Agrocampus Ouest, CFR Rennes

Sébastien Lê

Associate Professor

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1 General Information and Education

1.1 General Information

Sébastien Lê
Born: 09 February 1973 in Paris (75014)
Two children

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Associate Professor since 01/10/2003

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1.2 Education

1997 Dea de Probabilités et Applications, *Université Pierre et Marie Curie.*

2000 Statistician, Isup.

2003 Ph.D in Applied Mathematics, *Université Paris* ix-*Dauphine. Defended the* 26th *of September 2003 in front of the following commission:*

> *M. Ludovic* Lebart, *President, Directeur de recherche* Cnrs[1], Enst[2]
> *M. Pierre* Cazes, *Supervisor, Professor at Université Paris-IX Dauphine*
> *M. Jérôme* Pagès, *Co-Supervisor, Professor at* Agrocampus Ouest
> *M. Edwin* Diday, *Professor at Université Paris-IX Dauphine*
> *M. El Mostafa* Qannari, *Professor at* Oniris *Nantes*

2 10 things you need to know about me

1. I'm a statistician by training, and I've been working on sensory and consumer data since 2000. I was closely involved in the construction of confidence ellipses around products at the beginning of my career, then in the analysis of holistic data such as sorting

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[1]Cnrs: Centre National de la Recherche Scientifique
[2]Enst: École Nationale Supérieure des Télécommunications

and napping, when I supervised **Marine Cadoret**, and finally in the elaboration of the ideal profile analysis, when I supervised **Thierry Worch**. With one of my former Ph.D students, **Tâm Minh Lê**, I'm working on a new way of collecting data, called **digit-tracking**. The objective is to understand how a global perception of a set of products can evolve over time. I'm currently supervising the rising star in consumer and sensory science **Margot Brard**. We're revisiting a psychological method called the Q-methodology.

2. I'm one of the co-authors of the **FactoMineR** and **SensoMineR** packages. Both packages are worldwide used. The first one is dedicated to the exploratory analysis of multivariate data, the second one is dedicated to the analysis of sensory data.

3. I'm a consultant for many international companies. People are asking me questions about how to analyze tricky data, but also about new ways of collecting data. I'm currently responsible for developing a consultancy agency, which main objective is to develop our network.

4. I wrote more than 30 papers, and I'm one of the co-authors of **Analyzing sensory data with R** (334 pages, *Chapman & Hall/CRC, The R Series*) and of **Exploratory multivariate analysis by example using R** (240 pages, *Chapman & Hall/CRC, Computer science and data analysis series*).

5. Since 2008, my students have won the **Syntec trophies**, a national French contest that rewards the best students' project in marketing and opinion research. One of the most memorable project is certainly: Intimate Projective Mapping: combining context and emotional states to understand consumer behaviour.

6. I've been working with children since 2010 to understand their behaviour when confronted to tasks that have to be adapted to subjects that can hardly talk. Since then I've been working a lot on sorting and its many different variations, on paired comparisons tasks, to understand amongst many other things the way children perceive food and nutrition.

7. I have strong connections with Asia: Korea, Taiwan, Vietnam, Thailand. I'm currently trying to build a Master of Science program in Statistics at Bach Khoa University of Technology, Hô Chi Minh Ville, one of the most important universities in Vietnam.

8. My collaborators would say about me that I'm innovative, I'm curious, I don't give up, I have good leadership skills, I have great pedagogic skills.

9. I've been invited for talks or tutorials in many different conferences or seminars. I like to work with many different people from different fields (sensory, marketing, psychology,...) and many different countries.

10. I like what I'm doing, *i.e.* understanding data from different points of view, from different types (quantitative, qualitative, textual, images, sounds, videos...), building new protocols, running experiments.

3 Collegial activities and managerial responsabilities

3.1 Agrocampus Ouest

- Elected member of the board of directors (current)

- Elected member of the teacher council (current)

- Correspondent of the "International relationships" at the Statistics and Computer Science department (current)

- Co-head of the Master of Science program in Statistics between Bach Khoa University of Technology (Hô Chi Minh City, Vietnam) and Agrocampus Ouest (to be opened)

- Former head of the Master of Science program in Statistics (2009-2012)

3.2 Other responsibilities

2007 Member of the scientific committee of the "*Summer Program in Sensory Evaluation*" (SPISE), Hô Chi Minh Ville, Vietnam

2007 Member of the organizing committee of the SPISE, Hô Chi Minh Ville, Vietnam

2008/− Elected member of the agro-industry group of the SFdS

2008/2012 Elected member of the "*Sensometric society*"

