

François Septier

Full Professor

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Positions

- From Sept. **Full Professor.**
2018 Université Bretagne Sud (CNU 26) - LMBA UMR CNRS 6205
- Jan. 2017 - **Deputy Head for Research** .
Aug. 2018 Communication Systems Department of IMT Lille Douai
- 2015-2016 **Research Coordinator at Télécom Lille.**
- Sept. 2015 **One year sabbatical - Visiting Associate Professor.**
Sept. 2014 Department of Statistical Science, University College London (UCL), UK
- Sept. 2009 - **Associate-Professor.**
Aug. 2018 IMT Lille Douai (ex-Télécom Lille) / CRISAL UMR CNRS 9189, France
- Aug. 2009 **Research Associate.**
Mar. 2008 Signal Processing Laboratory, University of Cambridge, UK
- Feb. 2008 **Research/Teaching Assistant.**
Oct. 2007 ATER in french at Institut des Sciences et Techniques de Valenciennes (ISTV), France
- Sep. 2007 **Research Assistant.**
Sep. 2004 Institut d'Electronique, de Microelectronique et de Nanotechnologie (IEMN) et Télécom Lille, France
- Sep. 2007 **Teaching Assistant.**
Sep. 2004 Moniteur in french at Institut des Sciences et Techniques de Valenciennes (ISTV), France

Academic Background

- Dec 2017 **Habilitation à Diriger les Recherches (HDR).**
University of Lille, France
- May 2008 **Ph.D. in "Signal Processing".**
University of Valenciennes et du Hainault-Cambrésis (UVHC), France
- June 2004 **M.Sc. in "Signal and Telecommunications".**
University of Valenciennes et du Hainault-Cambrésis (UVHC), France
- Juin 2004 **Eng. Degree Télécom Lille.**
Télécom Lille, France

Teaching Experiences

- From 2018 **Université Bretagne Sud, France.**
Statistics, Estimation, Machine Learning.
- 2009-2018 **IMT Lille Douai, France.**
Signal Processing, Statistics, Statistical Machine Learning, Probability.
- 2010-2012 **Institut des Sciences et Techniques de Valenciennes (ISTV), France .**
Statistical Signal Processing.

Responsibilities

- From 2020 **Co-responsible of the Master "Applied Mathematics & Statistics".**
Université Bretagne Sud

- From 2020 **Elected member of *Mathematics, Computer Science & Statistics* Department Council.**
Université Bretagne Sud
- From 2018 **Responsible of the studies - Master 2 Data Science & Statistical Modeling.**
Université Bretagne Sud
- 2015-2018 **Responsible of “Data Science”.**
5th year Télécom Lille (\approx 100h)
- 2012-2018 **Responsible of “Signal & Communications”.**
3rd year Télécom Lille (\approx 100h)

Distinction and Awards

- 2019-... Holder, French Ministry of Research “Prime d’Encadrement Doctoral et de Recherche” (PEDR).
- 2015 “Best Paper Award”, Conference IEEE ISSNIP.
- 2009 Finalist of “Best Regular Paper Award”, 3rd rank, Conference FUSION.
- 2004-2007 Recipient, French Ministry of Research doctoral scholarship.

Visiting Positions

- Since 2014 **Department of Statistical Modeling, Institute of Statistical Mathematics, Japan**, 4 weeks per year.
- 11/14 - 07/15 **Department of Statistical Science, University College London, UK**, 8 months.
- 10/14 - 11/14 **Department of Automatic Control and Systems Engineering, Sheffield University, UK**, 2 months.
- Aug. 2013 **Department of Statistical Modeling, Institute of Statistical Mathematics, Japan**, 2 weeks.
- Dec. 2012 **Department of Statistical Science, University College of London, UK**, 2 weeks.
- Mar. 2012 **Department of Engineering, University of New South Wales, Australia**, 1 month.
- Sept. 2008 **Statistical and Applied Mathematical Sciences Institute (SAMSI), USA**, 2 weeks.

Research Projects

- 2020-2023 **Research contract**, Principal Investigator.
“On the combination of statistical models and neural networks for time-series modeling”
Partners: Total
- 2018-2020 **Research contract**, Principal Investigator.
“Sequential Statistical Methods for Source Term Estimation”
Partners: CEA/DAM
- 2018-2022 **ANR JCJC Project**, Participant.
“PISCES - Adaptive importance sampling methods for Bayesian inference in complex systems”
- 2017-2021 **ANR JCJC Project**, Participant.
“BoB - Bayes on a Budget - big data and expensive models”
Partners: Painleve (Univ. Lille), CRISAL (Centrale Lille/INRIA/IMT Lille Douai).
- 2017-2021 **ANR Project**, Participant.
“ARBurst - Achievable region of multi-users bursty wireless communications
Partners: CITI (INSA Lyon), IETR (INSA Rennes), IRCICA (Univ. of Lille/IMT Lille Douai).
- 2015-2016 **Project funded by the Institut français of Singapore and A*STAR**, Principal Investigator.
“Statistical Models and Methods for Urban Air Pollution Forecasting using Participatory Sensing”
Partners: A*STAR (Singapore) and CRISAL
- 2015 **Project funded by Institut Mines-Télécom**, Principal Investigator.
“SMART: From data to knowledge: Statistical Modeling and Estimation of Heterogeneous Sensor Data”
Partners : University College London (UK), Sheffield University (UK), A*STAR (Singapore)
- 2013-2017 **ANR Project**, Participant.
“BNPSI - Bayesian NonParametric methods for Signal and Image processing”
<https://project.inria.fr/bnpsi/>
Partners: Alea Team (INRIA Bordeaux), IMS (University of Bordeaux), IRIT (University of Toulouse), CEA-LIST.

