Controlled Mobility*"**, International Conference on Ad Hoc Networks and Wireless (AdHocNow) Padderborn, Allemagne (2011)

170. Delot, Thierry; Mitton, Nathalie; Ilarri, Sergio; Hien, Thomas, **"*Decentralized pull-based information gathering in vehicular networks using GeoVanet*"**, International Conference on Mobile Data Management (MDM) Lulea, Suède (2011)

171. Li, Xu; Mitton, Nathalie; Simplot-Ryl, David, **"*Mobility Prediction Based Neighborhood Discovery in Mobile Ad Hoc Networks.*"**, Networking Valencia, Espagne (2011)

172. Burin Des Rosiers, Clément; Chelius, Guillaume; Ducrocq, Tony; Fleury, Eric; Fraboulet, Antoine; Gallais, Antoine; Mitton, Nathalie; Noël, Thomas; Vandaële, Julien, **"*Using SensLAB as a First Class Scientific Tool for Large Scale Wireless Sensor Network Experiments*"**, Networking Valencia, Espagne (2011)

173. Burin Des Rosiers, Clément; Chelius, Guillaume; Fleury, Eric; Fraboulet, Antoine; Gallais, Antoine; Mitton, Nathalie; Noël, Thomas, **"*SensLAB Very Large Scale Open Wireless Sensor Network Testbed*"**, International ICST Conference on Testbeds and Research Infrastructures for the Development of Networks and Communities (TridentCOM) Shanghai, Chine (2011)

174. Li, Xu; Mitton, Nathalie; Simplot-Ryl, Isabelle; Simplot-Ryl, David, **"*A Novel Family of Geometric Planar Graphs for Wireless Ad Hoc Networks*"**, Proc. IEEE International Conference on Computer Communications (INFOCOM) Shanghai, Chine (2011)

175. Carneiro Viana, Aline; Mitton, Nathalie; Schmidt, Loic; Vecchio, Massimo, **"*A k-layer self-organizing structure for product management in stock-based networks*"**, IEEE International Conference on e-Business Engineering (ICEBE) Shanghai, Chine (2010)

176. Ahmad Kassem, Ahmad; Mitton, Nathalie, **"*Adapting dynamically neighbourhood table entry lifetime in wireless sensor networks*"**, International Conference on Wireless Communications and Signal Processing (WCSP) Suzhou, Chine (2010) **Best paper**

177. Gongjun, Yan; Mitton, Nathalie; Li, Xu, **"*Reliable Routing in Vehicular Ad hoc Networks.*"**, International Workshop on Wireless Ad hoc and Sensor Networking (WWASN) Genoa, Italie (2010)

178. Khadar, Fadila; Mitton, Nathalie; Simplot-Ryl, David, **"*Towards an efficient QoS based selection of neighbors in QOLSR*"**, International Workshop on Sensor Networks (SN) Genoa, Italie (2010)

179. Razafindralambo, Tahiry; Mitton, Nathalie; Viana, Aline Carneiro; Dias De Amorim, Marcelo; Obraczka, Katia, **"*Adaptive Deployment for Pervasive Data Gathering in Connectivity-Challenged Environments*"**, IEEE International Conference on Pervasive Computing and Communications (PERCOM) Mannheim, Allemagne (2010)

180. Lukic, Milan; Pavkovic, Bogdan; Mitton, Nathalie; Stojmenovic, Ivan, **"*Greedy geographic routing algorithms in a real environment*"**, International Conference on Mobile Ad-hoc and Sensor Networks (MSN) Wu Yi Mountain, Chine (2009)

181. Li, Xu; Mitton, Nathalie; Ryl, Isabelle; Simplot, David, **"Localized Sensor Self-Deployment with Coverage Guarantee in Complex Environment"**, International Conference on Ad Hoc Networks and Wireless (AdHocNow) Murcia, Espagne (2009)

182. Mitton, Nathalie; Simplot-Ryl, David; Stojmenovic, Ivan, **"Guaranteed delivery for geographical anycasting in wireless multi-sink sensor and sensor-actor networks."**, IEEE Conf. on Computer Communications (INFOCOM) Rio de Janeiro, Brésil (2009)

183. Schmidt, Loïc; Mitton, Nathalie; Simplot-Ryl, David, **"Towards Unified Tag Data Translation for the Internet of Things"**, Wireless VITAE Aalborg, Danemark (2009)

184. Mitton, Nathalie; Razafindralambo, Tahiry; Simplot-Ryl, David; Stojmenovic, Ivan, **"Hector is an Energy effiCient Tree-based Optimized Routing protocol for wireless networks"**, International Conference on Mobile Ad Hoc and Sensor Networks (MSN) Wuhan, Chine (2008)

185. Hamouda Elhafsi, Essia; Mitton, Nathalie; Simplot-Ryl, David, **"End-to-End Energy Efficient Geographic Path Discovery With Guaranteed Delivery in Ad Hoc and Sensor Networks"**, IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC) Cannes, France (2008)

186. Ingelrest, François; Mitton, Nathalie; Simplot-Ryl, David, **"A Turnover based Adaptive HELLO Protocol for Mobile Ad Hoc and Sensor Networks"**, International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems (MASCOTS) Istanbul, Turquie (2007)

