

Associate professor

PhD-HDR in Applied Mathematics

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Yousri SLAOUI

Laboratoire de Mathématiques et Applications
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ACADEMIC EXPERIENCE

Since Sep 2011	ASSOCIATE PROFESSOR AT THE LABORATORY OF APPLIED MATHEMATICS, University of Poitiers, France.
Oct 2010 - Aug 2011	POSTDOCTORAL RESEARCHER AT INSERM (NATIONAL INSTITUTE OF HEALTH AND MEDICAL RESEARCH), University of Paris Diderot, France.
Mar 2009 - Sep 2010	POSTDOCTORAL RESEARCHER AT ORANGE LABS (FRANCE TELECOM R&D), Issy Les Moulineaux, France.
Sep 2007 - Feb 2009	POSTDOCTORAL RESEARCHER AT CNRS (NATIONAL CENTER OF SCIENTIFIC RESEARCH), University of Evry, France.
Sep 2005 - Aug 2007	RESEARCH ASSISTANT, University of Versailles Saint-Quentin, France.

EDUCATION

2016	HDR - HABILITATION À DIRIGER DES RECHERCHES (ABILITY TO CONDUCT RESEARCHES) IN MATHEMATICAL STATISTICS. Title : selection of smoothing parameters of recursive estimators, deconvolution problem, censored data, large deviations and moderate deviations. President : Delphine Blanke . Reviewers : Gérard Biau, Hervé Cardot and Aurore Delaigle . Examinators : Denis Bosq, Abdelkader Mokkadem, Clément Dombry, Hermine Biermé, Julien Michel . 07th october, 2016, University of Poitiers.
2006	PHD IN MATHEMATICAL STATISTICS. Title : Application of the approximation stochastic methods for the estimation of a density and a regression function. Supervisor : Abdelkader Mokkadem, Mariane Pelletier . President : Marie Duffo . Reviewers : Bernard Bercu, Jean-Michel Poggi . 18th december, 2006, University of Versailles Saint-Quentin.
2001	MASTER IN STATISTICS AND PROBABILITY ENGINEERING. University of Versailles Saint-Quentin, France.

PUBLICATIONS

— ARTICLES IN JOURNALS :

- [YS24] [Y. Slaoui](#). “[Recursive nonparametric regression estimation for independent functional data](#)”, *Statistica Sinica*, doi :10.5705/ss.202018.0069 (2019).
- [YS23] [Y. Slaoui](#). “[Data-driven bandwidth selection for recursive kernel density estimators under double truncation](#)”, *Sankhya B, The Indian Journal of Statistics*, doi : 10.1007/s13571-018-0165-2 (2019).

