

SUSANA MONDSCHHEIN

SUSANA.MONDSCHHEIN@UCHILE.CL

CAMINO DEL ALGARROBO 1438, LAS CONDES, SANTIAGO

PHONE NUMBER: +569 98714901

ACADEMIC POSITIONS

Associate Professor, University of Chile, August 2020 – present.
Associate Professor, Adolfo Ibañez University, September 2011 – July 2020.
Lecturer Yale School of Management, September 2001 – July 2011.
Associate Professor, University of Chile, 1998 – 2007.
Assistant Professor, University of Chile, 1993 –1998.
Instructor, University of Chile, 1987 – 1990.

ACADEMIC DEGREES

Ph.D. in Operations Research, Massachusetts Institute of Technology (MIT), 1993.
M.Sc. in Industrial Engineering, University of Chile, 1989.
Engineering degree, University of Chile, 1987.

RESEARCH FIELDS

Logistics
Stochastic Optimization.
Public health & Healthcare.
Revenue Management.

TEACHING

Undergraduate teaching:

- Advance Operations Management, University of Chile
- Capstone project, Adolfo Ibañez University.
- Stochastic Processes, University of Chile and Adolfo Ibañez University.
- Optimization, University of Chile.
- Finance, University of Chile.
- Methods and Systems for Management, University of Chile.
-

Graduate teaching:

- Operations Management in the Service Industry, Ms. and Ph.D. course, University of Chile and Adolfo Ibañez University.
- Mathematical Models for Management, 1st Year Ph. D. mandatory course in Accounting, Finance and Marketing, Yale School of Management.
- Advanced Topics in Operations Management, University of Chile.
- Quantitative Methods, University of Chile.
- Advanced Topics in Finance, University of Chile.
- Planning and Control Systems for Production, University of Chile.

HONORS, AWARDS AND GRANTS

- Saval Award for best plenary work. XLVIII Chilean Congress of Gastroenterology." Impact on the survival of colorectal cancer: is Chile an unequal country?", (with F. Subiabre, N. Yankovic, Z. Berger, C. Estay, and C. von Muhlenbrock), Nov. 2021.
- President of the Chilean Institute of Operations Research, ICHIO, August 2021- August 2023.
- Finalist for the IFORS Operational Research in Development Prize, IFORS Conference, Beijing, August 1999 (8 out of 47 participants were selected).
- Member of the OR Less Developed Countries Group, IFORS, 1998-2002.
- Fondecyt Grants (Chilean NSF), 1999-2000, 1996-1997, 1994-1995.
- Ministry of Planning Fellowship for Graduate Studies, Chile,1990-1993.
- Engineering School Fellowship, University of Chile, 1987-1998.
- CORFO Engineering Thesis Award, Chilean Government, 1986.

ACADEMIC ADMINISTRATION

- Member of the Hiring Committee at the School of Engineering and Sciences, University of Chile, October 2021-September 2023.
- Member of Advisory Committee on Teaching Strategies, School of Engineering and Sciences, University of Chile, August 2022-present.
- Member of the Communications Advisory Committee, School of Engineering and Sciences, University of Chile, 2021-present.
- Member of the constituent committee for the Institute of Data and Artificial Intelligence (D&AI), University of Chile, October 2020-present.
- Member of the Academic Committee of the Ph.D. in Engineering Systems, School of Engineering and Sciences, University of Chile, April 2021-present.
- Member of the Academic Committee of the Master in Operations Management, School of Engineering and Sciences, University of Chile, May 2021-present.
- Director of Industrial Engineering, Faculty of Engineering and Sciences, Universidad Adolfo Ibáñez, 2015-2019.
- Member of Hiring Committee, School of Engineering, School of Engineering, Universidad de Chile, 1999–2001.
- Director, Manufacturing and Services Center (CEMS), Dept. of Industrial Engineering, School of Engineering, Universidad de Chile, 1994–1998.

