

The University of Texas at Austin

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ACADEMIC BACKGROUND

2015 – 2020 PhD in Mathematics Education

Texas State University, San Marcos, Texas

<u>Dissertation:</u> Transition from Education to Profession: Experiences of Statisticians Chair: Dr Alexander White

2010 – 2012 Master in Applied Probabilities and Statistics - Honors

Université de Lorraine, Metz, France

<u>Emphasis:</u> Statistics, Probability theory, Partial Differential Equations, Epistemology, and numerous projects given by professional statisticians with concrete applications Research Project: Perona-Malik Diffusion in Image Processing with Dr. Ralph Chill

2009 – 2010 Bachelor of Physics (Licence de Physique) - Honors

Université de Strasbourg, France

Emphasis: Quantum mechanics, Statistical Physics, Electromagnetism and Theory of Relativity

2008-2009 Bachelor of Mathematics (Licence de Mathématiques)

Visiting student at Trinity College Dublin, Ireland <u>Emphasis:</u> Mathematics, Irish Language and Literature.

2006-2008 "Classes préparatoires" – Honors

Lycée Fabert, Metz, France

<u>Emphasis:</u> Acquisition of knowledge in Mathematics, Physics, Chemistry, Engineering science, Literature and English to prepare competitive entrance exams to "Grandes Ecoles".

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PROFESSIONAL EXPERIENCE

August Assistant Professor of Instruction

2020 - now

The University of Texas at Austin

Online courses in the Department of Statistics and Data Sciences

- SDS 328M Biostatistics
- SDS 348 Computational Biology & Bioinformatics
- o SDS 358 Applied Regression
- SDS 379R Undergraduate Research

In-person courses in the Department of Statistics and Data Sciences

- SDS 320E Elements of Statistics
- o SDS 322E Elements of Data Science
- o SDS 324E Elements of Regression Analysis

Summer Statistics Institute

o Common Mistakes in Using Statistics: Spotting them and Avoiding them

September

Teaching Experience

2015 – 2020 Texas State University, San Marcos, Texas

Courses in the Department of Mathematics

Instructor of record:

- o MATH 2328 Elementary Statistics
- MATH 1319 Mathematics for Business and Economics I
- o MATH 1315 College Algebra (stand alone or paired with support courses)
- o MATH 1312 College Algebra and Statistics

Teaching Assistant:

- o MATH 2472 Calculus II
- o MATH 2471 Calculus I
- MATH 1300 and 1311 Elementary and Intermediate Algebra

January 2018 Research Assistant (qualitative research)

- August 2018 with Dr Robert Sigley at Texas State University

Investigated the relationship between the understanding of the mean and the concept of variation for undergraduate students enrolled in an elementary statistics course

- Development of a task with multiple activities involving cubes and applets
- Conducting interviews with students

August 2016 Research Assistant (quantitative and qualitative research)

- August 2017

with Dr Kate Melhuish at Texas State University and the Teacher Development Group Worked for the "Enhancing Mathematics Teaching and Learning in Urban Elementary Schools: A Cluster-Randomized Efficacy Trial of a Novel Professional Development Approach" project founded by the National Science Foundation, Award Number 1223074

- Conducting data management
- o Performing statistical analysis (Hierarchical Linear Models)
- o Assessing Mathematical Quality of Instruction (MQI) through videos
- Developing the Math Habits Instrument (application for iPad)

March 2015 Biostatistician

- July 2015 CHU Brabois Hospital and INSERM, Nancy, France

Worked in the Department of Epidemiology and Clinical Research on:

April 2013

– June 2013

- $\circ \quad \textit{Retrieving data from Access and conducting data management}$
- o Performing various statistical analyses with SAS
- Writing protocols and proposals

April 2012 Internship as a Statistical Analyst

September2012

Banque Centrale du Luxembourg, Luxembourg

Internship in the Department of Statistics to work on a statistical study about funds of funds:

