

Fernando de Pol Mayer

Curriculum Vitæ

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Education

- 2013–current **Statistics & Experimentation**, *Universidade de São Paulo (USP)*, Ph.D.
Bayesian spatio-temporal modelling for zero-inflated and overdispersed count data (provisory).
Advisor Paulo Justiniano Ribeiro Jr.
- 2008–2011 **Ecology**, *Universidade Federal de Santa Catarina (UFSC)*, M.Sc.
Probabilistic models for zero-inflated and overdispersed data in commercial fisheries.
Advisor Humber Agreli Andrade
- 2000–2005 **Oceanography**, *Universidade do Vale do Itajaí (UNIVALI)*, B.Sc.
Swordfish (*Xiphias gladius*) fishery in southwestern Atlantic: fleet dynamics and Catch Per Unit Effort (CPUE) influencing factors.
Advisor Humber Agreli Andrade

Complementary training

Internship

- 2006 **UNIVALI**.
Voluntary teaching assistant for “Statistics” course in Oceanography undergraduate.
- 2000–2005 **Biological Oceanography Laboratory, UNIVALI**.
Several studies developed including fisheries statistics and modelling.

Courses taken

- 2013 **USP**, 25h, Integral and differential calculus.
- 2013 **USP**, 25h, Probability.
- 2013 **USP**, 25h, Matrices.
- 2012 **USP**, 6h, Non-linear mixed models in R.
- 2012 **USP**, 6h, Computational methods for inference with R.
- 2011 **UFPR**, 6h, Data structures for spatial-temporal modelling.
- 2011 **UEM**, 6h, Modelling Statistics of Extremes.
- 2011 **UEM**, 6h, Introduction to stochastic simulation and modelling.
- 2010 **UFSC**, 6h, Multiple imputation and its applications.
- 2009 **UFSCar**, 6h, Hierarchical Generalized Linear Models.
- 2009 **UFSCar**, 6h, Linear Mixed Models.
- 2009 **SEB**, 8h, Experiments in ecology.
- 2009 **UFPR**, 9h, Programming statistical methods integrating C and R languages.
- 2007 **UFPR**, 21h, Effective statistical modelling with R.

Experience

Professional experience

- 2011–2012 **Universidade Federal de Santa Catarina (UFSC).**
Assistant professor for Oceanography and Biological Sciences undergraduate courses.
Disciplines taught:
 - Fisheries Resources
 - Population Ecology
 - Informatics for the Biological Sciences
- 2010–2011 **Fisheries and Aquaculture Ministry (MPA) and Organization of Ibero-American States for Education, Science and Culture (OEI).**
Consultant in fisheries statistics. Consolidated Brazilian fisheries statistics for 2008–2010 through multiple imputation methods.
- 2006–2008 **Universidade do Vale do Itajaí (UNIVALI), Fisheries Study Group (GEP).**
Tuna fisheries statistics and data analysis.

Courses taught

- 2012 **Instituto Albatroz, 16h**, Introduction to R programming language for statistical modelling.
- 2012 **UNIVALI, 16h**, Introduction to R programming language.
- 2011 **UNIVALI, 16h**, Introduction to R programming language.
- 2010 **UFSC, 12h**, Introduction to R programming language.
- 2007 **UNIVALI, 12h**, Introduction to R programming language.

Interests

Applied statistics
Statistical computing
Natural resources management

Computational skills

Operating Systems	Linux, Mac OS, Windows
Programming Languages	R, Fortran, HTML, \LaTeX
Tools	git, Shell

Languages

Portuguese	Native
English	Advanced

Test of English language proficiency: IELTS band 7 (September, 2009)

Grants

- 2009-2010 **REUNI/CAPEB.**
Scholarship (M.Sc).
- 2008-2009 **CNPq.**
Research project funding (colaborator).
- 2004–2005 **ProBIC/UNIVALI.**
Scientific initiation scholarship.
- 2000-2003 **Federal Government/UNIVALI.**
Scholarship (internship).

