

François Grolleau

MD, MPH, PhD

Post-Doctoral Scholar at Stanford University
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Education

- 2019-2023 **Ph.D. in Statistics and Computer Science**, UNIVERSITÉ PARIS CITÉ.
Thesis: "Causal inference methods for personalized medicine: an application to the timing of renal replacement therapy initiation." Adviser: Prof. Raphaël Porcher.
- 2013-2019 **M.D. Graduation**, UNIVERSITÉ DE CAEN NORMANDIE.
Full Board Certification (France) in Anesthesiology and Critical Care Medicine.
- 2017 **MSc. in Public Health**, UNIVERSITÉ PARIS CITÉ, *summa cum laude*.
Biostatistics and Methods in Comparative Effectiveness Research.
- 2015 **BSc. in Biostatistics**, UNIVERSITÉ DE CAEN NORMANDIE, *summa cum laude*.
- 2007-2013 **Medical School**, UNIVERSITÉ TOULOUSE III — PAUL SABATIER.

Professional positions

- 2024–Present **Post-Doctoral Scholar**, STANFORD CENTER FOR BIOMEDICAL INFORMATICS RESEARCH, Prof. Jonathan Chen, Department of Medicine, Stanford University.
- 12/2023–
03/2024 **Post-Doctoral Scholar**, PARIS ARTIFICIAL INTELLIGENCE RESEARCH INSTITUTE, France, Prof. Raphaël Porcher and Prof. François Petit, Université Paris Cité.
- 2019-2023 **Fellow in Biostatistics and Epidemiology**, UNIVERSITÉ PARIS CITÉ, France.
- 2020 **Fellow in Critical Care Medicine**, UNIVERSITÉ PARIS CITÉ, France.
During COVID-19, I resumed clinical practice and worked at Bichat Hospital's Medical ICU.
- 2013–2019 **Resident in Critical Care Medicine, Anesthesiology, and Nephrology**, France.
University Hospital of Caen and Hôpital Européen Georges-Pompidou (AP-HP, Paris).
- 2017 **Research Fellow**, MCMASTER UNIVERSITY, Canada.
Clarity Research attendee (led by Prof. Gordon Guyatt).

Scientific publications

Citations: 233 *h*-index: 7

- Preprints
- F. Grolleau, R. Tibshirani and JH. Chen. Estimating complier average causal effects with mixtures of experts. *arXiv:2501.03155*.
 - F. Grolleau, E. Goh, SP. Ma et al. Systematic exploration of hospital cost variability: a conformal prediction-based outlier detection method for electronic health records. *medRxiv:2025.01.10.25320349*.
 - F. Grolleau, C. Beji, F. Petit and R. Porcher. Estimating complier average causal effects with mixtures of experts. *arXiv:2405.02779*.
 - F. Grolleau, F. Petit and R. Porcher. A comprehensive framework for the evaluation of individual treatment rules from observational data. *arXiv:2207.06275*.