- Creating the 1st database concerning funds of funds and maintenance of large data sets
- o Performing statistical analysis (PCA) with SAS
- \circ Writing articles for the official BCL quarterly report in Winter 2013 ${\mathscr O}$

September Private Tutor

2009 – September 2014 Tutored middle school, high school students and undergraduates in Mathematics and Physics. Organized intensive programs to prepare students for different types of exams. (approximately 6 hours a week)

14 o nours a week

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SCHOLARLY/CREATIVE WORK

Refereed Journal Articles Melhuish, K., Thanheiser, E., & Guyot, L. (2020). Elementary school teachers' noticing of essential mathematical reasoning forms: justification and generalization. *Journal of Mathematics Teacher Education*, 23(1), 35-67.

Refereed Conferences Proceedings

Guyot, L. & White, A. (2022, in process). Promoting opportunities to learn for statisticians. In Proceedings of the Eleventh International Conference on Teaching Statistics (ICOTS-11). Voorburg, The Netherlands: International Statistical Institute.

White, A. & Guyot, L. (2022, in process). Data in search of a context: an online icebreaker activity. In Proceedings of the Eleventh International Conference on Teaching Statistics (ICOTS-11). Voorburg, The Netherlands: International Statistical Institute.

Guyot, L. & White, A. (2019, November). Promoting an Authentic Experience of Statistical Practices in Statistics Education. In S. Otten, A. G. Candela, Z. de Araujo, C. Haines, & C. Munter (Eds.), Proceedings of the forty-first annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA) (pp. 421-425).

Guyot, L., Walker, A., & White, A. (2018, July). Challenges for Independent Student Projects: A Perspective of the Teacher. In M. A. Sorto, A. White, & L. Guyot (Eds.), Looking back, looking forward: Proceedings of the Tenth International Conference on Teaching Statistics (ICOTS10, July, 2018), Kyoto, Japan. Voorburg, The Netherlands: International Statistical Institute.

White, A., Guyot, L., & Walker, A. (2018, July). Data in Search of a Context: An Icebreaker Activity. In M. A. Sorto, A. White, & L. Guyot (Eds.), Looking back, looking forward: Proceedings of the Tenth International Conference on Teaching Statistics (ICOTS10, July, 2018), Kyoto, Japan. Voorburg, The Netherlands: International Statistical Institute.

Fagan, J., Melhuish, K. M., Thanheiser, E., Fasteen, J., Guyot, L., Rosencrans, B. (2017). Connecting teachers' buy-into professional development with classroom habits and practices. In E. Galindo & J. Newton (Eds.), *Proceedings of the 39th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 459-462). Indianapolis, IN: Hoosier Association of Mathematics Teacher Educators.

Thanheiser, E., Rosencrans, B., Melhuish, K. M., Fagan, J., Guyot, L. (2017). Increasing student cognitive engagement in the math classroom through sustained professional development. In E. Galindo & J. Newton (Eds.), *Proceedings of the 39th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 478-482). Indianapolis, IN: Hoosier Association of Mathematics Teacher Educators.

Conferences Proceedings

Guyot, L. (2019, June). *Transition between Education and Profession: Experiences of Statisticians*. Presentation made at the 51^{eme} Journées de la Statistique. Paper in the program. Nancy, France.

Guyot, L. (2018, June). Promoting an Authentic Experience of Statistical Practices in Statistics Education. Presentation made at the 50^{eme} Journées de la Statistique. Paper in the program. Paris, France.

Conferences Presentations

Guyot, L. (2021, February). Learning in Transition to the Workplace: Perspectives from the Statistical Community and Implications. Presentation made at the Conference of Statistical Practice. Online.

Guyot, L. (2019, October). *Transition from Education and Profession: Experiences of Statisticians*. Presentation made at the Women in Statistics and Data Science conference. Bellevue, WA.

Guyot, L. (2019, July). *Transition from Education to Profession: Experiences of Statisticians*. Speed presentation and poster at the Joint Statistical Meetings. Denver, CO.