- [YS22] [Y. Slaoui](#). “[Large and moderate deviation principles for semi-recursive hazard rate kernel estimators defined by stochastic approximation method](#)”, **International Journal of Mathematics and Statistics**, **19**, (2019).
- [YS21] S. Bouzebda and [Y. Slaoui](#). “[The Stochastic Approximation Method for Kernel-Type Function Estimators for Spatial Data](#)”, **Statistics and Probability Letters**, Volume 139, (2018), Pages 103-114. MR3802190
- [YS20] [Y. Slaoui](#). “[Bias reduction in kernel density estimation](#)”, **Journal of Nonparametric Statistics**, Volume 30, Issue 2, (2018), Pages 505-522. MR3794404.
- [YS19] A. Jmaei, [Y. Slaoui](#) and W. Dellagi. “[Recursive distribution estimator defined by stochastic approximation method using Bernstein polynomials](#)”, **Journal of Nonparametric Statistics**, Volume 29, Issue 4, (2017), Pages 792-805. MR3740720
- [YS18] [Y. Slaoui](#). “[Recursive kernel density estimators under missing data](#)”, **Communications in Statistics - Theory and Methods**, Volume 46, Issue 18, (2017), Pages 9101-9125. MR3684557
- [YS17] [Y. Slaoui](#). “[On the choice of smoothing parameters for semi-recursive nonparametric hazard estimators](#)”, **Journal of Statistical Theory and Practice**, Volume 10, Issue 4, (2016), Pages 656-672. MR3558394
- [YS16] [Y. Slaoui](#). “[Optimal Bandwidth selection for semi-recursive kernel regression estimators](#)”, **Statistics and Its Interface**, Volume 9, Issue 3, (2016), Pages 375-388. MR3457504
- [YS15] [Y. Slaoui](#). “[Bandwidth selection in deconvolution kernel distribution estimators defined by stochastic approximation method with Laplace errors](#)”, **Journal of Japan Statistical Society**, Volume 46, Issue 1, (2016), Pages 1-26 . MR3616241
- [YS14] [Y. Slaoui](#). “[Smoothing parameters for deconvolution recursive kernel density estimators defined by stochastic approximation method with Laplace errors](#)”, **Journal of Indian Statistical Association**, Volume 54, Issue 1-2, (2016), Pages 193-220. MR3676722
- [YS13] S. Ragot, P. J. Saulnier, E. Grand, G. Velho, A. De Hauteclocque, [Y. Slaoui](#), L. Potier, P. Sosner, J. M. Halimi, P. Zaoui, V. Rigalleau, F. Fumeron, R. Roussel, M. Marre, S. Hadjadj on behalf of the SURDIAGENE and DIABHYCAR Study group. “[Dynamic changes in renal function are associated with Major Cardiovascular Events in patients with type 2 diabetes](#)”, **Diabetes Care**, (2016), Volume 39, Issue 7, Pages 1259-1266. PMID : 27222502
- [YS12] [Y. Slaoui](#). “[Moderate deviation principles for recursive regression estimators defined by stochastic approximation method](#)”, **International Journal of Mathematics and Statistics**, Volume 16, Issue 2, (2015), Pages 51-60. MR3378190
- [YS11] [Y. Slaoui](#). “[Plug-In Bandwidth selector for recursive kernel regression estimators defined by stochastic approximation method](#)”, **Statistica Neerlandica**, Volume 69, Issue 4, (2015), Pages 483-509. MR3414708
- [YS10] [Y. Slaoui](#). “[Large and Moderate deviation principles for averaged stochastic approximation method for the estimation of a regression function](#)”, **Serdica Mathematical Journal**, Volume 41, Issue 2, (2015), Pages 307-328. MR3363608
- [YS9] A. de Hauteclocque, S. Ragot, [Y. Slaoui](#), P. Sosner, J. M. Halimi, V. Rigalleau, R. Roussel, P. J. Saulnier, S. Hadjadj for the SURDIAGENE Study group “[La trajectoire de créatinine chez les diabétiques de type 2: un bon marqueur de la survenue d'évènements cardiovasculaires.](#)” **Diabetes & Metabolism**, Volume 40, Supplement 1, (2014). doi :10.1016/S1262-3636(14)72186-X.
- [YS8] A. De Hauteclocque, S. Ragot, [Y. Slaoui](#), E. Gand, A. Miot, P. Sosner, J. M. Halimi, P. Zaoui, V. Rigalleau, R. Roussel, P. J. Saulnier, S. Hadjadj for the SURDIAGENE Study group. “[The](#)

influence of sex on Renal Function Decline in people with Type 2 Diabetes ”, **Diabetic Medicine : a journal of the British Diabetic Association**, Volume 31, Issue 9, (2014), Pages 1121-1128. PMID : 24773061