PUBLICATIONS

- Mondschein, S., Subiabre, F., Yankovic, N., Estay, C., Von Mühlenbrock, C., & Berger, Z. (2022). "Colorectal cancer trends in Chile: a Latin-American country with marked socioeconomic inequities". *PlosOne*. <https://doi.org/10.1371/journal.pone.0271929>
- Mondschein, S., Subiabre, F., Yankovic, N., Estay, C., Von Mühlenbrock, C., & Berger, Z. (2022) "Colorectal cancer trends in Chile: an observational study". *ABSTRACTS*, Volume 23, Special Issue, S33, July 01, 2022, *LANCET Oncology*, (Q1). [doi.org/10.1016/S1470-2045\(22\)00432-6](https://doi.org/10.1016/S1470-2045(22)00432-6)
- Foncea, P., Mondschein, S. & Olivares, M. (2022). "Replacing quarantine of COVID-19 contacts with periodic testing is also effective in mitigating the risk of transmission". *Sci Rep* 12, 3620 (2022), <https://doi.org/10.1038/s41598-022-07447-2>
- Mondschein S., Olivares, M., Ordoñez, F., Schwartz, D., Weintraub, A., Aguayo, C., Canessa, G., Torres, I. (2021). "Service design to balance waiting time and infection risk: An application for elections during the COVID-19 pandemic". *Service Science*, <https://doi.org/10.1287/serv.2021.0290>
- Azar, M., Carrasco. R., Mondschein S. (2021). "Dealing with Uncertain Surgery Times in Operating Room Scheduling". *European Journal of Operations Research*. doi.org/10.1016/j.ejor.2021.09.010
- Mondschein, S., Yankovic, N., Matus, O. (2021). "The Challenges of Administering a New Treatment: The Case of Direct -Acting Antivirals for Hepatitis C Virus". *Public Health*. <http://doi.org/10.1016/j.puhe.2020.02.009>
- Garmendia, M. L., Mondschein, S., Montiel, B., & Kusanovic, J. P. (2021). Trends and predictors of birth weight in Chilean children. *Public Health*, 193, 61-68. <http://doi.org/10.1016/j.puhe.2021.01.019>
- Mondschein, S., Quinteros, M.J., Yankovic, N. (2020) "Bias in the Chilean public health system: Do we all wait the same?". *PLOS ONE*. <http://doi.org/10.1371/journal.pone.0239445>
- Mondschein, S., Yankovic, N., Matus, O. (2019). "Age Dependent Optimal Policies for Hepatitis C Virus Treatment", *International Transactions in Operations Research (ITOR)*. <http://doi.org/10.1111/itor.12705>
- Garmendia, M.L., Mondschein, S., Montiel, B., Kusanovic, J.P. (2019). "Trend and Predictors of Gestational Diabetes Mellitus in Chile". *International Journal of Gynecology and Obstetrics*. <http://doi.org/10.1002/ijgo.13023>
- Barrera, J., Carrasco, R., Mondschein, S., Canessa, G., Rojas-Zalazar, D. (2018). "Operating Room Scheduling Under Waiting Time Constraints: the Chilean Ges Plan". *Annals of Operations Research*. <http://doi.org/10.1007/s10479-018-3008-7>
- Garmendia, M.L., Mondschein, S., Matus, O., Kusanovic, P. (2018). "Gestational Weight Gain Recommendations for Chilean Women: A Mathematical Optimization Approach". *Public Health*. <http://doi.org/10.1016/j.puhe.2018.07.004>

Kong, Q., Mondschein, S., Pereira, A. (2018). "Effectiveness of Breast Cancer Screening Policies in Countries with Medium-Low Incidence Rates". *Rev Saude Publica*; 52:7.

<http://doi.org/10.11606/S1518-8787.2018052000378>

Garmendia, M.L., Mondschein, S., Matus, O., Murrugarra, R., Uauy, R. (2017). "Predictors of Gestational Weight Gain among Chilean Pregnant Women: the Chilean Maternal and Infant Nutrition Cohort Study". *Health Care for Women International*.

<http://doi.org/10.1080/07399332.2017.1332627>

Bitran, G., Mondschein, S. (2015). "Why Individualized Contact Policies are Critical in the Mass Affluent Market". *Academia Revista Latinoamericana de Administración*.

<https://doi.org/10.1108/ARLA-03-2014-0037>

Mondschein, S, Weintraub, G. (2003). "Appointment Policies in Service Operations: A Critical Analysis of the Economic Framework". *Production and Operations Management*.

<http://doi.org/10.1111/j.1937-5956.2003.tb00504.x>

Caldentey, R., Mondschein, S. (2003). "Policy Model for Pollution Control in the Copper Industry, Including a Model for the Sulfuric Acid Market". *Operations Research*.