2009 Member of the scientific committee of the SPISE, Hô Chi Minh Ville, Vietnam

2009 Member of the organizing committee of the SPISE, Hô Chi Minh Ville, Vietnam

2009 Member of the organizing committee of the R USER CONFERENCE, Rennes, France

2011 Member of the organizing committee of the CARME CONFERENCE, Rennes, France

2012 Member of the scientific committee of the SENSOMETRICS 2012, Rennes, France

2012 Vice-president of the organizing committee SENSOMETRICS 2012, Rennes, France

2012 Member of the scientific committee of the SPISE, Hô Chi Minh Ville, Vietnam

2012 Member of the organizing committee of the SPISE, Hô Chi Minh Ville, Vietnam

2014 Member of the scientific committee of the SPISE, Hô Chi Minh Ville, Vietnam

2014 Member of the organizing committee of the SPISE, Hô Chi Minh Ville, Vietnam

2014 Member of the scientific committee of the SENSOMETRICS 2014, Chicago, USA

2016 Member of the scientific committee of the SPISE, Hô Chi Minh Ville, Vietnam

2016 Member of the organizing committee of the SPISE, Hô Chi Minh Ville, Vietnam

2016 Member of the scientific committee of the SENSOMETRICS 2016, Brighton, England

3.3 Society memberships

- The French Statistical Society (SFdS)
- The Sensometric Society

3.4 Reviewing activities

- Food Quality and Preference
- Journal of Sensory Studies
- BMC Genomics
- Journal of Statistical Software

4 Students Supervision

4.1 Ph.D students

- Marine Cadoret (sorting, napping, sorted napping; defended in 2010)
- Thierry Worch (ideal profile analysis; defended in 2012)
- Marie Verbanck (genomic data; defended in 2013)
- Nguyen Ba Thanh (neophobia; defended in 2014)
- Tâm Minh Lê (holistic representation over time; defended in 2015)
- Margot Brard (statistics and consumer science)
- Franck Pabœuf (marketing)

4.2 Master students' projects

- Projective tests using Napping, the Rorschach test revisited: are the cultural differences between Asians and Caucasians signicant?
- Visualization of High-Dimensional Data in an Exploratory Multivariate Framework
- Intimate Projective Mapping: combining context and emotional states to understand consumer behaviour
- A sonic branding methodology for matching brand values to a sound logo: the Sennheiser case study
- Ideal Profile Method: an efficient way to improve products?
- Food design: the ins and outs

5 Books

5.1 Edited Books

HUSSON, F., LÊ, S. & PAGÈS, J. (2009). Analyse de données avec R. *Presses Universitaires de Rennes.*

HUSSON, F., LÊ, S. & PAGÈS, J. (2010). Exploratory Multivariate Analysis by Example Using R. *Chapman & Hall/CRC Computer Science & Data Analysis.*

HUSSON, F., LÊ, S. & PAGÈS, J. (2012). Análisis de datos con R. *Escuela Colombiana de Ingeniería Julio Garavito.*

LÊ, S. & WORCH, T. (2014). Analyzing sensory data with R. *Chapman & Hall/CRC The R Series.*

HUSSON, F., LÊ, S. & PAGÈS, J. (2016). Analyse de données avec R. Deuxième édition revue et augmentée. *Presses Universitaires de Rennes.*

5.2 Chapter in an Edited Book

HUSSON, F., LÊ, S. & PAGÈS, J. (2009). SensoMineR, in Évaluation sensorielle - manuel méthodologique. *Lavoisier, SSHA, 3ème édition*, 463-470.

LÊ, S. (2014). Introduction to multivariate statistical techniques for sensory characterization, in Novel Techniques in Sensory Characterization and Consumer Profiling. *Chapman & Hall/CRC.*

LÊ, S., LÊ, T. M. & CADORET, M. (2014). Napping and sorted Napping as a sensory profile technique, in Rapid Sensory Profiling Techniques and Related Methods. *Woodhead Publishing.*

6 Refereed Journal Articles

1. HUSSON, F., LE DIEN, S., PAGÈS, J. (2001). Which value can be granted to sensory profiles given by consumers? Methodology and results. *Food Quality and Preference*, 14 (5-7), 291-296.

2. LE DIEN, S., PAGÈS, J. (2003). Analyse Factorielle Multiple Hiérarchique. *Revue de Statistique Appliquée*, LI (2), 47-73.

3. LE DIEN, S., PAGÈS, J. (2003). Hierarchical Multiple Factor Analysis : application to the comparison of sensory profiles. *Food Quality and Preference*, 14 (5-6), 397-403.

4. HUSSON, F., LE DIEN, S., PAGÈS, J. (2005). Confidence ellipse for the sensory profiles obtained by Principal Component Analysis. *Food Quality and Preference*, 16 (3), 245-250.

5. PAGÈS, J., LÊ, S. & HUSSON, F. (2006). Une approche statistique de la performance en analyse sensorielle descriptive. *Sciences des aliments*, 26 (5), 116-169.

6. HUSSON, F. & LÊ, S. (2006). SensoMineR : un package pour le traitement de données sensorielles avec R. *Sciences des aliments*, 26, 355-356.

7. LÊ, S., HUSSON, F. & PAGÈS, J. (2006). Another look at sensory data: How to "have your salmon and eat it, too!". *Food Quality and Preference*, 17 (7-8), 3-5.