- 2012-2013 **Research contract**, Principal Investigator.
 “Statistical Methods for Source Term Estimation”
 Partners: CEA/DAM
- 2012 **BQR Project funded by University of Lille1 and Ecole centrale de Lille**, Co-Principal Investigator.
 “Models and Methods for Sensor Networks”
 Partners: P. Painlevé Lab. (University of Lille1), IRCICA Lab. (University of Lille1)
- 2011-2012 **Project funded by GIS 3SGS and CEA**, Principal Investigator.
 “Statistical Methods for Source Term Estimation”
 Partners: LM2S Lab. (Troyes University of Technology), CEA/DAM
- 2011 **Project funded by Institut Mines-Télécom**, Principal Investigator.
 “Multiple objects tracking in video”
 Partner : IFFSTAR
- 2008-2009 **Project funded by DIF/DTC, UK**, Participant.
 “Cluster Project on Target Tracking”
 Partners: Bristol University, Cambridge University, Imperial College London and QinetiQ
- 2008-2009 **Project funded by the Statistical and Applied Mathematical Sciences Institute, USA**, Participant.
 “Sequential Monte-Carlo methods”
 Leader of the working group “Multitarget Tracking”

Leading and Steering Activities

- 2013-... **Co-leader of the “Stochastic simulation methods” of the french research group GDR-ISIS.**
- 2020 **Co-organizer One-day GDR-ISIS Workshop “Deep Learning and Generative Models for data uncertainty”.**
- 2013-2018 **Steering Committee of the research network**, Institut Mines-Télécom : “Applied Mathematics and Computer Science”.
- 2018 **Co-organizer One-day GDR-ISIS Workshop “Monte Carlo Sampling and Statistical Learning”.**
- 2017 **Co-organizer of the special session “Interactions entre méthodes d’optimisation et algorithmes de simulation stochastique” at XXVIeme colloque GRETSI, Juans-les-Pins.**
- 2015 **Co-organizer One-day GDR-ISIS Workshop “On the Interaction of Optimization and Monte-Carlo Methods” .**
- 2014 **Co-organizer One-day GDR-ISIS Workshop “Bayesian Filtering in High-Dimensional using Monte-Carlo Methods” .**
- 2012 **Co-organizer Workshop, “Mathematical Models for Impulsiveness : Alpha-stable processes for signal processing and communications”, 18/12/2012, Lille, France.**
- 2011 **Co-organizer du workshop, “Filtering, MCMC and ABC”, 28-29/03/2011, Lille, France.**
- 2008-2009 **Leader of the working group “Multitarget Tracking”, Program “Sequential Monte-Carlo methods” Statistical and Applied Mathematical Sciences Institute, USA.**

Supervision

Ph.D. Thesis

- 2020-... Clément Bonet, co-supervised (30%) with Nicolas Courty (UBS) and Lucas Drumetz.
 “Bridging the gap between stochastic methods and deep learning”
- 2020-... Yann Guguen, co-supervised (50%) with Audrey Poterie (UBS).
 “Statistical Learning an Random Forest for spatio-temporal data”
- 2020-... Samir Orujov, co-supervised (50%) with Audrey Poterie (UBS) and Victor Elvira (Univ. Edinburgh, UK) .
 “On the combination of statistical models and neural networks for time-series modeling”
- 2019-... Romeo Tayewo, supervised (100%).
 “Statistical Optimality of Decision Rules for Humans and Rational Machines Interacting Together”

- 2018-... Min Rui, co-supervised (50%) with Christelle Garnier (IMT Lille Douai) and John Klein (Univ. Lille).
"Models and Monte-Carlo methods for tracking in high dimensional spaces"
- 2015-2018 Roland Lamberti, co-supervised (33%) with Prof. François Desbouvries and Dr. Yohan Petetin (Telecom SudParis).
"Contributions to Monte Carlo methods and their application to statistical filtering"
Publications: [J5–J7, CN2, C7, C9, C17]
- 2013-2016 Harizo Rajaona, co-supervised (60%) with Prof. Yves Delignon - In collaboration with CEA/DAM & ARIA Technologies.
"Source Term Estimation Methods"
Publications: [C8, J9, J14, C19]
- 2011-2014 Thi Le Thu Nguyen, co-supervised (50%) with Prof. Yves Delignon.
"Sequential Monte Carlo Sampler for Bayesian Inference in Complex Systems"
Publications: [J9, J11, C20, C26]

Post-docs

- 2019-... Victor Watson, in collaboration with CEA.
"Statistical Methods for Pollutant Event Detection"
- 2011–2012 Adrien Ickowicz, 14 months (now Research Scientist at CSIRO, Australia).
"Statical Methods for Pollutant Source Term Estimation"
Publications: [C29, R1, C31, R2, R3]
- 2011 Nghi Truong Cong, 9 months (now Lecturer, Ho Chi Minh City University of Technology, Vietnam).
"Multi-Object Tracking in video sequences"
Publications: [C32]

Master

- 2010 Bassam El Hajj Chehade, Research Master Lille Univ. "Automatique, Génie Informatique et Image".
"Multi-Object Tracking in video sequences"

Evaluation committees & Review panels

Technical Program Committees

- 06/2020 CAp (*Conférence sur l'Apprentissage automatique*), Vannes, France.
- 12/2019 IEEE International Workshop on Computational Advances in Multi-Sensor Adaptive Processing, Guadeloupe.
- 07/2019 ISSAT International Conference on Data Science in Business, Finance and Industry, Vietnam.
- 09/2017 XXVIeme colloque GRETSI, Juans-les-Pins, France.
- 06/2014 IEEE Workshop on Statistical Signal Processing (SSP 14), Jupiters, Gold Coast, Australia.
- 04/2014 IEEE International Conference on Intelligent Sensors, Sensor Networks and Information Processing (ISSNIP), Singapore.
- 07/2012 6th International Symposium on signal, Image, Video and Communications (ISIVC), Valenciennes, FR.

Editorial Activities

- 2020-... **Associate Editor**, *Signal Processing (Elsevier)*.
- 2009-... Reviewer for different journal and international conferences.
Journal: IEEE Trans. on Signal Processing, IEEE Signal Processing Letters, Computational Statistics & Data Analysis, Bayesian Analysis, IEEE Journal of Selected Topics in Signal Processing, Signal Processing (Elsevier), Automatica, IEEE Trans. on Communications, IEEE Communications Letters, IEEE Trans. on Vehicular Technology, IEEE Sensors Journal, IEEE Journal of Oceanic Engineering.
Conferences: IEEE ICASSP Conferences, EUSIPCO Conferences, IEEE SSP Workshops, IEEE ISSNIP, ISSPA 2010, etc.

HDR Committees

- 12/2020 Daniel Clark, "*Point process modelling for filtering, information, and control*", Université Paris-Saclay.
- 12/2020 Emmanuel Monfrini, "*Markovian modeling and Bayesian Inference*", Université Ecry Val Essonne - Reviewer.

