Andres Alban

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ACADEMIC POSITIONS

- Postdoctoral research fellow, MGH Institute for Technology Assessment, Harvard Medical School (2021-present)

EDUCATION

Ph.D.	INSEAD, Technology and Operations Management (2021)
M.S.	INSEAD, M.S. in Management (2018)
	GPA: 3.9
B.S.	New Jersey Institute of Technology, double major in applied mathematics and physics (2016)
	Albert Dorman Honors College, GPA: 4.0

RESEARCH INTERESTS

My research interests lie broadly in the application of simulation, optimization, and data analysis to support health care decision-making.

JOURNAL PUBLICATIONS

- Alban, A., Chick, S. E., and Forster, M. (2022a). Value-based clinical trials: selecting trial lengths and recruitment rates in different regulatory contexts. *Management Science*. Finalist POMS College of Healthcare Operations Management Best Paper Competition 2021

- Alban, A., Blaettchen, P., de Vries, H., and Van Wassenhove, L. N. (2021a). Resource allocation with sigmoidal demands: Mobile healthcare units and service adoption. *Manufacturing & Service Operations Management*.

- Forster, M., Brealey, S., Chick, S. E., Keding, A., Corbacho, B., Alban, A., and Rangan, A. (2021). Cost-effective clinical trial design: Application of a Bayesian sequential stopping rule to the profher pragmatic trial. *Clinical Trials*.

- Alban, A., Chick, S. E., Dongelmans, D. A., Vlaar, A. P. J., and Sent, D. (2020a). ICU capacity management during the covid - 19 pandemic using a process simulation. *Intensive Care Medicine*

- Alban, A., Darji, H. A., Imamura, A., and Nakayama, M. K. (2017). Efficient Monte Carlo methods for estimating failure probabilities. *Reliability Engineering and System Safety*

WORKING PAPERS

- Alban, A., Chick, S. E., and Zoumpoulis, S. (2022b). Learning personalized treatment strategies with predictive and prognostic covariates in adaptive clinical trials. In submission to Management Science

WORK IN PROGRESS

- Alban, A., Sent, D., van der Meulen, D. M., Chick, S. E., Wissink, I., Vlaar, A., and Dongelmans, D. (2022d). A quality improvement study on how a simulation model can help decision making on organization of ICU wards. In submision to Intensive Care Medicine

- Alban, A., Collins, R. A., Herman, T., Valinejad, J., Jalali, M. S., Gazelle, G. S., Chhatwal, J., and Lubitz, C. (2022c). The cost of early diagnosis of thyroid carcinoma with calcitonin tests. In progress

- Alban, A., van Mourik, N., Uhel, F., Zoumpoulis, S., Vlaar, A., Chick, S. E., and Scicluna, B. (2022e). Blood transcriptomic endotypes and the response to treatment modalities in sepsis: A prospective cohort study. In progress

CONFERENCE PROCEEDINGS

- Alban, A., Chick, S. E., and Zoumpoulis, S. (2021b). Expected value of information methods for contextual ranking and selection: Clinical trials and simulation optimization. In *Proceedings of the 2021 Winter Simulation Conference*
- Alban, A., Chick, S. E., Lvova, O., and Sent, D. (2020b). A simulation model to evaluate the patient flow in an intensive care unit under different levels of specialization. In *Proceedings of the 2020 Winter Simulation Conference*
- Alban, A., Chick, S. E., and Forster, M. (2018). Extending a Bayesian decision-theoretic approach to value-based sequential clinical trial design. In *Proceedings of the 2018 Winter Simulation Conference*
- Alban, A., Darji, H. A., Imamura, A., and Nakayama, M. K. (2016). Variance reduction for estimating a failure probability with multiple criteria. In *Proceedings of the 2016 Winter Simulation Conference*

CONFERENCE PRESENTATIONS

- Learning personalized treatment strategies with predictive and prognostic covariates in adaptive clinical trials. With Stephen E. Chick and Spyros I. Zoumpoulis. *INFORMS Annual Meeting 2022.*
- The Cost of Early Diagnosis of Thyroid Carcinoma with Calcitonin Tests. With Reagan A. Collins, Tianna Herman, Jaber Valinejad, Mohammad S. Jalali, G. Scott Gazelle, Jagpreet Chhatwal, Carrie Lubitz. *Society of Medical Decision Making Annual North American Meeting 2022.*
- Value-based clinical trials: selecting trial lengths and recruitments rates in different regulatory contexts. *INFORMS Annual Meeting 2020 and 2021, POMS Annual Conference 2021*
- A value of information approach to designing sequential clinical trials for precision medicine. With Stephen E. Chick and Spyros I. Zoumpoulis. *INFORMS Annual Meeting 2019, 2020, POMS Annual Conference 2021, INFORMS Healthcare 2021, INFORMS Annual Meeting 2021.*
- Fair and efficient? Capacity allocation of mobile family planning services in Uganda. With Philippe Blaettchen, Harwin de Vries, and Luk Van Wassenhove. *INFORMS Annual Meeting 2019.*
- Personalized Fluid Management in Sepsis Using Transcriptomic Endotypes. With Stephen E. Chick, Spyros I. Zoumpoulis, Brendon P. Scicluna, Fabrice Uhel, and Alexander P.J. Vlaar. *INFORMS Healthcare 2019.*
- Value-Based Clinical Trial Design to Account for Features of Pragmatic Trials. With Stephen E. Chick and Martin Forster. *POMS Annual Conference 2019.*

GRANTS AND AWARDS

- Luk N. Van Wassenhove Ph.D. Student Research Award 2019-2020, INSEAD
- European Sepsis Academy, grant provided by the European Union, 2016-2019
  - Attended courses on pathogenesis and treatment of sepsis (Amsterdam University Medical Center), diagnostics technologies (BioMérieux), immune functional assays (BioMérieux), mini MBA (INSEAD), sepsis clinical course (University College London)
- NJIT Provost's Undergraduate Summer Research program, 2014 and 2015
- NJIT Albert Dorman Honors College Scholarship

TEACHING

- Process and operations management core class for MBA students (online), INSEAD, Spring 2020
- Math tutorials for PhD students, INSEAD, Fall 2017.
- Math tutor and recitation assistant, NJIT Math Tutoring Center, 2013-2016.

SKILLS

- Programming: R, Julia, Matlab, Python, C++
- Languages: Spanish (native), English (fluent), German (intermediate), French (basic)
- Sports: tennis (played NCAA division I at NJIT with scholarship), soccer, ultimate frisbee, touch rugby, basketball