8. LÊ, S. & LEDAUPHIN, S. (2006). "You like tomato, I like tomato: segmentation of consumers with missing values". *Food Quality and Preference*, 17 (3-4), 228-233.

9. LÊ, S., HUSSON, F. & PAGÈS, J. (2006). Confidence ellipses applied to the comparison of sensory profiles. *Journal of Sensory Studies*, 21 (3), 241-248.

10. PAGÈS, J., BERTRAND, C., ALI, R., HUSSON, F. & LÊ, S. (2007). Sensory analysis comparison of eight biscuits by French and Pakistani panels. *Journal of Sensory Studies*, 22 (6), 665-686.

11. HUSSON, F., LÊ, S. & PAGÈS, J. (2007). Variability of the representation of the variables resulting from PCA in the case of a conventional sensory profile. *Food Quality and Preference*, 18 (7), 933-937.

12. LÊ, S., JOSSE, J. & HUSSON, F. (2008). FactoMineR: an R package for multivariate analysis. *Journal of Statistical Software*, 25 (1), 1-18.

13. LÊ, S., PAGÈS, J. & HUSSON, F. (2008). Methodology for the comparison of sensory profiles provided by several panels: application to a cross-cultural study. *Food Quality and Preference*, 19 (2), 179-184.

14. LÊ, S. & HUSSON, F. (2008). SensoMineR: a package for sensory data analysis. *Journal of Sensory Studies*, 23 (1), 14-25.

15. CADORET, M., LÊ, S. & PAGÈS, J. (2009). A Factorial Approach for Sorting Task data (FAST). *Food Quality and Preference*, 20 (6), 410-417.

16. DE TAYRAC, M., LÊ, S., AUBRY, M., MOSSER, J. & HUSSON, F. (2009). Simultaneous analysis of distinct Omics data sets with integration of biological knowledge: Multiple Factor Analysis approach. *BMC Genomics*, 10-32.

17. LÊ, S. & PAGÈS, J. (2009). DMFA: Dual Multiple Factor Analysis. *Communication in Statistics - Theory and Methods*.

18. WORCH, T., LÊ, S. & PUNTER, P. (2010). How reliable are the consumers? Comparison of sensory profiles from consumers and experts. *Food Quality and Preference*, 21 (3), 309-318.

19. LEDAUPHIN-MENARD, S., LÊ, S. (2010). Typologie des consommateurs et mesure de loyauté/fidélité. *La Revue MODULAD*, numéro 42.

20. PAGÈS J., CADORET M. & LÊ S. (2010). The Sorted Napping: a new holistic approach in sensory evaluation. *Journal of Sensory Studies*. 25 (5), 637-658.

21. CADORET M., LÊ S. & PAGÈS J. (2011). Multidimensional scaling versus multiple correspondence analysis when analyzing categorization data. Studies in Classification, Data Analysis, and Knowledge Organization (post-proceedings of first joint meeting of the SFC and the Cladag).

22. CADORET M., LÊ S. & PAGÈS J. (2011). Statistical analysis of hierarchical sorting data. *Journal of Sensory Studies.* 26 (2), 96-105.

23. BÉCUE-BERTAUT M., LÊ S. (2011). Analysis of multilingual labeled sorting tasks: application to a cross-cultural study in wine industry. *Journal of Sensory Studies.* 26 (5), 299-310.

24. WORCH, T., LÊ, S., PUNTER, P. & PAGÈS, J. (2012). Assessment of the consistency of ideal profiles according to non-ideal data for IPM. *Food Quality and Preference*, 24 (1), 99-110.

25. WORCH, T., LÊ, S., PUNTER, P. & PAGÈS, J. (2012). Extension of the consistency of the data obtained with the Ideal Profile Method: Would the ideal products be more liked than the tested products? *Food Quality and Preference*, 26 (1), 74-80.

26. WORCH, T., LÊ, S., PUNTER, P. & PAGÈS, J. (2012). Construction of an Ideal Map (IdMap) based on the ideal profiles obtained directly from consumers. *Food Quality and Preference*, 26 (1), 93-104.

27. WORCH, T., LÊ, S., PUNTER, P. & PAGÈS, J. (2013). Ideal Profile Method (IPM): the ins and outs. *Food Quality and Preference*, 28 (1), 45-59.

28. VERBANCK, M., LÊ, S. & PAGÈS, J. (2013). A new unsupervised gene clustering algorithm based on the integration of biological knowledge into expression data. *BMC Bioinformatics*, 14 (1), 42.

29. WORCH, T., CRINE, A., GRUEL, A. & LÊ, S. (2014). Analysis and validation of the Ideal Profile Method: Application to a skin cream study. *Food Quality and Preference*, 32, 132-144.

30. PARK, H. S., LÊ, S., HONG, J. H. & KIM, K. O. (2014). Sensory Perception of Yackwa (Korean Traditional Fried Cookie) by Consumer Groups of Different Age Using the Sorted Napping Procedure. *Journal of Sensory Studies*, 29 (6), 425-434.