Ph.D Committees

- 12/2020 Mircea Moscu, "*Distributed graph topology inference from streaming data*", Université Cote d'Azur.
- 12/2019 Haoyu Li, "*Recent Hidden Markov Models for Lower Limb Locomotion Activity Detection and Recognition using IMU sensors*", Ecole Centrale de Lyon - Reviewer.
- 07/2019 Léo Legrand, "*Contributions to single and multi-target tracking based on random finite sets*", University of Bordeaux - Reviewer.
- 03/2019 Marina Riabiz, "*On Latent Variable Models for Bayesian Inference with Stable Distributions and Processes*", University of Cambridge (UK) - Reviewer.
- 12/2018 Marcos Eduardo Gomes-Borges, "*Real-Time Sensor Management Strategies for Multi-Object Tracking*", Centrale Lille.
- 12/2018 Khac Phuc Hung THAI, "*Détection et localisation de cibles masquées en milieu urbain*", Université de Rennes 1.
- 04/2018 Kersane Zoubert-Oussen, "*Algorithmes de géolocalisation à l'intérieur d'un bâtiment en temps différé*", Université de Rennes 1.
- 06/2013 Nouha Jaoua, "*Estimation Bayésienne non Paramétrique de Systèmes Dynamiques en Présence de Bruits Alpha-Stables*", Ecole Centrale de Lille.
- 10/2011 Majdi Mansouri, "*Collaborative Signal Processing in Wireless Sensor Networks*", UTT Troyes.
- 07/2011 Michele Pace, "*Stochastic models and methods for multi-object tracking*", University of Bordeaux .

Academic Position Committees

- 05/2019 Assistant Professor - Université Bretagne Sud, MCF 26 0092.
- 05/2016 Assistant Professor - Troyes University of Technology, MCF 61 4025.
- 05/2014 Assistant Professor - ENSEEIHT University of Toulouse, MCF 61 4058.
- 05/2013 Assistant Professor - ENSEEIHT University of Toulouse, MCF 63 0310.
- 05/2011 Assistant Professor - Troyes University of Technology, MCF 61 0007.

Review Panels

- 05/2019 Research project submitted to *Agence Nationale de la Recherche (ANR)*, France.
- 09/2018 Research project submitted to *Czech Science Foundation*, Czech Republic.
- 01/2018 Research project submitted to *Netherlands Organisation for Scientific Research (NWO)*, Netherlands.
- 05/2017 Member of expert panel for the evaluation of the *French-South African Institute of Technology (F'SATI)* in Pretoria & Cape Town (2008-2015) requested by the *National Research Foundation*, South Africa.
- 2013-2014 Ph.D Scholarships - Institut Mines-Télécom.
- 12/2011 Post-doctoral Fellowship - Conseil Régional Champagne Ardenne.

Memberships

- From 2020 Member of the team *Dynamical Systems, Probability & Statistics* of the laboratory LMBA UMR CNRS 6205.
- Depuis 2020 Member of the French Society of Statistics (SFdS).
- From 2013 Member of the International Society for Bayesian Analysis (ISBA).
- From 2009 Member IEEE Signal Processing Society.
- From 2009 Member of the french research group GDR-ISIS.
- 2018-2020 Member of the team DECIDE of the laboratory Lab-STICC UMR CNRS 6285.
- 2011-2018 Member of the team "Signal, Models and Applications" of CRISAL, UMR 9189 (previously "Signal and Image" of LAGIS, UMR CNRS 8219).

Seminars and Invited Talks

- 8/2019 Bayesian Inference Summer School, Karuizawa, Japan .
"Advanced Sequential Monte Carlo Methods for Bayesian filtering" (3h)

- 11/2018 Invited talk - Workshop "Advanced multiple target tracking techniques" GDR-ISIS, Mines ParisTech.
"Advanced Monte Carlo methods for multi-target tracking"
- 2/2018 International Workshop on Spatial and Temporal Modeling from Statistical, Machine Learning and Engineering perspectives, ISM, Tokyo, Japan (1h).
"Revisit of the resampling mechanism used in Importance sampling methods" (1h)
- 7/2017 Seminar, Institute of Statistical Mathematics, Tokyo Japan.
"Monte Carlo methods for Tracking"
- 2/2017 Invited talk at Journée "Pistage" GIS Albatros/INRIA/Université de Bordeaux, Bordeaux France.
"Monte Carlo methods for Tracking"
- 7/2016 International Workshop on Spatial and Temporal Modeling from Statistical, Machine Learning and Engineering perspectives, ISM, Tokyo, Japan (1h).
"Sequential Markov Chain Monte Carlo for Bayesian Filtering with Massive Data"
- 7/2015 3rd International Workshop on Spatial and Temporal Modeling from Statistical, Machine Learning and Engineering perspectives, ISM, Tokyo, Japan (1h).
"Langevin and Hamiltonian based Sequential MCMC for Efficient Bayesian Filtering in High-dimensional Spaces"
- 6/2015 Seminar, Mathematics Department, University of Clermont-Ferrand, France (1h).
"Langevin and Hamiltonian based Sequential MCMC for Efficient Bayesian Filtering in High-dimensional Spaces"
- 5/2015 Seminar, Institute for Infocomm Research (I²R)-A*STAR, Singapore.
"New Perspectives on Multiple Source Localization in Wireless Sensor Networks" (1h)
- 10/2014 Seminar, University of Sheffield, UK.
"Monte-Carlo Methods for Bayesian filtering in High-Dimensional spaces and/or Likelihood-free models" (1h)
- 07/2014 2nd International Workshop on Spatial and Temporal Modeling from Statistical, Machine Learning and Engineering perspectives, ISM, Tokyo, Japan.
"Connectivity and Localization in Wireless Sensor Networks" (1h) and "Sequential Monte-Carlo Samplers for Bayesian Inference in Complex Systems" (1h)
- 03/2014 3ème Colloque de l'Institut Mines-Télécom "Numérique: Grande échelle & complexité", Institut Mines-Télécom, Paris.
"Inférence par Méthodes de Monte-Carlo"
- 08/2013 International Workshop on Spatial and Temporal Modeling from Statistical, Machine Learning and Engineering perspectives, ISM, Tokyo, Japan.
"Bayesian Filtering in High-Dimensional Spaces" (1h) and "Bayesian Filtering with Intractable Likelihood" (1h)
- 05/2013 Seminar BigMC - Institut Henri Poincaré, Paris, France.
"Bayesian Filtering in High-Dimensional Spaces using Sequential MCMC"
- 11/2009 Final Workshop of the SAMSI program on Sequential Monte-Carlo methods, Durham, North Carolina, USA.
"Multi-target Tracking using MCMC-Based Particle Algorithm."
- 05/2009 Laboratoire L2S, Gif-sur-Yvette.
"Méthodes particulières pour la poursuite d'objets"
- 01/2009 IRISA - Rennes, France.
"Méthodes particulières pour la poursuite et la détection de cibles"
- 09/2008 Opening Workshop of the SAMSI program on Sequential Monte-Carlo methods, Durham, North Carolina, USA.
"Tracking of Coordinated Groups using Marginalised MCMC-based Particle Algorithm"

