

# Eloy Alvarado Narváez

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## EMPLOYMENT

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

## EDUCATION

2018 – 2022	Ph.D. in Statistics, Instituto de Estadística, Universidad de Valparaíso	<i>Valparaíso, Chile.</i>
	Advisors: Moreno Bevilacqua and Christian Caamaño	
2013 – 2015	Bachelor in Statistics / Statistician, Pontificia Universidad Católica de Valparaíso	<i>Valparaíso, Chile.</i>
2014	Exchange program in Korea University	<i>Seoul, South Korea</i>

## 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. María Elisa Farías, Eloy Alvarado, and Javier Scavia. Is divergence the cause? contagion in times of financial distress. *Applied Economics (Under Review)*, 2024.
2. Eloy Alvarado, Francisco Plaza-Vega, Carlos Montenegro, and Oscar Saavedra. Deep learning-based classification of species in central-southern fisheries in chile. *Latin American Journal of Aquatic Research (Under Review)*, 2024.
3. Moreno Bevilacqua, Eloy Alvarado, and Christian Caamaño-Carrillo. A flexible clayton-like spatial copula with application to bounded support data. *Journal of Multivariate Analysis*, 201:105277, 2024. Copula Modeling from Abe Sklar to the present day.
4. Víctor Beltrán, Marco Flores, Cristina Sanzana, Fernanda Muñoz-Sepúlveda, Eloy Alvarado, Bernardo Venegas, Juan Carlos Molina, Sandra Rueda-Velásquez, and Alfredo von Marttens. Tooth Loss and Caries Experience of Elderly Chileans in the Context of the COVID-19 Pandemic in Five Regions of Chile. *International Journal of Environmental Research and Public Health*, 20(4):3001, January 2023.
5. Víctor Beltrán, Alfredo von Marttens, Pablo Acuña-Mardones, Cristina Sanzana-Luengo, Sandra J Rueda-Velásquez, Eloy Alvarado, Marco Flores, Angeline Cerda, and Bernardo Venegas. Implementation of a teledentistry platform for dental emergencies for the elderly in the context of the covid-19 pandemic in chile. *BioMed Research International*, 2022, 2022.
6. Víctor Beltrán, Pablo Acuña Mardones, Jaime Díaz, Eloy Alvarado, and Alfredo 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. *Journal of Oral Research*, (1):1–8, 2022.

7. Cristina Sanzana-Luengo, Leonardo Díaz, Liliann Abarza, Eloy Alvarado, and Víctor 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. *Journal of Oral Research*, pages 1–8, 2022.
8. M Stehlík, J Kisel'ák, A Dinamarca, E Alvarado, F Plaza, FA Medina, S Stehlíková, J Marek, B Venegas, A Gajdoš, et al. Redacs: Regional emergency-driven adaptive cluster sampling for effective covid-19 management. *Stochastic Analysis and Applications*, pages 1–35, 2022.

## 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.
2. *Ali-Mikhail-Haq spatial copula*. Joint work with Moreno Bevilacqua and Christian Caamaño-Carrillo.
3. *Weibull random fields through Clayton spatial copula: An application to mining haul roads*. Joint work with Christian Caamaño-Carrillo and Luis Riquelme.
4. *A CAPM Approach with Stable Error Distributions: Application to Brazilian Market Dynamics*. Joint work with María Elisa Farías and Kerlyns Martínez.

## GRANTS AND PROJECTS

- 2025 – 2027 Spatial extension of the Gumbel copula: applications to some non-Gaussian random fields, 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.	<i>Taught in 2023/01, 2024/01–02</i>
PII402	Stochastic Processes (Postgraduate).	<i>Taught in 2023/02, 2024/01</i>
IND163C	Business Analytics.	<i>Taught in 2022/02, 2023/01</i>

### UNIVERSIDAD ANDRÉS BELLO

ATDFI102	Introduction to programming.	<i>Taught in 2024/02</i>
CIND217	Business intelligence.	<i>Taught in 2024/01</i>
IICGP01	Business intelligence.	<i>Taught in 2023/02</i>

### UNIVERSIDAD DE VALPARAÍSO

IEST422	Statistical Quality Control.	<i>Taught in 2022/02</i>
LFIS325	Statistics for Physical Sciences.	<i>Taught in 2022/02, 2021/02, 2020/02</i>
IECD411	Machine Learning.	<i>Taught in 2022/01</i>
IEST414	Time Series.	<i>Taught in 2022/01</i>
IECD415	Multivariate Methods.	<i>Taught in 2022/01</i>
IECD325	Linear Models and Experimental Design.	<i>Taught in 2021/02</i>
IEST412	Sampling Theory II.	<i>Taught in 2021/02, 2021/01, 2020/01</i>

IENT322	Sampling Theory I.	<i>Taught in 2021/01, 2020/02, 2019/02</i>
IEC311	Probability and Statistics.	<i>Taught in 2021/01, 2020/01</i>
IENT213	Statistical Methods.	<i>Taught in 2019/02</i>
<b>PONTIFICIA UNIVERSIDAD CATÓLICA DE VALPARAÍSO</b>		
EST205	Probability and Statistics.	<i>Taught in 2017/01, 2017/02</i>

#### 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 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 Ibáñez. [moreno.bevilacqua@uai.cl](mailto:moreno.bevilacqua@uai.cl)
- Christian Caamaño, Associate professor at Universidad del Bío-Bío. [chcaaman@ubiobio.cl](mailto:chcaaman@ubiobio.cl)
- Carlos Montenegro, Head of Fisheries Research at IFOP. [carlos.montenegro@ifop.cl](mailto:carlos.montenegro@ifop.cl)