Eloy Alvarado Narváez

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Employment

2023 –	Academic Instructor, Universidad Técnica Federico Santa María	*Santiago, Chile.*
2022 – 2022	Lecturer, Universidad Técnica Federico Santa María	*Santiago, Chile.*
2021 – 2022	External Adviser, Instituto de Fomento Pesquero	*Valparaíso, Chile.*
2019 – 2022	Lecturer, Universidad de Valparaíso	*Valparaíso, Chile.*
2017 – 2017	Lecturer, Pontificia Universidad Católica de Valparaíso	*Valparaíso,Chile.*
2016 – 2017	Statistical Analyst, Equifax Inc.	*Santiago, Chile. / Atlanta, US.*

Education

2018 – 2022	Ph.D. in Statistics, Instituto de Estadística, Universidad de Valparaíso Advisors: Moreno Bevilacqua and Christian Caamaño	*Valparaíso, Chile.*
2013 – 2015	B.Sc in Statistical Science, Pontificia Universidad Católica de Valparaíso	*Valparaíso, Chile.*
2014	Exchange program in Korea University	*Seoul, South Korea*

Languages

Spanish	Native Speaker
English	Full professional proficiency, TOEFL iBT 90 (November, 2015)
French	Beginner A1, Institut Français
Korean	Beginner A2, Korea University

Research Articles

1. E. Alvarado, F. Plaza-Vega, C. Montenegro, and O. Saavedra. "Deep learning-based classification of species in central-southern fisheries in Chile". In: *Latin American Journal of Aquatic Research* 53.3 (2025), pp. 411–424. ISSN: 0718-560X. DOI: 10.3856/vol53-issue3-fulltext-3318.

2. M. E. Farías, E. Alvarado, and J. Scavia. "Contagion, Financial Distress and DIvergent Beliefs". In: *Open Economics Review (Under Review)* (2025).

3. M. Bevilacqua, E. Alvarado, and C. Caamaño-Carrillo. "A flexible Clayton-like spatial copula with application to bounded support data". In: *Journal of Multivariate Analysis* 201 (2024). Copula Modeling from Abe Sklar to the present day, p. 105277. ISSN: 0047-259X. DOI: https://doi.org/10.1016/j.jmva.2023.105277.

4. V. Beltrán, M. Flores, C. Sanzana, F. Muñoz-Sepúlveda, E. Alvarado, B. Venegas, J. C. Molina, S. Rueda-Velásquez, and A. von Marttens. "Tooth Loss and Caries Experience of Elderly Chileans in the Context of the COVID-19 Pandemic in Five Regions of Chile". en. In: *International Journal of Environmental Research and Public Health* 20.4 (Jan. 2023), p. 3001. ISSN: 1660-4601. DOI: 10.3390/ijerph20043001. (Visited on 02/25/2023).

5. V. Beltrán, P. A. Mardones, J. Díaz, E. Alvarado, and A. von Marttens. "TEGO: A new concept of teledentistry for the elderly through a web platform and mobile app in the context of the covid-19 pandemic." In: *Journal of Oral Research* 1 (2022), pp. 1–8. DOI: 10.17126/joralres.2022.023.

6. V. Beltrán, A. von Marttens, P. Acuña-Mardones, C. Sanzana-Luengo, S. J. Rueda-Velásquez, E. Alvarado, M. Flores, A. Cerda, and B. Venegas. "Implementation of a Teledentistry Platform for Dental Emergencies for the Elderly in the Context of the COVID-19 Pandemic in Chile". In: *BioMed Research International* 2022 (2022). DOI: 10.1155/2022/6889285.
7. C. Sanzana-Luengo, L. Díaz, L. Abarza, E. Alvarado, and V. Beltrán. "Teledentistry protocol for the elderly in the context of the COVID-19 pandemic through a web platform/mobile app: approach from the general dentist." In: *Journal of Oral Research* (2022), pp. 1–8. DOI: 10.17126/joralres.2022.026.
8. M. Stehlík, J. Kisel'ák, A. Dinamarca, E. Alvarado, F. Plaza, F. Medina, S. Stehlíková, J. Marek, B. Venegas, A. Gajdoš, et al. "REDACS: Regional emergency-driven adaptive cluster sampling for effective COVID-19 management". In: *Stochastic Analysis and Applications* (2022), pp. 1–35. DOI: 10.1080/07362994.2022.2033126.

Working Papers

1. *Simulation-based road characterization using LiDAR intensity: a random field approach for mining haul roads.* Joint work with David Godoy and Tomás Chávez.
   Status: Manuscript in Final Preparation.
2. *Ali-Mikhail-Haq spatial copula.* Joint work with Moreno Bevilacqua and Christian Caamaño-Carrillo.
   Status: Manuscript in Final Preparation.
3. *Weibull random fields through Clayton spatial copula: An application to mining haul roads.* Joint work with Christian Caamaño-Carrillo and Luis Riquelme.
   Status: Manuscript in Final Preparation.
4. *Non-Standard Profit Efficiency in Banking: A copula approach.* Joint work with Vivian Cruz and Fernando Díaz.
   Status: Manuscript Draft Completed - Final Estimation in Progress.
5. *Drift parameter identification for the Ornstein-Uhlenbeck process driven by Ornstein-Uhlenbeck with small General Gaussian noise.* Joint work with Héctor Araya and Francisco Plaza-Vega.
   Status: Manuscript in Final Preparation.
6. *A CAPM Approach with Stable Error Distributions: Application to Brazilian Market Dynamics.* Joint work with María Elisa Farías, Kerlyns Martínez and Alexis Alfaro.
   Status: Early Stage - Preliminary Results and Draft Development.
7. *Gumbel Spatial Copula.* Joint work with Moreno Bevilacqua and Christian Caamaño-Carrillo.
   Status: Early Stage - Developing Theoretical Results.