Publications

Preprints, Submitted papers

- [P1] A. DE FREITAS, F. SEPTIER, and L. MIHAYLOVA. "Sequential Markov Chain Monte Carlo for Bayesian Filtering with Massive Data". submitted to an IEEE journal - arXiv:1512.02452. 2018.
- [P2] G. W. PETERS, T. MATSUI, F. SEPTIER, and A. TAMAMORI. "Estimation and Calibration in Gaussian Process State Space Models : MCDC Tool". submitted to Journal of Statistical Software. Feb. 2017.

[P3] G. W. PETERS, L. CLAVIER, I. NEVAT, and F. SEPTIER. “Generalized Interference Models for Wireless Network Systems : the PNSC(α) Framework”. submitted to *ACM Transactions on Modeling and Computer Simulation*. Jan. 2017.

International journal papers

- [J1] W. GU, X. YAN, G. W. PETERS, L. CLAVIER, F. SEPTIER, and I. NEVAT. “Impulsive Noise Modeling and Robust Receiver Design”. In: *EURASIP Journal on Wireless Communications and Networking*, Jan. 2021. DOI: 10.1186/s13638-020-01868-1.
- [J2] F. SEPTIER, P. ARMAND, and C. DUCHENNE. “A Bayesian Inference Procedure Based on Inverse Dispersion Modelling for Source Term Estimation in Built-up Environments”. In: *Atmospheric Environment* 242, Dec. 2020. DOI: 10.1016/j.atmosenv.2020.117733.
- [J3] P. ZHANG, I. NEVAT, G. W. PETERS, F. SEPTIER, and M. A. OSBORNE. “Spatial Field Reconstruction and Sensor Selection in Heterogeneous Sensor Networks with Stochastic Energy Harvesting”. In: *IEEE Transactions on Signal Processing*, Apr. 2018. DOI: 10.1109/TSP.2018.2802452.
- [J4] Q. T. NGUYEN, Y. DELIGNON, F. SEPTIER, and A. T. PHAN-HO. “Probabilistic modelling of printed dots at the microscopic scale”. In: *Signal Processing: Image Communication* 62, Mar. 2018, pp. 129–138. DOI: 10.1016/j.image.2018.01.003.
- [J5] R. LAMBERTI, Y. PETETIN, F. DESBOUVRIES, and F. SEPTIER. “Semi-independent resampling for particle filtering”. In: *IEEE Signal Processing Letters* 25 (1), Jan. 2018, pp. 130–134. DOI: 10.1109/LSP.2017.2775150.
- [J6] R. LAMBERTI, F. SEPTIER, N. SALMAN, and L. MIHAYLOVA. “Gradient Based Sequential Markov Chain Monte Carlo for Multi-target Tracking with Correlated Measurements”. In: *IEEE Transactions on Signal and Information Processing over Networks* 4 (3), 2018, pp. 510–518. DOI: 10.1109/TSIPN.2017.2756563.
- [J7] R. LAMBERTI, Y. PETETIN, F. DESBOUVRIES, and F. SEPTIER. “Independent Resampling Sequential Monte Carlo Algorithms”. In: *IEEE Transactions on Signal Processing* 65 (20), Oct. 2017. available on arXiv:1607.05758, pp. 5318–5333. DOI: 10.1109/TSP.2017.2726971.
- [J8] M. HAWES, L. MIHAYLOVA, F. SEPTIER, and S. GODSILL. “Bayesian Compressive Sensing Approaches for Direction of Arrival Estimation With Mutual Coupling Effects”. In: *IEEE Transactions on Antennas and Propagation* 65 (3), Mar. 2017, pp. 1357–1368. DOI: 10.1109/TAP.2017.2655013.
- [J9] T. L. T. NGUYEN, F. SEPTIER, H. RAJAONA, G. W. PETERS, I. NEVAT, and Y. DELIGNON. “A Bayesian Perspective on Multiple Source Localization in Wireless Sensor Networks”. In: *IEEE Transactions on Signal Processing* 64 (7), Apr. 2016, pp. 1684–1699. DOI: 10.1109/TSP.2015.2505689.
- [J10] F. SEPTIER and G. W. PETERS. “Langevin and Hamiltonian Based Sequential MCMC for Efficient Bayesian Filtering in High-Dimensional Spaces”. In: *IEEE Journal of Selected Topics in Signal Processing* 10 (2), Mar. 2016, pp. 312–327. DOI: 10.1109/JSTSP.2015.2497211.
- [J11] T. L. T. NGUYEN, F. SEPTIER, G. W. PETERS, and Y. DELIGNON. “Efficient Sequential Monte-Carlo Samplers for Bayesian Inference”. In: *IEEE Transactions on Signal Processing* 64 (5), Mar. 2016, pp. 1305–1319. DOI: 10.1109/TSP.2015.2504342.
- [J12] A. CARMİ, L. MIHAYLOVA, and F. SEPTIER. “Subgradient-based Markov Chain Monte Carlo particle methods for discrete-time nonlinear filtering”. In: *Signal Processing* 120, Mar. 2016, pp. 532–536. DOI: 10.1016/j.sigpro.2015.10.015.
- [J13] I. NEVAT, G. W. PETERS, K. AVNIT, F. SEPTIER, and L. CLAVIER. “Location of Things: GeoSpatial Tagging for IoT using Time-of-Arrival”. In: *IEEE Transactions on Signal and Information Processing over Networks*, 2016, pp. 1–13. DOI: 10.1109/TSIPN.2016.2531422.
- [J14] H. RAJAONA, F. SEPTIER, P. ARMAND, Y. DELIGNON, C. OLRİY, A. ALBERGEL, and J. MOUSSAFİR. “An adaptive Bayesian inference algorithm to estimate the parameters of a hazardous atmospheric release”. In: *Atmospheric Environment* 122, Dec. 2015, pp. 748–762. DOI: 10.1016/j.atmosenv.2015.10.026.
- [J15] I. NEVAT, G. W. PETERS, F. SEPTIER, and T. MATSUI. “Estimation of Spatially Correlated Random Fields in Heterogeneous Wireless Sensor Networks”. In: *IEEE Transactions on Signal Processing* 63 (10), May 2015, pp. 2597–2609. DOI: 10.1109/TSP.2015.2412917.

