

Curriculum Vitæ of Patricia CONDE-CESPEDES

Personal Information

Civil status :

Name : Patricia Conde-CéspeDES

Citizenship : French

Marital status : Married, 1 child

Email address :

patricia.conde-cespedes@isep.fr

Address :

LISITE, ISEP

10 rue de Vanves, 92130 Issy-les-Moulineaux.

Page Web : <http://perso.isep.fr/pconde/>

Research Interests : Graphs and networks, social network analysis, clustering algorithms, optimization, graph clustering and modularization, community detection in complex networks, modularization quality functions, supervised and unsupervised learning, data mining.

Current position

- Since September 1st, 2016 : Associate professor at Institut Supérieur d'Electronique de Paris (ISEP) and researcher at LISITE lab.
- Associate researcher et L2TI lab - University Paris 13.
- **qualified in section CNU 26** (number 15226255144)

Previous position

Since September 1st, 2014 to August 31st, 2016 : postdoctoral researcher at L2TI (Laboratoire de traitement et transport de l'information) at University Paris 13, contract funded by the REQUEST (RECURSIVE QUERY & SCALABLE TECHNOLOGIES) project.

Education

2010 – 2013 **PhD in Statistics**, Theoretical and Applied Statistics Laboratory (LSTA), Pierre et Marie Curie University (Paris 6).

Title : *Modelling and extensions of Mathematical Relational Analysis to graph clustering.*

Advisor : Jean-François Marcotorchino.

Defended : on December 18th, 2013 at LSTA *Mention* : Très honorable.

Financement : Contrat doctoral.

Jury members :

Paul DEHEUVELS	University Pierre et Marie Curie
Jean-Loup GUILLAUME	University de la Rochelle
Jean-François MARCOTORCHINO	Directeur Scientifique, Thales
Gilbert SAPORTA	Conservatoire national des arts et métiers
Michalis VAZIRGIANNIS	École Polytechnique
Emmanuel VIENNET	University Paris 13

Thesis referees : Renaud LAMBIOTTE and Emmanuel VIENNET

2009 – 2010 **Master 2 in Statistics**, Université Pierre-et-Marie-Curie. *Mention Bien.*

2005 – 2006 **Master ISMAG (Informatique, Statistique et Mathématiques appliquées à la Gestion)**, University Toulouse 2 (UTM). *Mention Assez Bien.*

2000 – 2005 **Industrial Engineering**, University Mayor de San Andrés-UMSA (La Paz- Bolivia). *Graduated with Honors : "Academic Excellence"(highest distinction)*.

Awards and scholarships

- 2014 : Nominated for the Thales Thesis Prize, my thesis was one of the 2 thesis selected by the division Thales SIX for the general competition of Thales Corp.
- 2010 : Full scholarship covering the preparation towards the PhD. (contrat doctoral) degree at University Pierre and Marie Curie.
- 2005 : Academic Excellence Scholarship covering the studies towards the Master's degree at a French University, awarded by the French Embassy in Bolivia.
- 2002 : Prize «Guido Capra Jemio» awarded to the best student in Industrial Engineering of the University Mayor de San Andrés (UMSA), La Paz-Bolivie.