- [YS7] [Y. Slaoui](#) and G. Nuel. “Parameter estimation in a hierarchical random intercept model with censored response: An approach using a SEM algorithm and Gibbs sampling ”, **Sankhya B, The Indian Journal of Statistics**, Volume 76, Issue 2, (2014), Pages 210-233. MR3302271
- [YS6] [Y. Slaoui](#). “Bandwidth selection for recursive kernel density estimators defined by stochastic approximation method”, **Journal of Probability and Statistics**. Volume 2014, Article ID 739640, (2014). MR3219439
- [YS5] [Y. Slaoui](#). “The stochastic approximation method for the estimation of a distribution function”, **Mathematical Methods of Statistics**, Volume 23, Issue 4, (2014), Pages 306-325. MR3295061
- [YS4] [Y. Slaoui](#). “Large and Moderate deviation principles for recursive kernel density estimators defined by stochastic approximation method ”, **Serdica Mathematical Journal**, Volume 39, Issue 1, (2013), Pages 53-82. MR3087768
- [YS3] J. Milet, G. Nuel, L. Watier, D. Courtin, [Y. Slaoui](#), P. Senghor, F. Migot-Nabias, O. Gaye and A. Garcia “Genome Wide Linkage and Association Study of Plasmodium falciparum Infection and Mild Malaria Attack in a Senegalese Population ”, **Journal of Public Library of Science, PLoS ONE**, Volume 5, Issue 7, (2010) : e11616. doi:10.1371/journal.pone.0011616. PMID : 20657648
- [YS2] A. Mokkadem, M. Pelletier and [Y. Slaoui](#). “The stochastic approximation method for the estimation of a multivariate probability density”, **Journal of Statistical Planning and Inference**, Volume 139, Issue 7, (2009), Pages 2459-2478. MR2508006.
- [YS1] A. Mokkadem, M. Pelletier and [Y. Slaoui](#). “Revisiting Révész’s stochastic approximation method for the estimation of a regression function”, **Latin American Journal of Probability and Mathematical Statistics, ALEA**, Volume 6, (2009), Pages 63-114. MR2496230.

— CONFERENCES OR WORKSHOPS :

- C1 [Y. Slaoui](#). “Sélection de paramètre de lissage des estimateurs récursifs construits à l’aide des algorithmes stochastiques.”, Journée IOPS-Image Optimisation Probabilités et Statistique (IOPS), Réserve Ornithologique du Teich, France, (2017).
- C2 [Y. Slaoui](#). “Smoothing parameters for recursive kernel density estimators under double truncation”, 22nd International Conference on Computational Statistics (COMPSTAT 2016), Oviedo, Espagne, (2016).
- C3 A. Jmaei, and [Y. Slaoui](#). “Recursive kernel distribution estimators defined by stochastic approximation method using Bernstein polynomials”, 48 èmes Journées de Statistique de la SFDS, Montpellier, (2016).
- C4 [Y. Slaoui](#). “Parameter estimation in a hierarchical random intercept model with censored response: An approach using a SEM algorithm and Gibbs sampling. ”, *Biometrics & Biostatistics, San Antonio, USA, 2015. Abstract in Journal of Applied and Computational Mathematics*, volume 4, Issue 5, (2015), doi: 10.4172/2168-9679.C1.003.
- C5 [Y. Slaoui](#). “Bandwidth selection in deconvolution recursive kernel density estimators defined by stochastic approximation method”, *European Meeting of Statistics*, Amsterdam, Netherland, (2015).