- [J16] L. MIHAYLOVA, A. CARMI, F. SEPTIER, A. GNING, S. K. PANG, and S. J. GODSILL. "Overview of Bayesian sequential Monte Carlo methods for group and extended object tracking". In: *Digital Signal Processing* 25, Feb. 2014, pp. 1–16. DOI: 10.1016/j.dsp.2013.11.006.
- [J17] N. JAOUA, E. DUFLOS, P. VANHEEGHE, L. CLAVIER, and F. SEPTIER. "Joint estimation of state and noise parameters in a linear dynamic system with impulsive measurement noise: Application to OFDM systems". In: *Digital Signal Processing*, 2014, pp. 1–16. DOI: 10.1016/j.dsp.2014.08.001.
- [J18] A. CARMI, F. SEPTIER, and S. J. GODSILL. "The Gaussian mixture MCMC particle algorithm for dynamic cluster tracking". In: *Automatica*, July 2012, pp. 1–14. DOI: 10.1016/j.automatica.2012.06.086.
- [J19] C. GARNIER, Y. DELIGNON, H. EL GHAZI, and F. SEPTIER. "Spreading code allocation strategy for downlink multicarrier code division multiple access transmission in a correlated Rayleigh fading channel". In: *Wireless Communications and Mobile Computing*, Mar. 2012, pp. –. DOI: 10.1002/wcm.2222.
- [J20] F. SEPTIER and Y. DELIGNON. "MCMC sampling for joint estimation of phase distortions and transmitted symbols in OFDM systems". In: *Digital Signal Processing* 21 (2), Mar. 2011, pp. 341–353. DOI: 10.1016/j.dsp.2010.10.003.
- [J21] H. EL GHANNUDI, L. CLAVIER, N. AZZAOU, F. SEPTIER, and P.-A. ROLLAND. "Alpha-stable interference modeling and Cauchy receiver for an IR-UWB ad hoc network". In: *IEEE Transactions on Communications* 58 (6), June 2010, pp. 1748–1757. DOI: 10.1109/TCOMM.2010.06.090074.
- [J22] F. SEPTIER, Y. DELIGNON, A. MENHAJ-RIVENQ, and C. GARNIER. "Pilot-Aided Sequential Monte Carlo Estimation of Phase Distortions and Transmitted Symbols in Multicarrier Systems". In: *Journal of Electrical and Computer Engineering* 2010, Jan. 2010, pp. 1–5. DOI: 10.1155/2010/536057.
- [J23] F. SEPTIER, Y. DELIGNON, A. MENHAJ-RIVENQ, and C. GARNIER. "Monte Carlo Methods for Channel, Phase Noise and Frequency Offset Estimation with Unknown Noise Variances in OFDM Systems". In: *IEEE Transactions on Signal Processing* 56 (8), Aug. 2008, pp. 3613–3626. DOI: 10.1109/TSP.2008.919629.
- [J24] F. SEPTIER, Y. DELIGNON, A. RIVENQ-MENHAJ, and C. GARNIER. "Non-Pilot-Aided Sequential Monte Carlo Method to Joint Signal, Phase Noise, and Frequency Offset Estimation in Multicarrier Systems". In: *EURASIP Journal on Advances in Signal Processing* 2008, Apr. 2008, pp. 1–14. DOI: 10.1155/2008/612929.

International conference papers

- [C1] M. RUI, C. GARNIER, F. SEPTIER, and J. KLEIN. "Block Kalman Filter: an Asymptotic Block Particle Filter in the Linear Gaussian Case". In: *IEEE International Conference on Acoustics, Speech and Signal Processing*. Toronto, Canada, June 2021.
- [C2] F. SEPTIER and T. MATSUI. "A Robust High-Dimensional Bayesian Filter: the Stochastic GH-GENKF". In: *IEEE International Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP)*. Le Gosier, France, Dec. 2019.
- [C3] F. SEPTIER, C. DUCHENNE, and P. ARMAND. "Application of the Bayesian approach and inverse dispersion modelling to source term estimates in built-up environments". In: *19th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes (HARMO)*. Bruges, Belgium, June 2019.
- [C4] I. NEVAT, F. SEPTIER, K. AVNIT, G. W. PETERS, and L. CLAVIER. "Joint Localization and Clock Offset Estimation via Time-Of-Arrival with Ranging Offset". In: *26th European Signal Processing Conference (EUSIPCO)*. Roma, Italy, Sept. 2018, pp. 672–676.
- [C5] R. LAMBERTI, Y. PETETIN, F. SEPTIER, and F. DESBOUVRIES. "A double proposal normalized importance sampling estimator". In: *IEEE Workshop on Statistical Signal Processing (SSP)*. Freiburg, Germany, June 2018.
- [C6] T. A. MYRVOLL, J. E. HAKEGARD, T. MATSUI, and F. SEPTIER. "Counting Public Transport Passenger Using WiFi Signatures of Mobile Devices". In: *IEEE 20th International Conference on Intelligent Transportation Systems ITSC*. Yokohama, Japan, Oct. 2017, pp. 1–6.
- [C7] R. LAMBERTI, Y. PETETIN, F. SEPTIER, and F. DESBOUVRIES. "An improved SIR-based sequential Monte Carlo algorithm". In: *IEEE Workshop on Statistical Signal Processing SSP*. Palma de Majorca, Spain, June 2016.