Sigley, R. & Guyot, L. (2019, July). Studying the Relationship between Students' Perception of the Mean and their Understanding of Variance. Speed presentation and poster at the Joint Statistical Meetings. Denver, CO.

Guyot, L. & White, A. (2019, May). What do statisticians do? Breakout session presented twice at the US Conference on Teaching Statistics. State College, PA.

Guyot, L. (2019, February). *Transition from Education and Profession: Experiences of Statisticians*. Presentation made at the Conference of Statistical Practice. New Orleans, LA.

Abili, M. & Guyot, L. (2018, November). *Teaching Statistics: A Comparison on Topics and Approaches Across Disciplines*. Presentation made at the Tenth International Research Conference for Graduate Students. San Marcos, TX.

Guyot, L. (2018, April). Promoting an Authentic Experience of Statistical Practices in Statistics Education. Presentation made at the Conference of Texas Statisticians. San Antonio, TX.

Sorto, M. A., Bower, R., Guyot, L., Akbuga, E., Song, Z., & Webre, B. (2017, April). *Las Matemáticas en Nuestras Aulas: Bilingual Strategies in Secondary Classrooms.* Presentation at the 2017 National Council of Teachers of Mathematics Annual Meeting. San Antonio, TX.

Shaughnessy, M., Melhuish, K., Thanhesier, E., Fredericks, J., Rosencrans, B., Fagan, J., & Guyot, L. (2017, March). *The Math Habits & Routines Classroom Observation Tool: Connecting teacher moves and student reasoning*. Presentation at the Teachers Development Group Leadership Seminar. Portland, OR.

Invited Talks

Guyot, L. (2021, March). Learning in Transition to the Workplace: Perspectives from the Statistical Community and Implications. Presentation made at the SDS Seminar Series, The University of Texas at Austin.

Guyot, L. (2019, October). *Discussion: Teaching Statistics across Campus*. Hosted discussion at the Statistics Seminar, Texas State University.

Guyot, L. (2019, September). *Conferences and Being Part of the Statistics Community*. Presentation made at the Statistics Seminar, Texas State University.

Sigley, R., Guyot, L., & White, A. (2018, September). Studying the Relationship Between Students' Perception of the Mean and their Understanding of Variance. Presentation made at the Statistics Seminar, Texas State University.

Guyot, L., Walker, A., & White, A. (2018, April). *Challenges for Independent Student Projects: A Perspective of the Teacher*. Presentation made at the Statistics Seminar, Texas State University with guest students.

Sigley, R. & Guyot, L. (2018, April). *Exploring the Relationship Between Mean Understanding and Variability*. Presentation made at the Statistics Seminar, Texas State University.

Guyot, L. (2018, March). What do statisticians do? Presentation made at the Statistics Seminar, Texas State University.

Guyot, L. (2017, November). *Statistical Practice in the Classroom*. Presentation made at the Statistics Seminar, Texas State University.

Melhuish, K., Fagan, J., Guyot, L. (2017, September). *Exploring the efficacy of the Mathematics Studio Model Professional Development*. Presentation made at the Math Education Seminar, Texas State University.

White, A., Lesser, L. M., Straughn, M., Guyot, L. (2016, October). *Multiple Perspectives of the Mean: Making Connections between Basic and Advanced Statistical Content*. Presentation made at the Statistics Seminar, Texas State University.

Posters

Guyot, L. (2019, March). What do Statisticians do? Poster presented at the Women in Science and Engineering conference. San Marcos, TX.

Guyot, L. (2018, July). What do statisticians do? Poster presented at the Tenth International Conference on Teaching Statistics. Kyoto, Japan.

Guyot, L. (2018, April). What do statisticians do? Poster presented at the Conference of Texas Statisticians. San Antonio, TX.