31. LÊ, M.T., LÊ, S. & NGUYEN, H.D. (2014). Assessing consumer-perceived food quality using conjoint analysis. *Journal of Science and Technology Development*, 17, 17- 27.

32. LACOU, L., LÊ, S., PEZENNEC, S. & GAGNAIRE, V. (2015). An in silico approach to highlight relationships between a techno-functional property of a dairy matrix and a peptide profile. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 475, 44-54.

33. LÊ, T. M., HUSSON, F. & LÊ, S. (2015). Digit-tracking: Interpreting the evolution over time of sensory dimensions of an individual product space issued from Napping and sorted Napping. *Food Quality and Preference.*

34. TAVARES, G. M., CROGUENNEC, T., LÊ, S., LERIDEAU, O., HAMON, P., CARVALHO, A. F. & BOUHALLAB, S. (2015). Binding of folic acid induces specific self-aggregation of lactoferrin: thermodynamic characterization. *Langmuir*, 31(45), 12481-12488.

35. BRARD, M., & LÊ, S. (2016). The Ideal Pair Method, an Alternative to the Ideal Profile Method Based on Pairwise Comparisons: Application to a Panel of Children. *Journal of Sensory Studies.*

36. Lê, T.M., Brard, M. & Lê, S. (2016) Holos: a collaborative environment for holistic approaches. *Behavior Research Methods (accepted with minor revisions).*

7 Talks and Workshops

7.1 Talks

As an Invited Speaker (the name of the speaker appears in bold)

1. **Lê, S.**, Husson, F. & Pagès, J. (2007). Dual Multiple Factor Analysis. *ASMDA. Chania, Crete, May 29-June 1.*

2. **Pagès, J.**, Lê, S. & Husson, F. (2007). Analysis of quantitative and categorical variables by multiple factor analysis. *Correspondence Analysis and Related Methods. Rotterdam, The Netherlands, June 25-27.*

3. Pagès, J. & **Lê, S.** (2007). Multiple Factor Analysis: a method to analyze several sets of variables of different types. *IMPS2007, International Meeting of the Psychometric Society. Tokyo, Japan, July 9-13.*

4. **Pagès, J.**, Bécue, M. & Lê, S. (2007). Multiple Factor Analysis : basic principles and recent extensions. *56th Session of the ISI (International Statistical Institute). Lisboa, Portugal, August 22-29.*

5. **Lê, S.**, Husson, F. (2008). "SensoMineR", un logiciel de traitement de données sensorielles sous R : application à la comparaison de panels. *10ème journées européennes Agro-industries. Louvain-La-Neuve, Belgium, January 23-25.*

6. **Pagès, J.** & Lê, S. (2008). Multiple Factor Analysis (MFA) : basic principles and applications to sensory data. *Séminaire de ESSEC-HEC : Structural Equation Models, PLS Path Modelling and Multi-block Techniques in Sensory and Consumer Analysis Methods. ESSEC Business School. Cergy-Pontoise, France, May 15.*

7. Pagès, J. & **Lê, S.** (2008). Multiple Factor Analysis applied to sensory data: overview and recent developments. *Société Francophone de Classification. Caserta, Italy, June 11-13.*

8. **Cadoret, M.**, Lê, S. & Pagès, J. (2009). Analyzing categorization data. *International Federation of Classification Societies. Dresden, Germany, March 14-18.*

9. **Lê, S.**, Cadoret, M. & Pagès, J. (2009). Holistic approaches: from napping data to categorization data, an overview of alternatives to QDA. *Annual Meeting of the Korean Society of Food Science and Technology. Daejeon, South Korea, May 27-29.*

10. **Husson, F.** & Lê, S (2010). SensoMineR: the free software to perform sensory analysis. *Agrostat 2010. Benevento, Italy, February 21.*

International Conferences (the name of the speaker appears in bold)

1. **Husson, F.**, Le Dien, S., Pagès, J. (2000). Are the sensory descriptions provided by the consumers reproducible? *Proceedings of the Vth Sensometrics meeting, Columbia (EU).*

2. **Le Dien, S.**, Husson, F., Périnel, E., Pagès, J. (2001). Hierarchical Multiple Factor Analysis: application to the comparison of sensory profiles. *The 6th Sensometrics Meeting, Dortmund (Allemagne).*

3. **Le Dien, S.**, Husson, F., Périnel, E., Pagès, J. (2001). Hierarchical Multiple Factor Analysis: Application to the study of the repeatability of the jury evaluation. *Xth International Symposium on Applied Stochastic models and data analysis, Compiègne.*

4. **Lê, S.**, Husson, F., Pagès, J. (2004). Confidence ellipses in Hmfa applied to sensory profiles of chocolates. *The 7th Sensometrics Meeting, Davis (EU).*

5. **Lê, S.**, Ledauphin, S. (2004). You like tomato, I like tomato: let's call the whole consumer testing off. *The 7th Sensometrics Meeting, Davis (EU).*