- [C8] H. RAJAONA, F. SEPTIER, Y. DELIGNON, P. ARMAND, C. OLRy, and A. ALBERGEL. "A Bayesian approach of the Source Term Estimate coupling retro-dispersion computations with a Lagrangian Particle Dispersion Model and the Adaptive Multiple Importance Sampling". In: *17th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes (HARMO 17)*. Budapest, May 2016.
- [C9] R. LAMBERTI, Y. PETETIN, F. SEPTIER, and F. DESBOUVRIES. "Particle Filters with Independent Resampling". In: *IEEE International Conference on Acoustics, Speech and Signal Processing*. Shanghai, China, Mar. 2016.
- [C10] K. MARKOV, T. MATSUI, F. SEPTIER, and G. W. PETERS. "Dynamic Speech Emotion Recognition with State-Space Models". In: *23rd European Signal Processing Conference (EUSIPCO)*. Nice, France, Aug. 2015.
- [C11] M. O. AMEZIANE, C. GARNIER, Y. DELIGNON, E. DUFLOS, and F. SEPTIER. "Particle Filtering with a Soft Detection Based Near-Optimal Importance Function for Visual Tracking". In: *23rd European Signal Processing Conference (EUSIPCO)*. Nice, France, Aug. 2015.
- [C12] O. ISUPOVA, L. MIHAYLOVA, D. KUZIN, G. MARKARIAN, and F. SEPTIER. "An Expectation Maximisation Algorithm for Behaviour Analysis in Video". In: *Int. Conf. on Information Fusion (FUSION)*. Washington D.C., United States, July 2015.
- [C13] M. HAWES, L. MIHAYLOVA, F. SEPTIER, and S. J. GODSILL. "A Bayesian Compressed Sensing Kalman Filter for Direction of Arrival Estimation". In: *Int. Conf. on Information Fusion (FUSION)*. Washington D.C., United States, July 2015.
- [C14] A. DE FREITAS, F. SEPTIER, L. MIHAYLOVA, and S. J. GODSILL. "How Can Subsampling Reduce Complexity in Sequential MCMC Methods and Deal with Big Data in Target Tracking?" In: *Int. Conf. on Information Fusion (FUSION)*. Washington D.C., United States, July 2015.
- [C15] X. YAN, L. CLAVIER, G. W. PETERS, N. AZZAOU, F. SEPTIER, and I. NEVAT. "Skew-t copula for dependence modelling of impulsive (α -stable) interference". In: *IEEE International Conference on Communications (ICC)*. London, United Kingdom, June 2015.
- [C16] I. NEVAT, G. W. PETERS, F. SEPTIER, and T. MATSUI. "Wind Storm Estimation using a Heterogeneous Sensor Network with High and Low Resolution Sensors". In: *IEEE International Conference on Communications (ICC)*. London, United Kingdom, June 2015.
- [C17] R. LAMBERTI, F. SEPTIER, N. SALMAN, and L. MIHAYLOVA. "Sequential Markov Chain Monte Carlo for multi-target tracking with correlated RSS measurements". In: *IEEE 10th International Conference on Intelligent Sensors, Sensor Networks and Information Processing (ISSNIP)*. Singapore, Singapore, Apr. 2015.
- [C18] G. W. PETERS, T. A. MYRVOLL, T. MATSUI, F. SEPTIER, and I. NEVAT. "Communications Meets Copula Modeling: Non-Standard Dependence Features in Wireless Fading Channels". In: *IEEE Global Conference on Signal and Information Processing (GlobalSIP)*. Atlanta, Georgia, United States, Dec. 2014, pp. 1–5.
- [C19] H. RAJAONA, P. ARMAND, F. SEPTIER, Y. DELIGNON, C. OLRy, and J. MOUSSAFIR. "Estimating Source Term Parameters through Probabilistic Bayesian inference: An Approach based on an Adaptive Multiple Importance Sampling Algorithm". In: *16th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes (HARMO 16)*. Varna, Bulgaria, Sept. 2014, pp. 1–5.
- [C20] T. L. T. NGUYEN, F. SEPTIER, G. W. PETERS, and Y. DELIGNON. "Improving SMC Sampler Estimate by Recycling All Past Simulated Particles". In: *2014 IEEE Workshop on Statistical Signal Processing (SSP 14)*. Gold Coast, Australia, June 2014, pp. 1–4.
- [C21] Q. T. NGUYEN, Y. DELIGNON, L. CHAGAS, and F. SEPTIER. "Printer Identification from Micro-metric Scale Printing". In: *IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP*. Florence, Italy, May 2014, pp. 1–4.
- [C22] N. JAOUA, F. SEPTIER, E. DUFLOS, and P. VANHEEGHE. "State and Impulsive Time-Varying Measurement Noise Density Estimation in Nonlinear Dynamic Systems Using Dirichlet Process Mixtures". In: *IEEE International Conference on Acoustics, Speech, and Signal Processing*. Florence, Italy, May 2014, pp. 1–5.
- [C23] I. NEVAT, O. EGER, G. W. PETERS, and F. SEPTIER. "NEPS: "Narrowband Efficient Positioning System" for Delivering Resource Efficient GNSS Receivers". In: *2014 IEEE Ninth International Conference on Intelligent Sensors, Sensor Networks and Information Processing (ISSNIP)*. Singapore, Singapore, Apr. 2014, pp. 1–6.