Publications

- Guillaume Lachaud, Patricia Conde-Cespedes and Maria Trocan "Entropy Role on Patch-Based Binary Classification for Skin Melanoma" (to appear), 2021.
- P. Conde-Cespedes "Approaching the Optimal Solution of the Maximal α -quasi-clique Local Community Problem", *Electronics* 2020, 9, 1438.
- D. Grosz and P. Conde-Cespedes : "Automatic Detection of Sexist Statements Commonly Used at the Workplace", In workshop LDRC in Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), Singapur, May 2020.
- P. Conde-Céspedes "Community Detection of High Density : An Upper Bound for the Optimal Solution.", *Sens. Transducers* 2019, 234, 37–43.
- A. Kadaikar, Y. Pan, Q. Zhang, P. Conde-Cespedes, M. Trocan, F. Amiel and B. Guinot, "Variable Complexity Neural Networks Comparison for Pollen Classification", in *International Journal of Biology and Biomedical Engineering*, Naun, 2019.
- A. Kadaikar, Benjamin Guinot, M. Trocan, F. Amiel, P. Conde-Cespedes et al. "Automatic Pollen Grains Counter" , in *BioSMART'2019*, IEEE, 2019.
- A. Kadaikar, M. Trocan, F. Amiel, P. Conde-Cespedes, "Sharp images detection for microscope pollen slides observation" , in *ACIIDS'2019*, Springer, 2019.
- P. Conde-Céspedes, J. Chavando et Eliza Deberry, "Detection of suspicious accounts in Twitter", *Multi-media and Network Information Systems - Proceedings of the 11th International Conference (MISSI)* Wroclaw, Poland, 12-14 September 2018, pages 362–371.
- P. Conde-Céspedes, B. Ngonmang and E. Viennet, "An efficient method for mining the maximal α -quasi-clique-community of a given node in complex networks", *Social Network Analysis and Mining*, pp. 8 :20, December 2018.
- P. Conde-Céspedes, F. Marcotorchino et E. Viennet. "Comparison of linear modularization criteria using the relational formalism, an approach to easily identify resolution limit". *AKDM6*, "Advances in Knowledge Discovery and Management", pp. 101-120, 2017.
- P. Conde-Céspedes, B. Ngonmang et E. Viennet, "Approximation of the Maximal α -Consensus Local Community detection problem in Complex Networks". In *IEEE SITIS 2015*, International Workshop on Complex Networks and their Applications, Bangkok, Thailand, November 2015.
- P. Conde-Céspedes, F. Marcotorchino et E. Viennet. "Comparison of linear modularization criteria using the relational formalism, an approach to easily identify resolution limit". *15ème Conférence Internationale Francophone sur l'Extraction et la Gestion des Connaissances (EGC'15)*, RNTI-E-28, pages 203-214, 2015.
- P. Conde-Céspedes et F. Marcotorchino. *Comparing different modularization criteria using relational metric*. In F. Nielsen et F. Barbaresco, editors, *Proc. First International Conference, Geometric Science*

of Information, number 1, pages 180–187, Paris, France, 2013. Springer-Verlag.

- F. Marcotorchino et P. Conde-Céspedes. *Optimal transport and minimal trade problem, impacts on relational metrics and applications to large graphs and network modularity*. In F. Nielsen et F. Barbaresco, editors, Proc. First International Conference, Geometric Science of Information, number 1, pages 169–179, Paris, France, 2013. Springer-Verlag.
- P. Conde-Céspedes et F. Marcotorchino. *Modularisation et Recherche de Communautés dans les réseaux complexes par Unification Relationnelle*. Revue des Nouvelles Technologies de l'Information (RNTI-A6), pages 71–97, June 2012.
- G. Louah, P. Conde-Céspedes, D. Daucher, B. Jourdain, and F. Bosc. Traffic operations at an entrance ramp of a suburban freeway first results. *Procedia - Social and Behavioral Sciences*, 16(0) :162 – 171, 2011. 6th International Symposium on Highway Capacity and Quality of Service.

Submitted papers

- R. Campigotto, P. Conde-Céspedes and J-L Guillaume. "A Generalized and Adaptive Method for Community Detection". <http://arxiv.org/abs/1406.2518>.
- P. Conde-Céspedes, B. Ngonmang and E. Viennet, "An efficient method for mining the Maximal α -quasi-clique-community of a given node in Complex Networks". http://www-l2ti.univ-paris13.fr/~condecspedes/article_localCon.pdf.

Refereeing : Revue des Nouvelles Technologies de l'Information (RNTI), IEEE Transactions on Knowledge and Data Engineering (TKDE), Knowledge and Information Systems (KAIS), Entropy journal, IJCNN.