6. **Lê, S.**, Husson, F. & Pagès, J. (2005). Another look at sensory data: how to "have your salmon and eat it too!". *The 6th Pangborn Sensory Science Symposium, Harrogate, Yorkshire, UK.*

7. **Lê S.**, Husson F. & Pagès J. (2005). SensoMineR : à la croisée de la recherche, du développement et de l'enseignement. *Journée STAR. Rennes, 17-18 Novembre 2005.*

8. **Husson F.**, **Lê S.** & Pagès J. (2006). Réflexions méthodologiques autour du package SensoMineR, bibliothèque de fonctions destinées àÂ l'analyse de données sensorielles. *Agrostat'2006. Montpellier, France, January 24-26.*

9. Husson, F. & **Lê, S.** (2006). SensoMineR: a package for sensory data analysis with R. *UseR! 2006. Vienna, Austria, June 15-17.*

10. Husson, F., **Lê, S.** & Pagès, J. (2006). Methodology for the comparison of sensory profiles provided by several panels: application to a cross-cultural study. *The 8th sensometrics meeting. Oslo, Norway, August 1-3.*

11. **Blancher, G.**, Cholet, S. & Lê, S. (2006). HMFA as a tool to compare French and Vietnamese sensory points of view. *The 8th sensometrics meeting. Oslo, Norway, August 1-3.*

12. **Lê, S.** & Husson, F. (2006). SensoMineR: a package for sensory data analysis with R. *The 8th sensometrics meeting. Oslo, Norway, August 1-3.*

13. **de Tayrac, M.**, Lê, S., Aubry, M., Husson, F., Mosser, J. (2007). Integrating "omics" data sets and biological knowledge: Multiple Factor Analysis as a powerful strategy. *ASMDA2007 conference. Chania, Crete, May 29- June 1.*

14. **Lê, S.** (2007). On measuring the impact of fair-trade label: a case study on chocolate products. *New Trends In Sensory Evaluation Of Food And Non-Food Products symposium. Hô Chi Minh City, Vietnam, July 26-27.*

15. **Perrin, L.**, Symoneaux, R., Lê, S. , Jourjon, F. & Pagès, J. (2007). Wine Napping: reliability of a sensory approach for a rapid and global characterisation. *New Trends In Sensory Evaluation Of Food And Non-Food Products symposium. Hô Chi Minh City, Vietnam, July 26-27.*

16. **Josse, J.**, Lê, S. & Husson, F. (2007). Multivariate Analysis with the FactoMineR package. *UseR!2007. Ames, United-States, August 8-10.*

17. Husson, F., de Tayrac, M., Aubry, M., Mosser, J., **Lê, S.** (2007). Intégration d'information biologique dans le traitement de données Xomiques. *Journées de classification. Paris, France, Septembre 5-7.*

18. Lê, S., Josse, J., **Husson, F.** (2007). FactoMineR, une librairie de fonctions R en analyse des données pour l'enseignement et la recherche. *Journées de classification. Paris, France, Septembre 5-7.*

19. **Lê, S.**, de Tayrac, M., Aubry, M., Mosser, J., Husson, F. (2008). Comparison of Multiple Factor Analysis and Generalized Canonical Analysis in the framework of Omics data. *6th Workshop Statistical methods for post-genomic data. Rennes, France, January 31 - February 1.*

20. **Husson, F.**, Josse, J. & Lê, S. (2008). FactoMineR, an R package for exploratory data analysis for teaching and research. *congrès joint SFdS-SSC. Ottawa, Canada, May 24-29.*

21. **Lê, S.**, Cadoret, M. & Pagès, J. (2008). A novel Factorial Approach for analysing Sorting Task data. *Société Francophone de Classification. Caserta, Italy, June 11-13.*

22. **Cadoret, M.**, Lê, S. & Pagès, J. (2008). Elements of validity in Muliple Factor Analysis. *Société Francophone de Classification. Caserta, Italy, June 11-13.*

23. **Cadoret, M.**, Lê, S. & Pagès, J. (2008). A novel Factorial Approach for analysing Sorting Task data. *9th Sensometrics meeting. St Catharines, Canada, July 20-23.*

24. **Worch, T.**, Lê, S. & Punter, P. (2008). How reliable are the consumers? Comparison of sensory profiles from consumers and experts. *9th Sensometrics meeting. St Catharines, Canada, July 20-23.*

25. **Chu, M.-C.**, Sheu, C.-F. & Lê, S. (2008). Context Effect in Categorizing Chinese Words-Evidence from a Sorting Task. *6th International Conference of the Cognitive Science. Yonsei University, Seoul, South Korea, July 27-29.*

26. **Durand, J.**, Husson, F., Josse, J. & Lê, S. (2008). dynGraph: interactive visualization of "factorial planes" integrating numerical indicators. *useR!2008. Dortmund, Germany, August 11-13.*

27. **Lê, S.**, Josse, J. & Husson, F. (2009). FactoMineR and *co*.: R solutions dedicated to multivariate exploratory data analysis. *Symposium on learning and data science. Université Paris Dauphine. Paris, France, April 1-3.*