- [C24] Q. T. NGUYEN, Y. DELIGNON, L. CHAGAS, and F. SEPTIER. "Printer technology authentication from micrometric scan of a single printed dot". In: *IS&T/SPIE Electronic Imaging*. San Francisco, California, United States, Feb. 2014, pp. 1–7.
- [C25] G. W. PETERS, I. NEVAT, L. CLAVIER, and F. SEPTIER. "Distributional upper bound on the interference in spatial wireless multiuser ultrawideband communication systems". In: *IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2014*. Florence, Italy, 2014, pp. 5764–5768. DOI: 10.1109/ICASSP.2014.6854708.
- [C26] T. L. T. NGUYEN, F. SEPTIER, G. W. PETERS, and Y. DELIGNON. "Bayesian Model Selection and Parameter Estimation in Penalized Regression Model Using SMC Samplers". In: *21st European Signal Processing Conference (EUSIPCO)*. Marrakech, Morocco, Sept. 2013, pp. 1–5.
- [C27] F. SEPTIER, G. W. PETERS, and I. NEVAT. "Bayesian Filtering with Intractable Likelihood using Sequential MCMC". In: *IEEE International Conference on Acoustics, Speech, and Signal Processing*. Vancouver, Canada, May 2013, pp. 1–5.
- [C28] N. JAOUA, E. DUFLOS, P. VANHEEGHE, and F. SEPTIER. "Bayesian Nonparametric State and Impulsive Measurement Noise Density Estimation in Nonlinear Dynamic Systems". In: *IEEE International Conference on Acoustics, Speech, and Signal Processing*. Vancouver, Canada, May 2013, pp. 1–5.
- [C29] A. ICKOWICZ, F. SEPTIER, P. ARMAND, and Y. DELIGNON. "Adaptive Bayesian Algorithms for the Estimation of Source Term in a Complex Atmospheric Release". In: *15th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes*. Madrid, Spain, May 2013, pp. 1–5.
- [C30] W. GU, G. PETERS, L. CLAVIER, F. SEPTIER, and I. NEVAT. "Receiver study for cooperative communications in convolved additive α -stable interference plus Gaussian thermal noise". In: *Ninth International Symposium on Wireless Communication Systems*. Paris, France, Aug. 2012, pp. 1–5.
- [C31] A. ICKOWICZ, F. SEPTIER, and P. ARMAND. "Estimating a CBRN atmospheric release in a complex environment using Gaussian Processes". In: *Proc. Int. Conf. on Information Fusion (FUSION 2012)*. Singapore, Singapore, July 2012, pp. 1846–1853.
- [C32] D. N. TRUONG CONG, F. SEPTIER, C. GARNIER, L. KHOUDOUR, and Y. DELIGNON. "Robust Visual Tracking via MCMC-based Particle Filter". In: *IEEE International Conference on Acoustics, Speech and Signal Processing*. Kyoto, Japan, Mar. 2012, pp. –.
- [C33] A. CARMI, L. MIHAYLOVA, F. SEPTIER, S. K. PANG, P. GURFIL, and S. J. GODSILL. "MCMC-Based Tracking and Identification of Leaders in Groups". In: *IEEE International Conference on Computer Vision Workshops (ICCV Workshops)*. Barcelona, Spain, Nov. 2011, pp. 112–119. DOI: 10.1109/ICCVW.2011.6130232.
- [C34] F. SEPTIER, J. CORNEBISE, S. J. GODSILL, and Y. DELIGNON. "A Comparative Study of Monte-Carlo Methods for Multitarget Tracking". In: *IEEE International Workshop on Statistical Signal Processing*. Nice, France, June 2011, pp. 205–208. DOI: 10.1109/SSP.2011.5967660.
- [C35] H. K. KHALIL, L. CLAVIER, F. SEPTIER, L. MARSALLE, and G. CASTELLAN. "Performance of an Optimal Receiver in the Presence of Alpha-Stable and Gaussian Noises". In: *IEEE International Workshop on Statistical Signal Processing*. Nice, France, June 2011, pp. 205–208. DOI: 10.1109/SSP.2011.5967762.
- [C36] N. JAOUA, E. DUFLOS, P. VANHEEGHE, L. CLAVIER, and F. SEPTIER. "Impulsive Interference Mitigation in Ad Hoc Networks Based on Alpha-Stable Modeling and Particle Filtering". In: *International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2011*. Ed. by I. S. P. SOCIETY. Prague, Czech Republic: IEEE - Signal Processing Society, May 2011, pp. 3548–3551. DOI: 10.1109/ICASSP.2011.5946244.
- [C37] N. DRIDI, Y. DELIGNON, W. SAWAYA, and F. SEPTIER. "Blind Detection of Severely Blurred 1D Barcode". In: *Global Telecommunications Conference (GLOBECOM 2010), 2010 IEEE*. United States, Dec. 2010, pp. 1–5.
- [C38] F. SEPTIER, S. K. PANG, A. CARMI, and S. GODSILL. "On MCMC-Based Particle Methods for Bayesian Filtering : Application to Multitarget Tracking". In: *IEEE International Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP)*. Aruba, Netherlands Antilles, Dec. 2009, pp. 1280–1287. DOI: 10.1109/CAMSAP.2009.5413256.
- [C39] F. SEPTIER, A. CARMI, S. K. PANG, and S. GODSILL. "Multiple Object Tracking Using Evolutionary MCMC-Based Particle Algorithms". In: *15th IFAC Symposium on System Identification, (SYSID 2009)*. Saint-Malo, France, July 2009. DOI: 10.3182/20090706-3-FR-2004.00132.

- [C40] F. SEPTIER, A. CARMI, and S. GODSILL. "Tracking of Multiple Contaminant Clouds". In: *12th International Conference on Information Fusion, 2009. FUSION '09*. Seattle, WA, United States, July 2009, pp. 1280–1287.
- [C41] A. CARMI, F. SEPTIER, and S. GODSILL. "The Gaussian mixture MCMC particle algorithm for dynamic cluster tracking". In: *12th International Conference on Information Fusion, 2009. FUSION '09*. Seattle, WA, United States, July 2009, pp. 1179–1186.
- [C42] F. SEPTIER, Y. DELIGNON, A. MENHAJ-RIVENQ, and C. GARNIER. "Estimation séquentielle et conjointe du bruit de phase, de l'offset en fréquence et des symboles émis dans les systèmes OFDM". In: *Traitement et Analyse de l'Information : Méthodes et Applications (TAIMA)*. Hammamet, Tunisia, May 2009, pp. 1–4.
- [C43] F. SEPTIER, S. K. PANG, S. GODSILL, and A. CARMI. "Tracking of coordinated groups using marginalised MCMC-based Particle algorithm". In: *IEEE Aerospace Conference*. Big Sky, MT, United States, Mar. 2009, p. 1. DOI: 10.1109/AERO.2009.4839491.
- [C44] A. CARMI, S. GODSILL, and F. SEPTIER. "Evolutionary MCMC Particle Filtering for Target Cluster Tracking". In: *IEEE 13th DSP Workshop and the 5th SPE Workshop*. Marco Island, Florida, United States, Jan. 2009, pp. 262–267.
- [C45] F. SEPTIER, Y. DELIGNON, A. MENHAJ-RIVENQ, and C. GARNIER. "OFDM Channel Estimation in the Presence of Phase Noise and Frequency Offset by Particle Filtering". In: *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*. Honolulu, United States, Apr. 2007, pp. III–289 – III–292.
- [C46] F. SEPTIER, Y. DELIGNON, A. MENHAJ-RIVENQ, and C. GARNIER. "Particle Filtering with hybrid importance function for joint symbol detection and phase tracking". In: *IEEE 7th Workshop on Signal Processing Advances in Wireless Communications*. Cannes, France, July 2006, pp. 1–5. DOI: 10.1109/SPAWC.2006.346358.
- [C47] F. SEPTIER, Y. DELIGNON, A. MENHAJ-RIVENQ, and C. GARNIER. "Traitement du bruit de phase par filtrage particulaire en communication numérique". In: *Traitement et Analyse de l'Information : Méthodes et Applications (TAIMA)*. Hammamet, Tunisia, Oct. 2005, pp. 1–4.