- C6 [Y. Slaoui](#). “[Large and Moderate Deviation Principles for Nonrecursive and Recursive Estimators of a Regression Function](#) ”, *9th Annual International Conference on Statistics*, Athens, Greece, (2015).
- C7 A. de Hauteclocque, S. Ragot, [Y. Slaoui](#), P. Sosner, J. M. Halimi, V. Rigalleau, R. Roussel, P. J. Saulnier, S. Hadjadj for the SURDIAGENE Study group “[La trajectoire de créatinine chez les diabétiques de type 2: un bon marqueur de la survenue d'évènements cardiovasculaires](#)”, *Congrès annuel de la société francophone du diabète*. Paris, (2014).
- C8 A. de Hauteclocque, S. Ragot, [Y. Slaoui](#), P. Sosner, J. M. Halimi, V. Rigalleau, R. Roussel, P. J. Saulnier, S. Hadjadj for the SURDIAGENE Study group “[La trajectoire de créatinine chez les diabétiques de type 2: un bon marqueur de la survenue d'évènements cardiovasculaires](#)”, *Journée recherche Tours-Poitiers*. Poitiers, (2013).
- C9 [Y. Slaoui](#), N. Brunel and F. d'Alché-Buc. “[Module extraction in autoregressive models : application to gene regulatory networks inference](#)”, *MLSB*. Machine Learning in Systems Biology . Royal Academy of Belgium. Brussels, (2008).
- C10 G. Nuel, [Y. Slaoui](#), V. Miele and A. Rebai. “[Taking into account missing genotypes and errors in Family Based Association Testing using an Expectation-Maximization framework](#)”, *ISB*. International Symposium Biotechnology. Sfax, Tunisie, (2008), Pages 508-514.
- C11 G. Nuel, [Y. Slaoui](#) and V. Miele. “[libfbat: a C++ library for family based association testing](#)”, *JOBIM*. Journées Ouvertes en Biologie, Informatique et Mathématiques, (2008), Pages. 119-124.
- C12 [Y. Slaoui](#), A. Garcia, O. Gaye et G. Nuel. “[A methodological approach to left censored parasite densities in malaria. Genetics and Mechanisms of susceptibility to infectious diseases](#)”, *EMBO* (2007). European Molecular Biology Organization. Institut Pasteur. Paris.

SUPERVISION

— SUPPORTED THESES :

1. Co-supervision (80%) with J. Michel (LMA, University of Poitiers) the thesis of Asma JEMAI. The subject deals on the multidimensionnal nonparametric functional estimation near of the edges. Supported 16th March 2018.

— PHD STUDENTS :

1. Co-supervision (70%) with S. Kharadani (Faculté des Sciences de Monastir, Tunisie), the thesis of Fatma BEN KHEDHER. The subject deals on recursive non parametric estimation under censoring. (Starting March 2017).
2. Co-supervision (70%) with H. Fathallah (Université de Sousse, Tunisie), the thesis of Saha SLAMA. The subject deals on recursive estimation of nonparametric estimators in a multidimensional framework in cases where the observations are tainted by errors with applications in the medical field. (Starting September 2017).
3. Co-supervision (50%) with P. Y. Louis (LMA, University of Poitiers), P. Rigoard, D. Frasca (PRISMATICS, CHU de Poitiers) the thesis of Amine Ounaïjim. The subject deals on Predictive modeling ; Prediction algorithms for the optimization of clinical solutions in spinal neurosurgery. (Starting September 2016).
4. Co-supervision (50%) with P. Y. Louis (LMA, University of Poitiers) the thesis of Abir EL HAJ. The subject deals on the application of stochastic algorithm to construct a recursive estimators of the number of clusters and the position of the new observations with applications in medical reseach. (Starting September 2016).

— MASTER STUDENTS :