28. **Cadoret, M.**, Lê, S. & Pagès, J. (2009). Missing values in categorization. *Applied Stochastic Models and Data Analysis (ASMDA). Vilnius, Lithuania, June 30 - July 3.*

29. **Bécue-Bertault, M.**, Colmenares, B. & Lê, S. (2009). Comparison of different panels sorting tasks with hierarchical multiple factor analysis. *Applied Stochastic Models and Data Analysis (ASMDA). Vilnius, Lithuania, June 30 - July 3.*

30. Cadoret, M., **Bouche, J.**, **Fournier, G.**, **Fournier, O.**, **Le Poder, F.**, Lê, S. (2009). EnQuireR: exploration of questionnaires with R. *useR!2009. Rennes, France, July 8-10.*

31. **Lê, S.**, Cadoret, M. & Pagès, J. (2009). Holistic approaches: from napping data to categorization data, an overview of alternatives to QDA. *8th Pangborn Sensory Science Symposium. Florencia, Italy, July 26-30.*

32. **Cadoret, M.**, Lê, S. & Pagès, J. (2009). Combining the best of two worlds, the "sorted napping". *Summer Program In Sensory Evaluation. Hô Chi Minh City, Vietnam, August 7-9.*

33. Cadoret, M., Bouche, J., Fournier, M., Fournier, O., Le Poder, F., **Lê, S.** (2009). EnQuireR: consumer insights at a glance. *Summer Program In Sensory Evaluation. Hô Chi Minh City, Vietnam, August 7-9.*

34. Cadoret, M., Lê, S., Pagès, J. (2010, presented by **Husson, F.**). A novel approach to analyze sorting task data. 11e *journées Européennes Agro-industrie et Méthodes statistiques. Italy, February 23.*

35. **Cadoret, M.**, Lê, S., Pagès, J. (2010). A new approach for analyzing hierarchical sorting task data. 10th *Sensometrics conference. Rotterdam, The Netherlands, July 25-28.*

36. **Worch, T.**, Lê S., Punter, P., Pagès, J. (2010). Can we trust consumers' ideals? Study of the relationship between the consumers' preference and their ideals. 10th *Sensometrics conference. Rotterdam, The Netherlands, July 25-28.*

37. **Lê S.** (2010). R tutorial: how R became a must in a decade? 10th *Sensometrics conference. Rotterdam, The Netherlands, July 25-28.*

38. **Verbanck, M.** & Lê, S. (2010). Integrating biological knowledge related to co-expression when analysing Xomic data. 19th *International Conference on Computational Statistics. Paris, France, August 22-27.*

39. Ouedraogo, M., Lecerf, F., **Lê, S.** (2010). Understanding co-expression of co-located genes using a PCA approach. *GfKl - CLADAG 2010. Florencia, Italy, September 8-10.*

40. **Cadoret, M.**, Lê, S., Pagès, J. (2010). A new approach for analyzing a set of hierarchies. *GfKl - CLADAG 2010. Florencia, Italy, September 8-10.*

41. **Verbanck, M.**, Lê, S. & Pagès, J. (2011). Towards the integration of biological knowledge with canonical correspondence analysis when analyzing Xomic data in an exploratory framework. *CARME. Rennes, France, February 8-11.*

42. **Buche, M.**, Cadoret, M. & Lê, S. (2011). Projective tests using Napping, the Rorschach test revisited: are the cultural differences between Asians and Caucasians significant? *CARME. Rennes, France, February 8-11.*

43. **Cadoret, M.**, Lê, S. & Pagès, J. (2011). Euclidean representations of a set of hierarchies using multiple factor analysis. *CARME. Rennes, France, February 8-11.*

44. **Worch, T.**, Lê, S. & Pagès, J. (2011).Validation of ideal profile data using multivariate analysis: the ideal products' space as a link between the products and their preferences. *CARME. Rennes, France, February 8-11.*

45. Cadoret, M., Buche, M. & **Lê, S.** (2011). Confidence ellipses when analyzing simultaneously several contingency tables resulting from free-text descriptions. *CARME. Rennes, France, February 8-11.*

46. **Ouedraogo**, M., Lecerf, F. & Lê, S. (2011). Investigate clusters of co-expressed and co-located genes at a genomic scale using CoCoMap. *useR! 2011, University of Warwick, Coventry, UK.*

47. **Lê, S.** & Bécue-Bertaut, M. (2011). Integrating free-text description when using holistic approaches. 9th *Pangborn Sensory Science Symposium, September 4-8.*

48. **Verbanck, M.**, Lê, S. & Pagès, J. (2012). Revealing new relationships among genes by combining external biological knowledge with expression data in an exploratory framework. *Symposium on Learning and Data Science, May 7-9.*

49. **Brecheteau J., Guillamet K., Lebastard A.**, Lê S. (2012). A "sonic branding" methodology for matching brand values to a sound logo. 11th *Sensometrics conference. Rennes, France, July 11-13.*