National conference papers

- [CN1] E. SORET, L. CLAVIER, G. W. PETERS, I. NEVAT, and F. SEPTIER. "SIMO communication with impulsive and dependent interference - the Copula receiver". In: *XXVIème Colloque GRETSI*. Juan-Les-Pins, Sept. 2017.
- [CN2] R. LAMBERTI, Y. PETETIN, F. SEPTIER, and F. DESBOUVRIES. "Rééchantillonnage indépendant et semi-indépendant pour le filtrage particulaire". In: *XXVIème Colloque GRETSI*. Juan-Les-Pins, Sept. 2017.
- [CN3] M. O. AMEZIANE, C. GARNIER, F. SEPTIER, and E. DUFLOS. "Visual tracking of multiple objects using a local particle filter". In: *XXVIème Colloque GRETSI*. Juan-Les-Pins, Sept. 2017.
- [CN4] M. OULAD AMEZIANE, C. GARNIER, Y. DELIGNON, E. DUFLOS, and F. SEPTIER. "Filtrage particulaire avec une loi de proposition quasi-optimale utilisant la détection souple pour le suivi visuel". In: *XXVème Colloque GRETSI*. Lyon, France, Sept. 2015.
- [CN5] Q. T. NGUYEN, Y. DELIGNON, L. CHAGAS, and F. SEPTIER. "Modélisation de points imprimés à l'échelle micro-métrique". In: *XXVème Colloque GRETSI*. Lyon, France, Sept. 2015.
- [CN6] X. YAN, L. CLAVIER, I. NEVAT, G. W. PETERS, and F. SEPTIER. "Robust receiver in impulsive noise". In: *17èmes Journées Nationales du Réseau Doctoral en Micro-Nanoélectronique, JNRDM 2014*. Villeneuve d'Ascq, France, 2014, 4 pages.
- [CN7] N. JAOUA, E. DUFLOS, P. VANHEEGHE, and F. SEPTIER. "Estimation bayésienne non paramétrique de l'état et du bruit impulsif dans les systèmes dynamiques non linéaires". In: *XXIVème Colloque GRETSI*. Brest, France, Sept. 2013, pp. 1–4.

Book chapters

- [B1] G. W. PETERS, E. PANAYI, and F. SEPTIER. "SMC-ABC methods for the estimation of stochastic simulation models of the limit order book". In: *Handbook of Approximate Bayesian Computation*. Ed. by S. A. SISSON, Y. FAN, and M. BEAUMONT. 2018. ISBN: 9781439881507.
- [B2] F. SEPTIER and G. W. PETERS. "An Overview of Recent Advances in Monte-Carlo Methods for Bayesian Filtering in High-Dimensional Spaces". In: *Theoretical Aspects of Spatial-Temporal Modeling*. Ed. by G. W. PETERS and T. MATSUI. SpringerBriefs - JSS Research Series in Statistics, Nov. 2015. ISBN: 9784431553359.

- [B3] A. CARMI, L. MIHAYLOVA, F. SEPTIER, S. K. PANG, P. GURFIL, and S. J. GODSILL. "Inferring Leadership from Group Dynamics Using Markov Chain Monte Carlo Methods". In: *Modeling, Simulation and Visual Analysis of Crowds: A Multidisciplinary Perspective*. Ed. by S. ALI, K. NISHINO, D. MANOCHA, and M. SHAH. Springer, Dec. 2013, pp. 325–346. ISBN: 9781461484820.
- [B4] S. K. PANG, S. GODSILL, J. LI, F. SEPTIER, and S. HILL. "Sequential Inference for Dynamically Evolving Groups of Objects". In: *Bayesian Time Series Models*. Ed. by A. T. C. D BARBER and S. CHIAPPA. Cambridge University Press, Aug. 2011, pp. 245–276. ISBN: 9780521196765.

Technical reports

- [R1] A. ICKOWICZ, F. SEPTIER, and P. ARMAND. *Recherche de sources NRBC dans des environnements atmosphériques complexes par méthodes de Monte-Carlo adaptatives - Applications à un quartier parisien*. Tech. rep. CEA, Jan. 2013.
- [R2] A. ICKOWICZ, F. SEPTIER, and P. ARMAND. *Méthodes de Monte-Carlo adaptatives pour la caractérisation de termes sources*. Tech. rep. EOTP A-25800-06-20-20-A2. CEA, Mar. 2012.
- [R3] A. ICKOWICZ, F. SEPTIER, and P. ARMAND. *Statistic Estimation for Particle Clouds with Lagrangian Stochastics Algorithms*. Tech. rep. EOTP A-24300-01-01-AW-20. CEA, Nov. 2011.
- [R4] F. SEPTIER and S. GODSILL. *Contour Tracking using Parametric Level Set Functions*. Tech. rep. Tracking Cluster Project, Phase III, Data and Information Fusion - Defence Technology Centre (DIF-DTC), Apr. 2009.
- [R5] F. SEPTIER and S. GODSILL. *Source Term Estimation and Plume Tracking*. Tech. rep. Tracking Cluster Project, Phase III, Data and Information Fusion - Defence Technology Centre (DIF-DTC), Mar. 2009.

Theses

- [T1] F. SEPTIER. "On sequential Monte-Carlo algorithms for Bayesian Inference". Habilitation à diriger des recherches. Université de Lille, Dec. 2017.
- [T2] F. SEPTIER. "Sequential Monte-Carlo Methods for Multicarrier Systems in the Presence of Phase Distortion". PhD thesis. Université de Valenciennes et du Hainaut Cambrésis, Apr. 2008.
- [T3] F. SEPTIER. "Pairwise Markov and Particle Filtering in Digital Communications". Master's thesis. Télécom Lille / Université de Valenciennes et du Hainaut Cambrésis, June 2004.