

# Imke Mayer

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## Research experience and professional activities

- 2020 **Visiting student researcher (4 months)**, *Biomedical Informatics Research Center, Stanford University*, Stanford, CA, USA.  
Causal inference, policy learning. Postponed due to COVID-19. Advisors: Stefan Wager & Nigam Shah
- 2019–Present **Teaching assistant**, *École Polytechnique*, Palaiseau, France.
- 2018–Present **PhD candidate**, *École des Hautes Études en Sciences Sociales & École Polytechnique*, Paris & Palaiseau, France.  
*Analysis of heterogeneous data with missing values – Application to critical care management.* Statistics, machine learning, personalized medicine. Advisors: Jean-Pierre Nadal & Julie Josse
- 2018 **Visiting student researcher (5 months)**, *Biomedical Engineering Department, Johns Hopkins University*, Baltimore, MD, USA.  
*Theoretical guarantees for sparse dictionary learning* (Master's thesis). Advisor: René Vidal
- 2017 **Research intern**, *Sorbonne Université*, Paris, France.  
False discovery rate control in linear models. Advisors: Claire Boyer & Maxime Sangnier
- 2016 **Working student (7 months)**, *Foodora GmbH*, Berlin, Germany.  
Data analysis and forecasting for logistics operations and business intelligence.

## Teaching

- Spring 2020 **Teaching assistant**, *École Polytechnique - IPP*, Palaiseau, France.  
Causality and missing values (Master level)
- Summer 2019 **Internship advisor**, *École Polytechnique*, Palaiseau, France.  
Master 1 internship of Teresa Alves de Sousa on matching methods to assess the impact of tranexamic acid on survival for major trauma patients with head injury.
- Spring, Fall 2019 **Teaching assistant**, *École Polytechnique - HEC*, Palaiseau, France.  
Regression, Unsupervised Learning and Data Analysis, Data for Management (Master level)

## Education and scholarships

- 2020 **FSMP travel scholarship for pre-doctoral research visit**, *Stanford University*, Stanford, CA, USA.
- 2017–2018 **Master 2 Mathematics and applications (Mathématiques, Vision, Apprentissage), highest honors**, *ENS Paris-Saclay*, Cachan, France.
- 2016–2017 **Master 1 Mathematics and applications, highest honors**, *Sorbonne Université*, Paris, France.
- 2015 **FSMP travel scholarship for applied mathematics undergraduate summer school**, *Brown University*, Providence, RI, USA.
- 2013–2016 **Bachelor double degree mathematics and computer science, highest honors**, *Sorbonne Université*, Paris, France.
- 2013–2018 **Excellence Major honor scholarship**, *Agence pour l'Enseignement Français à l'Étranger (AEFE)*, France.

- 2013 **French Baccalauréat (scientific stream) and German Abitur, highest honors**, *Lycée français*, Berlin, Germany.
- 2012 **German Student-Academy scholarship (course in neurolinguistics and cognitive science)**, *Stiftung Bildung & Begabung*, Rostock, Germany.

## Publications

- 2019 I. Mayer, J. Josse, F. Raimundo and J.-P. Vert. **MissDeepCausal: causal inference from incomplete confounders using deep latent variable models**, *submitted*.
- 2019 I. Mayer, E. Sverdrup, S. Wager, T. Gauss, J.-D. Moyer and J. Josse. **Doubly robust treatment effect estimation with missing attributes**, *Annals of Applied Statistics*, <https://arxiv.org/abs/1910.10624>.
- 2019 I. Mayer, J. Josse, N. Vialaneix, N. Tierney. **R-miss-tastic: a unified platform for missing values methods and workflows**, *submitted*, <https://arxiv.org/abs/1908.04822>.

## Oral and poster communications

- Sep. 2020 **European Network for Business and Industrial Statistics (talk, invited)**, *Technical University of València*, València, Spain.
- May 2020 **American Causal Inference Conference (talk, postponed to 2021)**, *University of Texas*, Austin, TX, USA.
- Jan. 2020 **Young Statisticians and Probabilists (talk, invited)**, *Institut Henri Poincaré*, Paris, France.
- Jan. 2020 **MaiAGE seminar (talk, invited)**, *INRA*, Jouy-en-Josas, France.
- Jan. 2020 **Séminaire Palaisien (talk, invited)**, *ENSAE, DATAIA*, Palaiseau, France.
- Dec. 2019 **NeurIPS workshop on Causality and Machine Learning (poster)**, *Advances in Neural Information Processing Systems 32*, Vancouver, Canada.
- Dec. 2019 **Econometrics and Big Data seminar (talk, invited)**, *Aix-Marseille University*, Marseille, France.
- Sept. 2019 **Statistique, mathématiques et applications (talk)**, Fréjus, France.
- June 2019 **51èmes Journées de Statistique (talk)**, *Université de Lorraine*, Nancy, France.
- June 2019 **Séminaire Systèmes complexes (talk, invited)**, *EHESS*, Paris, France.
- May 2019 **Data science seminar for MDs in critical care management (talk)**, *Traumabase Group*, Paris, France.
- Mar. 2019 **European Causal Inference Meeting (poster)**, *Leibniz Institute*, Bremen, Germany.
- Mar. 2019 **DAGStat Conference (poster)**, *LMU*, Munich, Germany.

## Software development

- Website **R-miss-tastic: a unified platform on missing values methods**, *funded by the R Consortium*.

## Languages and programming skills

German	Native	R, matlab	Advanced
English	Perfectly proficient	Python, C++	Intermediate
French	Perfectly proficient	Bash, SQL	Basics
Korean	Elementary		

## Associative commitment and interests

2019–Present **Member of the *Groupe Jeunes* of the SFdS (French Statistical Society), elected member since 2020**, (*responsibilities: organization of the YSP day, and of satellite events at the JdS, construction of European Young Statisticians network*).

2019–Present **Elected member of the parity and diversity committee**, CMAP, *École Polytechnique*, Palaiseau, France.

2018–Present **Member of R Foundation *Forwards* taskforce on women and other underrepresented groups**, (*responsibilities: diversity scholarship coordination*).

Hobbies Theatre, reading, traveling (mostly by train or by bike), sewing, traditional Korean dance.