50. **Worch, T.**, Lê S., Punter, P., Pagès, J. (2012). The Ideal Mapping: a new technique for the determination of a consensual ideal product from the IPM. 11th *Sensometrics conference. Rennes, France, July 11-13.*

51. **Lê, M.T.**, Carré Q., Lê S. (2012). A napping based methodology for quickly getting a model of consumer emotions: A vietnamese case study. *SPISE 2012, July 24-26.*

52. Brecheteau J., Guillamet K., Lebastard A., **Lê S.** (2012). A "sonic branding" methodology for matching brand values to a sound logo: The Sennheiser case study. *SPISE 2012, July 24-26.*

53. **Lê, M.T.**, Carré Q., Lê S. (2012). A napping based methodology for getting an emotion wheel from consumers. *The 5th European Conference on Sensory and Consumer Research, September 9-12, Bern, Switzerland.*

54. **D'Olivo, P.**, Del Curto, B., Faucheu, J., Lafon, D., Bassereau, J. F., Lê, S., & Delafosse, D. (2013). Sensory Metrology: when emotions and experiences contribute to Design. *The 19th International Conference on Engineering Design (ICED13), August 19-22, Seoul, Korea.*

55. **Lê, M.T.**, Lê, S. & Nguyen, H.D. (2014). Assessing sensory quality using Holos, an environment for holistic methods. *Spise 2014: From senses to quality, Hô Chi Minh City, Vietnam.*

56. **Lê, M.T.** & Lê, S. (2014). Digit-Tracking: studying over time the evolution of sensory dimensions of individual product space based on Holistic methods. *Sensometrics 2014, Chicago, IL.*

57. **Lê, M.T.** & Lê, S. (2014). Holos: an environment for studying the evolution of sensory dimensions of individual product space based on Holistic methods. *Eurosense 2014, Copenhagen, Denmark.*

58. **Brard, M.**, Lautret, C., Le Lay, M., Cariou, A., Natchez, C. & Lê, S. (2014). An alternative to the Ideal Profile Method Adapted to Children. *Sensometrics 2014, Chicago, IL.*

59. **Brard, M.**, Lautret, C., Le Lay, M., Cariou, A., Natchez, C. & Lê, S. (2014). Adapting the Ideal Profile Method and its analysis to children: a fragrance case study. *Eurosense 2014, Copenhagen, Denmark.*

60. **Brard, M.**, Lê, T.M. & Lê, S. (2015). Holos: a collaborative environment for holistic approaches. *Society for Computers In Psychology, November 2015, Chicago.*

61. **Brard, M.**, Lê, T.M. & Lê, S. (2016). Holos ou l'apport du digital pour étudier la perception du consommateur. *Séminaire M@rsouin, Mai 2016, Douarnenez.*

62. **Brard, M.** & Lê, S. (2016). The QC-methodology: twisting the Q-methodology for understanding some complex concept. *Sensometrics 2016, Brighton, United Kingdom.*

63. **Brard, M.** & Lê, S. (2016). The QC-methodology: twisting the Q-methodology for understanding some complex concept. *Sensometrics 2016, Brighton, United Kingdom.*

64. Brard, M. & **Lê, S.** (2016). The QC-methodology as a way for understanding some complex concept: an innovative case study. *SPISE 2016, Hô Chi Minh City, Vietnam.*

65. **Cochener, C.**, Dacquay, V., Rottreau, E. & Lê, S. (2016). Tell me what you see, and I will tell you what you expect: when the icing does make the pastry. *SPISE 2016, Hô Chi Minh City, Vietnam.*

7.2 Workshops, seminars

As an Invited Speaker (the name of the speaker appears in bold)

1. **Lê, S.** (2006). Statistical training session for the Vietnamese wine industry. *Bach Khoa University of Technology. Hô Chi Minh City, Vietnam, December.*

2. **Lê, S.** (2006). Introduction to Multiple Factor Analysis applied to sensory data. *Khon Kaen University. Khon Kaen, Thailand, December.*

3. **Lê, S.** (2009). From analytical to spontaneous data, an overview. *SenseCamp meeting at Delta. Hørsholm, Denmark.*

4. **Lê, S.** (2009). Introduction to R and SensoMineR. *Ewha Womans University. Seoul, South Korea, May 25.*

5. **Lê, S.** (2010). Exploratory multivariate analysis applied to sensory data. *Ewha Womans University. Seoul, South Korea, January 13-15.*

6. **Lê, S.** (2010). Launching day of the support unit in methodology and statistical analysis (Support en Méthodologie et Calcul Statistique, SMCS) of the statistical intitute of the Université Catholique de Louvain-la-Neuve. *R as a link between academic and industrial worlds: how R became a must in a decade? Louvain-la-Neuve, Belgium, 30 Avril 2010.*

7. **Lê, S.** (2011). Understanding consumers' data with R. *Ewha Womans University. Seoul, South Korea, May 4.*