187. Razafindralambo, Tahiry; Mitton, Nathalie, **"Analysis of the impact of hello protocol parameters over a wireless network self-organization"**, International Symposium on Performance Evaluation of Wireless Ad Hoc, Sensor, and Ubiquitous Networks (PE-WASUN) Chania, Grèce (2007)

188. Chavez, Edgar; Mitton, Nathalie; Tejeda, Hector, **"Routing in Wireless Networks with Position Trees"**, International Conference on Ad Hoc Networks and Wireless (AdHocNow) Morelia, Mexique (2007)

189. Hamouda Elhafsi, Essia; Mitton, Nathalie; Simplot-Ryl, David, **"Cost over Progress Based Energy Efficient Routing over Virtual Coordinates in Wireless Sensor Networks"**, T2P WOWMOM Helsinki, Finlande (2007)

190. Steffen Abdallah Goncalves, Betânia; Mitton, Nathalie; Guérin Lassous, Isabelle, **"Comparison of Two Self-organization and Hierarchical Routing Protocols for Ad Hoc Networks"**, Mobile Ad-hoc and Sensor Networks, Second International Conference (MSN) Hong Kong, Chine (2006)

191. Mitton, Nathalie; Fleury, Eric; Guérin-Lassous, Isabelle; Sericola, Bruno; Tixeuil, Sébastien, **"Fast Convergence in Self-stabilizing Wireless Networks."**, International Conference on Parallel and Distributed Systems (ICPADS) Mineapolis, États-Unis (2006)

192. Mitton, Nathalie; Fleury, Eric, **"Distributed Node Location in Clustered Multi-hop Wireless Networks"**, Asian INTernet Engineering Conference (AINTEC), Bangkok, Thaïlande (2005)

193. Mitton, Nathalie; Fleury, Eric, **"Efficient Broadcasting in Self-Organizing Multi-Hop Wireless Networks."**, Ad Hoc Networks & Wireless (AdhocNow) Cancun, Mexique (2005)

194. Busson, Anthony; Mitton, Nathalie; Fleury, Eric, **"An analysis of the MPR selection in OLSR and consequences"**, Mediterranean Ad Hoc Networking Workshop (MedHocNet), France (2005)

195. Mitton, Nathalie; Fleury, Eric; Guérin-Lassous, Isabelle; Tixeuil, Sebastien, **"*Self-stabilization in self-organized multihop wireless networks*"**, Workshop on Wireless ad hoc Networking (WWAN), Columbus, États-Unis (2005)

196. Mitton, Nathalie; Busson, Anthony; Fleury, Eric, **"*Self-organization in large scale ad hoc networks*"**, Mediterranean ad hoc Networking Workshop (MedHocNet). Bodrum, Turquie (2004)

Books

197. Zheng, Jun; Mitton, Nathalie; Li, Jun; Lorenz, Pascal, **"*Ad Hoc Networks - 4th International ICST Conference, ADHOCNETS 2012, Revised Selected Papers*"**, (2013)

198. Mitton, Nathalie; Simplot-Ryl, David, **"*Supervision et sécurité dans les grands réseaux*"**, (2009)

Book chapter

199. Valeria Loscri, Nathalie Mitton, Riccardo Petrolo, **"*Cloud, network and sensing in a Smart City, toward a cloud of meshed cooperative heterogeneous things*"**, Smart Cities in the Post-algorithmic Era Integrating Technologies, Platforms and Governance, Edward Elgar Publishing (2019)

200. Mitton, Nathalie; Wolhuter, Riaan, **"*Energy Harvesting in Wireless Sensor Networks*"**, Rechargeable Sensor Networks: Technology, Theory, and Application Introducing Energy Harvesting to Sensor Networks (2014)

201. Gouvy, Nicolas; Mitton, Nathalie; Simplot-Ryl, David, **"*Routing in Mobile Wireless Sensor Networks*"**, Wireless Sensor and Robot Networks From Topology Control to Communication Aspects (2014)

202. Erdelj, Milan; Mitton, Nathalie; Natalizio, Enrico, **"*Applications of Industrial Wireless Sensor Networks*"**, Industrial Wireless Sensor Networks: Applications, Protocols, and Standards (2013)

203. Carle, Jean; Hauspie, Michaël; Mitton, Nathalie; Razafindralambo, Tahiry; Simplot-Ryl, David, **"*Les réseaux de capteurs*"**, Informatique et intelligence ambiante : des capteurs aux applications (2012)

204. Mitton, Nathalie; Schmidt, Loïc; Simplot-Ryl, David, **"*RFID Middleware : Concepts and Architecture*"**, RFID Systems : Research Trends and Challenges (2010)

205. Mitton, Nathalie; Razafindralambo, Tahiry; Simplot-Ryl, David, **"*Position-Based Routing in Wireless Ad Hoc and Sensor Networks*"**, Theoretical Aspects of Distributed Computing in Sensor Networks (2010)

206. Ingelrest, François; Mitton, Nathalie; Simplot-Ryl, David, **"*Applications à la diffusion*"**, Réseaux de capteurs : théorie et modélisation (Collection Architecture, Applications, Service) (2009)

207. Mitton, Nathalie; Ingelrest, François; Simplot-Ryl, David, **"*Découverte de voisinage et contrôle de topologie.*"**, Réseaux de capteurs : théorie et modélisation (Collection Architecture, Applications, Service) (2009)