1. Co-supervision with D. Dupuy (Institut Europeen de Chimie et Biologie, Inserm U1212, Bordeaux) the master 2 internship of Didace Ndala Landou. The subject deals on the development of mathematical methods to identify the cellular specificity of all genes in its genome from a large number of transcriptome. Will be Defended on Septembre 2018.
2. Co-supervision with S. Ragot (Inserm U1402, CHU de Poitiers) the master 2 internship of Charlotte Castel. The subject deals on the development of prognostic indicators of morbidity and mortality from longitudinal data of markers of renal function in kidney transplant patients and diabetic patients. type 2 . Will be Defended on Septembre 2018.
3. Co-supervision with H. Fathallah (Université de Sousse), the master 2 internship of Salima Helali. The subject deals on the use of interpolation polynomials to analyze the estimation error in the case of a probability density. Will be Defended on Septembre 2018.
4. Co-supervision with P. Y. Louis (LMA, Université de Poitiers), P. Rigoard et D. Frasca (CHU, Université de Poitiers) the master 1 internship of Raouf Boukenna. The subject deals on statistical treatment of clinical, radiological, cartographic and psycho / sociological data of chronic Lombo-Radiculalgia patients Postoperative (LRPO) to identify predictors of responses to different therapies. Will be Defended on Septembre 2018.
5. Co-supervision with P. Y. Louis (LMA, University of Poitiers), D. Frasca and A. Chalant (CHU of Poitiers) the master 1 internship of Didace Ndala Landou. The subject deals on the study of the predictive role of HTTLPR functional polymorphism on the response to escitalopram treatment in patients with obsessive-compulsive disorder. Defended on Septembre 2017.
6. Co-supervision with P. Y. Louis (LMA, University of Poitiers), D. Frasca et A. Chalant (CHU de Poitiers) the master 1 internship of Joe De Keizer. The subject deals on the analysis of data from a clinical trial comparing two strategies for performing the apnea test in patients with brain death. Defended on Septembre 2017.
7. Co-supervision with P. Y. Louis (LMA, University of Poitiers), D. Frasca et A. Chalant (CHU de Poitiers) the master 1 internship of Anass Z'Roudi. The subject deals on the exploratory analysis of the migrant health database on the national territory. Defended on Septembre 2017.
8. Co-supervision with P. Y. Louis (LMA, University of Poitiers), C. Perret (CeRCA/MSHS, University of Poitiers) the master 2 internship of Girault Bouges Ganguenon Guesse. The subject deals on the establishment of a mixed model for the analysis of data from electroencephalography in order to understand the cognitive processes involved in conceptually directed verbal production. Defended on Septembre 2017.
9. Co-supervision with P. Y. Louis (LMA, University of Poitiers), P. Rigoard et D. Frasca (CHU, Université de Poitiers) the master 1 internship of Charlotte Castel. The subject deals on some Statistical Processing of Clinical, Radiological, Cartographic and Psycho / Sociological Data of Post-Operative Lumbar-Radiculalgia Patients (LRPO) to Identify Predictive factors for responses to different therapies. Defended on Septembre 2017.
10. Co-supervision with P. Y. Louis (LMA, University of Poitiers), E. Darles (XLIM-ASALI, équipe informatique graphique, Université de Poitiers) the master 1 internship of Kevin Bidault. The subject deals on the exploitation of the space of the parameters of a model for the simulation of fluid in image synthesis. Defended on Septembre 2017.
11. Co-supervision with H. Fathallah (University of Sousse, Tunisia), the master 2 internship of Sahar Slama. The subject deals on the recursive estimation of a regression function in a multidimensional boundary data. Defended on Septembre 2017.

12. Co-supervision with P. Y. Louis (LMA, University of Poitiers), P. Rigoard et D. Frasca (CHU, University of Poitiers) the master 2 internship of Amine Ounajim. The subject deals on the introduction of statistical analysis methods for new multidimensional metrics from the evaluation of chronic pain patients. Defended the 8th Septembre 2016.
13. Co-supervision with P. Y. Louis (LMA, University of Poitiers), P. Rigoard et D. Frasca (CHU, University of Poitiers) the master 1 internship of Eva Lafourcade. The subject deals on some Statistical treatments of clinical, radiological and cartographic data of patients suffering from Lumbar-radiculalgia chronic in order to identify predictive factors of answers to the different themes. Defended the 6th Septembre 2016.
14. Supervision of the master 1 internship of Ridha Bettayeb. The subject deals on the la Construction of phylogenetic trees. Defended the 6th Septembre 2016.
15. Co-supervision with P. Y. Louis (LMA, University of Poitiers) the master 2 internship of Emeline Royer. The subject deals on the applications of stochastic algorithms to the construction of a recursive estimators. Defended the 11th of May, 2016.
16. Co-supervision with P. Y. Louis (LMA, University of Poitiers) the master 1 internship of Jean-David Pailleron. The subject deals on the search of homogeneous areas in the DNA using a hidden Markov models. Defended the 25th of May, 2016.
17. Co-supervision with J. Michel (LMA, University of Poitiers) and D. Oriot (Simulation in Medicine Institute (SiMI), University of Poitiers) the master 2 internship of Adghar Amar, Oukassi Boussad and Mounia Zaouche. The subject deals on the reliability measures of psychiatric rating scales. Defended the 15th of september, 2014.
18. Co-supervision with P. Y. Louis (LMA, University of Poitiers) and B. Vannier (Regulation and Tumor Cells (2RTC), University of Poitiers) the master 2 internship of Vincent Audigier, Pierre Guinard et Cécile Manceau. The subject deals on the applications of statistical methods for postgenomics data : real and simulated Biological data. Defended the 12th of february, 2012.