Awards

- 2005 **Universidade do Vale do Itajaí (UNIVALI).**
Academic Merit (academic achievement, participation in technical and scientific activities and the experiences of values and ethical attitudes during the academic life).

Publications

Peer-reviewed publications

- 1 Bender, M. G.; Floeter, S. R.; Mayer, F. P.; Vila-Nova, D. A.; Longo, G. O.; Hanazaki, N.; Carvalho-Filho, A.; Ferreira, C. E. L. 2013. Biological attributes and major threats as predictors of the vulnerability of species: a case study with Brazilian reef fishes. **Oryx** (Oxford Print), *in press*.
- 2 Mayer, F. P.; Andrade, H. A. 2008. Size of yellowfin tuna (*Thunnus albacares*) caught by pole-and-line fleet in the southwestern Atlantic ocean. **Brazilian Journal of Aquatic Science and Technology**, 12(1): 59–62.
- 3 Andrade, H. A.; Pereira, M. D.; Mayer, F. P. 2007. Alternative methods for calculating catch-per-unit-effort for skipjack tuna (*Katsuwonus pelamis*) caught in the southwestern Atlantic ocean. **Brazilian Journal of Aquatic Science and Technology**, 11(2): 63–66.
- 4 Mayer, F. P., Andrade, H. A. 2005. Swordfish (*Xiphias gladius*) and blue shark (*Prionace glauca*) fishery and the dynamics of the fleet off southeastern Brazilian coast. **Collective Volume of Scientific Papers, ICCAT**, 58(3): 1204–1214.
- 5 Mayer, F. P., Andrade, H. A. 2003. Catch, effort and CPUE of swordfish (*Xiphias gladius*) landed in Santa Catarina in 2000 and 2001. **Notas técnicas da FACIMAR**, 7: 23–36. (*In portuguese*).

Books

- 1 Hanazaki, N.; Petrucio, M. M.; Zank, S.; Mayer, F. P. 2009. Introduction to Ecology. 2. ed. Florianópolis: Biologia/EaD/UFSC, 85 p., ISBN 978-85-61485-22-1. (*In portuguese*).

Extended abstracts

- 1 Mayer, F. P.; Bonat, W. H.; Ribeiro Jr., P. J. 2011. Spatio-temporal modelling of catches in commercial fisheries through hierarchical Bayesian models with latent Gaussian structure. *In: 56 Annual Brazilian Region meeting of the International Biometric Society. (In portuguese).*
- 2 Mayer, F. P. 2009. Count data models considering overdispersion and excess zeros for abundance estimates of uncommon species in commercial fisheries. *In: 54 Annual Brazilian Region meeting of the International Biometric Society. (In portuguese).*

Reports

- 1 Mayer, F. P.; Sant'Ana, R. 2011. Methodology used for the consolidation of national fisheries statistics for 2010 and data compilation for the statistical bulletin of fisheries and aquaculture. *Report for MPA/OEI. (In portuguese).*
- 2 Mayer, F. P. 2010. Methodology used for the consolidation of national fisheries statistics for the period 2008–2009 and data compilation for the statistical bulletin of fisheries and aquaculture. *Report for MPA/OEI. (In portuguese).*
- 3 Mayer, F. P.; Andrade, H. A. 2005. Using a delta-lognormal Generalized Linear Model (GLM) in the analysis of swordfish (*Xiphias gladius*) catch data from the southwestern Atlantic. *Report for the scientific initiation scholarship — ProBic/UNIVALI. (In portuguese).*
- 4 Mayer, F. P.; Andrade, H. A. 2004. Study of the factors influencing the swordfish (*Xiphias gladius*) CPUE captured in the southwestern Atlantic through Generalized Linear Models (GLM). *Report for the scientific initiation scholarship — ProBic/UNIVALI. (In portuguese).*