Conferences and seminars

- May 15th, 2012 : "Séminaire des doctorants du LSTA", University Pierre et Marie Curie.
- May 23rd, 2012 : "44èmes Journées de Statistique, Société Française de Statistiques", Bruxelles.
- June 28th, 2012 : "5èmes Journées "Apprentissage Artificiel & Fouille de Données", University Paris 13.
- November 29th, 2012, "journées ResCom", University Pierre et Marie Curie.
- May 29th, 2013 : "45èmes Journées de Statistique, Société Française de Statistiques", Toulouse.
- July 10th-12th 2013 : European Conference on Data Analysis, Luxembourg.
- August 28th, 2013 : First International Conference, Geometric Science of Information, Paris.
- April 14th-18th, 2014 : "Semaine d'Étude Maths-Entreprises (SEME)", Marseille.
- April 29th-30th, 2014 : "6èmes Journées Apprentissage Artificiel & Fouille de Données", University Paris 13, Paris.
- September 10th-12th, 2014 : "21ème rencontre de la société francophone de classification (SFC'14)", Rabat.
- October 15th-17th, 2014 : "5ème Journée thématique : Fouille de grands graphes (JFGG'14)", Paris.
- January 27th-30th, 2015 : "15ème Conférence Internationale Francophone sur l'Extraction et la Gestion des Connaissances (EGC'15)", Luxembourg.
- September 28th- October 2nd, 2015 : ECAS course on Statistical Analysis of Network Data, Herrsching, Germany.
- January 22nd, 2016 : Complex networks seminar, LIP6, University Paris 6.
- February 04th, 2016 : "Séminaire de l'équipe Machine Learning for Data Science (MLDS), Laboratory LIPADE, University Paris Descartes (Paris 5).
- 22-26 May 2016 : "AAFD & SFC'16 : Conférence Internationale Francophone sur la Science des Données", Marrakech (Maroc).
- 1-4 mai 2016 : "Workshop Advanced Mathematics for Network Analysis", Toulouse-France.
- 16 janvier 2017 : "Journée thématique sur l'Analyse Relationnelle", Lyon-France.

Teaching

In **applied mathematics** : 346 hours at Université Pierre-et-Marie-Curie from September 2010 to August 2014 :

- Linear Algebra, tutorial classes (Licence 1), 126 hours.
- Data Analysis and regression, tutorial and practical classes with R (Licence 3), 108 hours.
- General linear model, tutorial classes (ISUP and Master 1), 60 hours.
- Courses of Mathematics to prepare the CRPE competition, lecturing classes and tutorial classes (Licence 3), 52 hours.

In **computer science** : 79 hours at l'IUT de Villeteuse at Université Paris-13 since September 2015 :

- Introduction to programming in C, (tutorial and practical classes), (Licence 1), 18 hours.
- Algorithmic and programming in python (lecturing, tutorial and practical classes), (Licence 3), 34 hours.
- Algorithmic and programming in C, (tutorial and practical classes), (Licence 1), 27 hours.

In **data science** : about 400 HETD at ISEP since September 2016 in 1st, 2nd et 3rd year of engineering school :

- Statistiques and probability (CM et TD).
- Data mining and machine learning (CM et TP).
- Data analysis (TP).
- Algorithmic and programming with JAVA, (TP).
- Project-based learning (CM).

Experience

Interships

April 2006-September 2006 : Airbus SAS, Blagnac-France.

Title : *Consolidation de l'évaluation du risque lié aux Lettres de Réserve et Actualisation des Courbes de Maturité.*

Tools : Descriptive statistics, Artificial neural network, Business objects, Splus, microsoft excel.

May 2010-September 2010 : Institut français des sciences et technologies des transports, de l'aménagement et des réseaux (IFSTTAR), Paris-France.

Title : *Etude et caractérisation de pelotons de véhicules sur des routes à forte circulation – Applications.*

Encadrants : Benjamin JOURDAIN and Dimitri DAUCHER

Tools : logistic regression, Correspondence analysis, microsoft access, Microsoft excel, SAS.

Working

November 2006-August 2009 : Engineer Statistician (Permanent contract) at Carl Zeiss Vision GVLab, Aubergenville-France.

Responsibilities : Determine the influential factors on the quality of manufacturing glasses.

Tools : Descriptive statistics, Experimental Design, Statistical Process Control (MSP), Multiple correspondence analysis, SPSS, Development of MSP program in Win Wrap Basic (Visual Basic for SPSS).

Computer Skills

Languages Python, C et C++ (beginner), JAVA (beginner) \LaTeX , html, css, php.

Tools SPSS, R, Microsoft Office.

Platforms Windows, Linux

Languages

Spanish (mother tongue), French (bilingual), English (bilingual), German (beginner).