EDITORIAL ACTIVITY

- Since August 2015, I am an editor for the International Journal of Mathematics and Statistics.
- Since September 2015, I am an editor for the Journal of Advanced Statistics.

REFEREE TASKS FOR

- Mathematical Reviews/MathSciNet
- Annals of the Institute of Statistical Mathematics
- Journal of Nonparametric Statistics
- Journal of Probability and Mathematical Statistics
- Journal of Applied Statistics
- Journal of Sankhya B
- Journal of Advanced Statistics
- International Journal of Mathematics and Statistics
- Acata Applicanda Mathematicae
- Journal of Scientific Research and Reports

ORGANISATION OF CONFERENCES, SEMINARS AND INVITATIONS

- Invitation to the Days IOPS (Images, Optimisation, Probabilités et Statistique) from 5 to 8 july 2017, Réserve Ornithologique du Teich (Bassin d'Arcachon).

- Organizer of some thematic days around non-parametric statistics and statistical process, speakers : Salim Bouzebda, Jean-François Dupuy, Armelle Guillou, Ahmed Kebaier, Salah Khardani, Elias Ould-Saïd and Pierre-Yves Louis the 19 and 20 January 2018.
- co organizer with Pierre-Yves Louis and Marc Arnaudon some thematic days around non-parametric statistics and stochastic algorithms, speakers : Bernard Bercu, Laurent Bordes, Aurore Delaigle, Jean-François Dupuy, Arnaud Guyader, Camille Male and Frederic Proïa the 26 and 27 June 2017.
- Invitation of Aurore Delaigle (Pr, university of Melbourne, Australia) as visiting professor at the Laboratory of Mathematics and Applications of the university of Poitiers during June 2017.
- co organizer of the conference "gene expression 2017" Poitiers January 2017.
- Invitation for seminar of Poitiers in January 2017 of Jean-François Dupuy (Pr, University of INSA Rennes, Rennes, France).
- Invitation for seminar of Poitiers in November 2016 of Salim Bouzebda (Pr, University of Compiègne, Compiègne, France).
- Invitation for seminar of Bordeaux in March 2016 by Marc Arnaudon (Pr, University of Bordeaux, Bordeaux, France).
- Invitation for seminar of Poitiers in March 2016 of Caroline Berard (MCF, University of Rouen, Rouen, France).
- co organizer of the conference "GeoSto" Poitiers August 2015.
- Invitation for seminar of Poitiers in May 2015 of Cyrille Joutard (MCF, University of Montpellier 2, Montpellier, France).
- Invitation for colloquium of Poitiers in January 2015 of Stéphane Robin (DR, AgroParisTech, Paris, France).
- Invitation research and education by Wassima Dellagi, IPEST (Preparatory Institute for Studies of Science and Technology), University of Carthage, Tunisie from 07 décembre 2014 to 14 décembre 2014.
- Invitation for seminar of Poitiers in April 2014 of Lilian Aveneau (MCF, University of Poitiers-Laboratory XLIM SIC, Poitiers, France).
- Chairman of the first section of turning seminar, Poitiers January 2014.
- Invitation for seminar of Poitiers in February 2012 of Issa Baba Camara (MCF, University of Lorraine, Metz, France).
- co organizer of the conference "Cap2008" Porquerolles May 2008.

DISTINCTION

- Since 2016 : I am holder of a premium for research and doctoral supervision.