Grants and Projects

2025 – 2027 Spatial extension of the Gumbel copula: applications to some non-Gaussian random fields, Fondecyt de Iniciación 2025 ANID No. 11250479.

2023 – 2024 Modeling and estimating massive point referenced spatial data, MATH-AMSUD AMSUD220041. Research Associate.

2018 – 2022 National Doctoral Degree, ANID No. 2018-21180953.

2020 – 2020 Semi-presential technological support platform for urgent and priority dental care for the elderly in the context of the COVID-19 pandemic in the Chilean population, ANID, Reference No. COVID0766, Chile. Collaborator.

Teaching

Universidad Técnica Federico Santa María

ICN292	Management Information Systems.	*Taught in 2023/01, 2024/01–02, 2025/01*
PII402	Stochastic Processes (Postgraduate).	*Taught in 2023/02, 2024/01, 2025/01*

IND163C	Business Analytics.	*Taught in 2022/02, 2023/01*
	Universidad Andrés Bello	
ATDFI102	Introduction to programming.	*Taught in 2024/01,2025/01*
CIND217	Business intelligence.	*Taught in 2024/01, 2025/01*
IICGP01	Business intelligence.	*Taught in 2023/02*
	Universidad de Valparaíso	
IEST422	Statistical Quality Control.	*Taught in 2022/02*
LFIS325	Statistics for Physical Sciences.	*Taught in 2022/02, 2021/02, 2020/02*
IECD411	Machine Learning.	*Taught in 2022/01*
IEST414	Time Series.	*Taught in 2022/01*
IECD415	Multivariate Methods.	*Taught in 2022/01*
IECD325	Linear Models and Experimental Design.	*Taught in 2021/02*
IEST412	Sampling Theory II.	*Taught in 2021/01-02, 2020/01*
IEST322	Sampling Theory I.	*Taught in 2021/01, 2020/02, 2019/02*
IEC311	Probability and Statistics.	*Taught in 2021/01, 2020/01*
IEST213	Statistical Methods.	*Taught in 2019/02*
	Pontificia Universidad Católica de Valparaíso	
EST205	Probability and Statistics.	*Taught in 2017/01-02*

Academic Service

2024 – 2024 Scientific Committee Member, XLVII National Conference on Statistics, organised by the Chilean Statistical Society.

2024 – Internship Coordinator, Department of Industries, Campus Vitacura, Universidad Técnica Federico Santa María.

2024 – Member of the academic committee for the development of a new undergraduate program: Bachelor's Degree in Data Science, Universidad Técnica Federico Santa María.

Advising

2024 Cristóbal Retamal. Industrial Engineering. Universidad Técnica Federico Santa María. Advisor.

2024 Nicolás Bravo. Industrial Engineering. Universidad Técnica Federico Santa María. Advisor.

2023 Ricardo Menares. Statistics and Data Science Engineering. Universidad de Valparaíso. Co-advisor.

2022 Cristóbal Collao. Statistical Engineering. Universidad de Valparaíso. Co-advisor.

Scientific Events

Nov 2024 *"Weibull random fields through Clayton spatial copula An application to mining haul roads"*. III Conference on Geostatistics and Spatio-Temporal Statistics: Theory and Applications. Organizer:Universidad Técnica Federico Santa María

Nov 2024 *"Weibull random fields through Clayton spatial copula An application to mining haul roads"*. III Statistical Engineering Conference. Organizer: Universidad de Santiago de Chile

Oct 2024 *"Archimedean-like spatial copulas"*. XLVII National Conference on Statistics. Organizer: Chilean Statistical Society

Oct 2024 *"Analysis of the Intention to Use ICT in Industrial Engineering: Integrating UTAUT and Structural Equation Models"*. XXXVI Chilean Congress of Engineering Education. Organizer: Chilean Society of Engineering Education

Aug 2024 *"Workshop: Reproducible Research with R"*. Open Science Webinar USM. Organizer: Universidad Técnica Federico Santa María

Jul 2024 *"Experiences in Open Science"*. Open Science USM. Organizer: Universidad Técnica Federico Santa María

Jul 2024 *"Archimedean-like spatial copulas and their applications"*. Colloquium on Statistics and Data Science. Organizer: Pontificia Universidad Católica de Chile

Nov 2023 *"Tools and Strategies for Reproducible Research"*. 3rd Open Science Webinar USM. Organizer: Universidad Técnica Federico Santa María

Oct 2023 *"AI-based Feedback for Engineering Students"*. XXXV Chilean Congress of Engineering Education. Organizer: Chilean Society of Engineering Education

Dec 2022 *"A flexible clayton-like spatial copula with application to bounded support data"*. III Statistics Workshop: Graduate Contributions and Scientific initiation. Organizer: Chilean Statistical Society

Oct 2015 *"Stochastics differential equations in mathematical finance: The Black-Scholes Model"*. XXI Valparaíso Statistical Week. Pontificia Universidad Católica de Valparaíso

References

- Moreno Bevilacqua, Associate Professor at Universidad Adolfo Ibañez. `moreno.bevilacqua@uai.cl`
- Christian Caamaño, Associate professor at Universidad del Bío-Bío. `chcaaman@ubiobio.cl`
- Oscar Saavedra, Associate Professor at Universidad Técnica Federico Santa María. `oscar.saavedra@usm.cl`
- Carlos Montenegro, Head of Fisheries Research at IFOP. `carlos.montenegro@ifop.cl`

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