Guyot, L., Melhuish, K. M., Fagan, J. (2017). Effect of Teachers' Participation in a Professional Development on Student Achievement: A Longitudinal Large-Scale Study. In E. Galindo & J. Newton (Eds.), Proceedings of the 39th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (pp. 537). Indianapolis, IN: Hoosier Association of Mathematics Teacher Educators.

SERVICE / LEADERSHIP

- Proposal/Grant Writing: Assistance with writing the undergraduate major proposal for a Bachelor of Science in Statistics and Data Science
- Committee Member:

- CNS Professional Track Faculty Committee (2022-2025)
- SDS's 2022-2023 Seminar Series organization committee: invite and welcome speakers
- Undergraduate Certificates: discuss courses and exceptions for the certificates in Scientific Computation & Data Sciences and in Applied Statistical Modeling (2020-2022)

Reviewer / Referee:

- Journal of Statistics Education (2021, 2022)
- USCLAP, biannual project competition (2021, 2022)
- PME-NA, North American Chapter of the International Group for the Psychology of Mathematics Education (2017, 2019)
- IRC, International Research Conference for Graduate Students (2019)
- ICOTS, International Conference on Teaching Statistics (2018, 2022)
- o Co-Editor: ICOTS, International Conference on Teaching Statistics (Spring / Summer 2018)

Session Chair:

- Teaching Statistics Online (International Conference On Teaching Statistics, September 2022)
- Tips for Collaborative Grant Writing (Conference on Statistical Practice, February 2021)
- Communicating with Stakeholders (Conference on Statistical Practice, February 2019)

o Guest lecturer:

- MATH 2311 Principles of Mathematics I (October 26th, 2018)
- MATH 2312 Informal Geometry (October 4th, 2017)
- MATH 2472 Calculus II (February 20th and March 10th, 2017)

o Volunteer:

- Panel discussion: Career preparation as a statistician/mathematician (December 2020)
- Running the Statistics Education/History booth at the Joint Statistical Meetings (July 2019)
- Graduate Student Panelist, Mathematics Department Open House (November 2018)
- Assessing K-2 and 2nd grade children's mathematical thinking at a local elementary school under the supervision of Dr Jessica Bishop by administering formative assessments (in the form of a clinical interview) and analyzing assessment data (Spring 2017, Spring 2018)

Organization Member:

- American Statistical Association (ASA)
- American Mathematical Society (AMS)
- Mathematical Association of America (MAA)
- National Council of Teachers of Mathematics (NCTM)

SCHOLARSHIPS / AWARDS

Scholarships/Fellowships:

- Student Government Scholarship \$4,000 (Year 2018-2019, Year 2019-2020)
- The Graduate College Scholarship Science & Engineering \$2,000 (Year 2019-2020)
- Women in Science and Engineering (WiSE) Scholarship \$1,000 (Fall 2019)

- Ross & Sarah Wayment Endowed Scholarship \$750 (Fall 2019)
- The Graduate College Doctoral Research Support Fellowship \$5,000 (Spring 2019)

o Awards:

- Travel Award for the Women in Statistics and Data Science conference \$400 (2019)
- Recognition for Academic Excellence at the Doctoral Level (2018, 2019)
- Rising Scholarly Travel Activity and Research (S.T.A.R) grant \$1,000 (2018, 2019)

TECHNOLOGY

- o **Statistical Software**: R Studio, SAS, SPSS, HLM software
- o **Programming Language**: Python, SQL, Fortran
- o Communication: R Markdown, Jupyter Notebooks, GitHub
- o **Instructional Software**: Fathom, Tuva labs, Desmos, Geometer's Sketchpad
- o **Online Teaching**: Canvas, Zoom, Panopto
- o Online Homework Platform: Gradescope, Sapling, MyMathLab, ALEKS, ConnectMath
- o **Documents**: MS Office, Adobe Acrobat DC, LaTeX

LANGUAGES

- o **French**: native comprehension, composition
- o **English**: advanced comprehension, composition
- o German and Spanish: some reading, listening comprehension