<http://doi.org/10.1287/opre.51.1.1.12797>

Bitran, G., Caldentey, R., Mondschein, S. (1998). "Coordinating Clearance Markdown Sales of Seasonal Products in Retail Chains". *Operations Research*. <http://doi.org/10.1287/opre.46.5.609>

Mondschein, S., Schilkrut, A. (1997). "Optimal Investment Policies for Pollution Control in the Copper Industry". *Interfaces*. <http://www.jstor.org/stable/25062317>

Bitran, G., Mondschein, S. (1997). "Managing the Tug-of-War Between Supply and Demand in the Service Industries". *European Management Journal*. [http://doi.org/10.1016/S0263-2373\(97\)00032-7](http://doi.org/10.1016/S0263-2373(97)00032-7)

Bitran, G., Mondschein, S. (1997). "A Comparative Analysis of Decision-Making Procedures in the Catalog Sales Industry". *European Management Journal*. [http://doi.org/10.1016/S0263-2373\(96\)00080-1](http://doi.org/10.1016/S0263-2373(96)00080-1)

Bitran, G., Mondschein, S. (1997). "Periodic Pricing of Seasonal Products in Retailing". *Management Science*. <http://doi.org/10.1287/mnsc.43.1.64>

Bitran, G., Mondschein, S. (1996). "Mailing Decisions in the Catalog Sales Industry". *Management Science*. <http://doi.org/10.1287/mnsc.42.9.1364>

Bitran, G., Mondschein, S. (1996). "Inventory Management in the Catalog Sales Industry". *INFORMS Journal on Computing*. <http://doi.org/10.1287/ijoc.8.3.274>

Bitran, G., Mondschein, S. (1995). "An Application of Yield Management to the Hotel Industry, Considering Multiple Night Stays". *Operations Research*. <http://doi.org/10.1287/opre.43.3.427>

Fernández, J.E., Marcotte, P., Mondschein, S., Vera, J., Weintraub, A. (1993). Solution Approaches to the Bus Operator Problem. *Transportation Research B*. [http://doi.org/10.1016/0191-2615\(93\)90008-X](http://doi.org/10.1016/0191-2615(93)90008-X)

RESEARCH AND DEVELOPMENT PROJECTS

- **ISCI, Instituto Sistemas Complejos de Ingeniería (código AFB180003):** Co-researcher, August 2020 to present.
- **Center for Cancer Prevention and Control (CECAN),** ANID, FONDAP 152220002, extraordinary national competition for Research Centres of Excellence in priority areas (SCIA). January 2023-2028. Co-researcher.
- **ANID-COVID19 Project:** “Integrated information system for home monitoring of COVID-19 patients in health services”, July 2020-June 2021. Co-researcher.
- **MISTI Global Seed Funds Project,** MIT-Chile, for the project “The Use of Data Science and Optimization to Improve Decision Making in Healthcare”. This is a joint project of Professors Dimitris Bertsimas (MIT) and Susana Mondschein (UAI-Chile), and provides funds for trips and stays to enhance collaboration between researchers. 2020-2021.
- **Project Ingeniería 2030,** CORFO-UAI: “Healthcare Decision Support Systems”, 2015-2017. Director.
- **Fondecyt project 1990990:** "Pricing policies in dynamic and stochastic environments", 1999-2001. Principal researcher.
- **Fondecyt project 1960693:** “Solution algorithms for dynamic and stochastic problems”, 1996-1998. Principal researcher.
- **Fondecyt project 1940479:** “Heuristic solution algorithms for combinatorial problems”, 1994-1995. Co-researcher.

PROFESSIONAL SERVICES

- Advisor of the Council of the National Commission for Evaluation and Productivity. Chile (CNEP), 2002–2006. Appointed by the President of Chile
- Application of Periodic Antibody Testing to Manage the Risk of COVID19 infection at CCU. June-July 2020, Project director.
- Decision Support System for Investment Decisions in Pollution Control in the State--Owned Copper Smelters. Chilean Copper Commission (COCHILCO), Chilean Copper Corporation (CODELCO), Mining Ministry, National Environmental Commission (CONAMA) and National Mining Company (ENAMI). Phase I: 1994-1995, Phase II: 1996--1997. Project director.

- Decision Support System for the Design of Localized Irrigation Systems. Corporation for the Promotion of Production (CORFO), Chile. 1989-1990. Project director.
- Design of a Software for Localized Irrigation Systems. HIDROFIN. 1987-1988. Project director.