- Peer Reviewed
- [F. Grolleau](#), F. Petit, S. Gaudry et al. Personalizing renal replacement therapy initiation in the intensive care unit: a reinforcement learning-based strategy with external validation on the AKIKI randomized controlled trials. *Journal of the American Medical Informatics Association*. 2024.
 - [F. Grolleau](#), R. Porcher, S. Barbar et al. Personalization of renal replacement therapy initiation: a secondary analysis of the AKIKI and IDEAL-ICU trials. *Critical Care*. 2022.
 - S. Gaudry, [F. Grolleau](#), S. Barbar et al. Continuous renal replacement therapy versus intermittent hemodialysis as first modality for renal replacement therapy in severe acute kidney injury: a secondary analysis of AKIKI and IDEAL-ICU studies. *Critical Care*. 2022.
 - D. Nezam, R. Porcher, [F. Grolleau](#), et al. Authors' reply: Kidney histopathology can predict kidney function in ANCA-associated vasculitides with acute kidney injury treated with plasma exchanges. *Journal of the American Society of Nephrology*. 2022.
 - D. Nezam, R. Porcher, [F. Grolleau](#), et al. Kidney histopathology can predict kidney function in ANCA-associated vasculitides with acute kidney injury treated with plasma exchanges. *Journal of the American Society of Nephrology*. 2022.
 - S. Goursaud, SM. de Lizarrondo, [F. Grolleau](#), et al. Delayed cerebral ischemia after subarachnoid hemorrhage: is there a relevant experimental model? A systematic review of preclinical literature. *Frontiers in Cardiovascular Medicine*. 2021.
 - R. Bey, R. Goussault, [F. Grolleau](#), et al. Fold-stratified cross-validation for unbiased and privacy-preserving federated learning. *Journal of the American Medical Informatics Association*. 2020.
 - [F. Grolleau](#), GS. Collins, A. Smarandache et al. The fragility and reliability of conclusions of anesthesia and critical care randomized trials with statistically significant findings: A systematic review. *Critical Care Medicine*. 2019.
- Book Chapter
- [F. Grolleau](#). Hypnotics, opioids, and myorelaxant agents. Principles and protocols in neuro-anesthesia and neuro-critical care. C. Gakuba *Edition Arnette*. 2019 (in French).
- Referee
- JAMA Network Open, BMJ Open, Annals of epidemiology etc.

Conferences and workshops

- Statistics
- Gustave Roussy biostatistics seminar, Paris FR 2024 (invited oral communication).
 - MAP5 statistics seminar, Paris FR 2023 (invited oral communication).
 - CNRS Causality in practice symposium, Paris FR 2023 (invited oral communication).
 - Talk at HealthRex Lab, Stanford University BMIR 2023 (online communication).
 - EPICLIN/JSCLCC conference, Nancy, 2023 (oral communication).
 - International society for clinical biostatistics, Newcastle, UK, 2022 (oral communication).
 - American causal inference conference, UC Berkeley, CA 2022 (poster).
 - Paris artificial intelligence research institute day, Paris, FR 2022 (poster).
 - EPICLIN/JSCLCC conference, Paris FR 2022 (oral communication).
- Medicine
- International symposium on intensive care, Brussels, BEL 2022 (poster).
 - French intensive care society congress, Paris, FR 2019 (poster).
 - European anesthesiology congress, Copenhagen, DE 2018 (moderator).
 - French society of anesthesia and intensive care, Paris, FR 2018 (poster).
 - Canadian pain society conference, Montreal, CAN 2018 (poster).

Grants

- 2022 PHRC-21-0167 "Intermittent hemodialysis versus continuous renal replacement therapy for severe acute kidney injury in critically ill patients" (PI: Stephane Gaudry, € 830'000).
- 2021 Action exploratoire (AEx) "Precision medicine using topology" (PI: Steve Oudot, € 235'000).

Teaching

- 2025 **HealthRex Lab Workshop, Stanford University.**
Instructed a workshop on "A Practical Introduction to Causal Inference and Estimation Theory." Workshop Materials: [http://github.com/fcgrolleau/causal inference tuto](http://github.com/fcgrolleau/causal_inference_tuto).
- 2021–2024 **Denis-Diderot Engineering School, Paris, France.**
Course instructor for a series of courses on *Survival Analysis* (Master level).
- 2019–2024 **Université Paris Cité, France.**
- Joint seminar with Maastricht University "AI in Medicine": course instructor.
 - University Diploma "Artificial Intelligence for Health": course instructor.
 - 1st year medical students: teaching assistant for probability and statistics.
 - 3rd year medical students: teaching assistant for methods in clinical research.
 - M.P.H. students: teaching assistant for prediction models and personalized medicine.
 - BSc. students: course instructor for critical thinking in comparative effectiveness research.
- Supervision of 1 M.P.H. student and 2 M.D. student for their thesis.

Technical skills

- Packages Tidyverse, Shiny, PyTorch, JAX, Keras, Sklearn, Git, AWS, Google Compute Engine.
- Programming Proficient: Python, R, \LaTeX , Good: SQL, Basic: JavaScript, C++.
- Software CRAN: Mestim, Pypi: Speedboot, Shiny apps: powerROC, dynamic-rrt.eu, rrt-personalization.eu