8. **Lê, S.** (2012). Exploratory Multivariate Analysis with R. *University of Cassino. Italy, September 13-14.*

9. **Lê, S.** (2012). Exploring "textual data". *Academia Sinica. Taipei, Taiwan, November 30.*

10. **Lê, S.** (2013). An introduction to multivariate statistics. *SenseCamp meeting at Delta. Hørsholm, Denmark. February 6-8.*

11. **Lê, S.** (2013). Analyzing categorical data with R: from barplots to the analysis of questionnaires. *Université Catholique de Louvain. Louvain-la-Neuve, Belgique. February 28.*

12. **Lê, S.** (2013). Analyzing holistic data. *Université Catholique de Louvain. Louvain-la-Neuve, Belgique. March 1.*

13. **Lê, S.** (2013). The ideal profile analysis: from the formulation to the optimization of skin creams. 12th *Workshop on Quality Improvement Methods. Dortmund, Germany, May 31-June 1.*

14. **Lê, S.** (2013). How sensory analysis can be used to reach a successful product? *College of Management, National Pingtung University of Science and Technology, Pingtung, Taiwan., October 18*

15. **Lê, S.** (2013). Check All That Apply, and I will tell you who you are. *Ewha Womans University. Seoul, South Korea, November 16-18.*

16. **Pagès, J. & Lê, S.** (2014). Données mixtes et structure hiérarchique en analyse factorielle. *Extraction et Gestion des Connaissances, IRISA, Rennes, France, January 28.*

17. **Lê, S.** (2016). Exploratory multivariate analysis applied to sensory data (revisited). *Ewha Womans University. Seoul, South Korea, February 25-26.*

International Conferences (the name of the speaker appears in bold)

1. **Abdi, H., Lê, S., Nguyen, D., Valentin, D.** (2007). Summer Program In Sensory Evaluation. *Bach Khoa University of Technology. Hô Chi Minh City, Vietnam, July 22-25.*

2. **Josse, J.**, **Husson, F.**, Lê, S. (2008). Exploratory Data Analysis. *useR!2008. Dortmund, Germany, August, 11-13.*

3. **Lê, S.**, Josse, J., Husson, F. (2008). Multiway Data Analysis. *useR!2008. Dortmund, Germany, August 11-13.*

4. **Lê, S.**, Pagès, J., **Cadoret, M.** (2009). From multivariate to multiway data analysis...an overview. *useR!2009. Rennes, France, July 8-10.*

5. **Abdi, H., Lê, S., Nguyen, D., Valentin, D.** (2009). Summer Program In Sensory Evaluation. *Bach Khoa, University of Technology. Hô Chi Minh City, Vietnam, August 03-06.*

6. **Lê, S.**, **Cadoret, M.** (2010). Analysing sensory data with R and SensoMineR. 10th *Sensometrics conference. Rotterdam, The Netherlands, July 25-28.*

7. **Lê, S.**, Pagès, J., **Cadoret, M.** (2010). Multiple Factor Analysis applied to sensory data: overview and recent developments. 10th *Sensometrics conference. Rotterdam, The Netherlands, July 25-28.*

8. **Lê, S.** (2011). From one to multiple data tables with FactoMineR. *CARME 2011. Rennes, France, February 8-11.*

9. **Cadoret, M.**, **Lê, S.** (2011). Analysing Categorical Data in R. *useR!2011. University of Warwick, Coventry, UK, August 16-18.*

10. **Lê, S.** (2012). Hands on Analysis of Sensory data with SensoMineR and R. 11th *Sensometrics conference. Rennes, France, July 11-13.*

11. **Abdi, H., Lê, S., Nguyen, D., Valentin, D.** (2012). Summer Program In Sensory Evaluation. *Bach Khoa University of Technology. Hô Chi Minh City, Vietnam, July 21-24.*

12. **Abdi, H., Lê, S., Nguyen, D., Valentin, D.** (2014). Summer Program In Sensory Evaluation. *Bach Khoa University of Technology. Hô Chi Minh City, Vietnam, July 25-27.*

13. **Lê, S. & Worch, T.** (2014). Analyzing Sensory Data with R and SensoMineR. 12th *Sensometrics conference. Chicago, U.S.A, July 29-August 1.*

14. **Abdi, H., Lê, S., Nguyen, D., Valentin, D.** (2016). Summer Program In Sensory Evaluation. *Bach Khoa University of Technology. Hô Chi Minh City, Vietnam, July 25-28.*

8 Software

Husson, F., Josse, J., Lê, S. & Mazet, J. (2010). *FactoMineR: Multivariate Exploratory Data Analysis and Data Mining with R.*

Husson, F. & Lê, S. (2010). *SensoMineR: Sensory data analysis with R.*

Fournier, G., Cadoret, M., Fournier, O., Le Poder, F., Bouche, J. & Lê, S. (2010). *EnQuireR: A package dedicated to questionnaires.*

Lê, S. & Durand, J. (2010). *dynGraph: Interactive visualization of dataframes and factorial planes.*