

Pamela M Chiroque-Solano

PERSONAL DETAILS

Address Marine Biodiversity and
Conservation Laboratory
Federal University of Rio de Janeiro
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ACADEMIC QUALIFICATIONS

Post-Doctorate in Ecological modelling 2018-2020

Graduate program in Ecology. Institute of Biology - Federal University of Rio de Janeiro, Brasil

Supervisor: Professor Rodrigo Leão de Moura.

Project: [link to Executive summary]

research Title: Hierarchy for Time-Dependent Quantile regression model to predict coral cover.[link to research presentation]

research Title: Modelo de efeitos variando no tempo para dados composicionais. [link to research presentation]

Ph.D. in Statistics 2014-2018

Graduate program in Statistics. Institute of Mathematics - Federal University of Rio de Janeiro, Brasil

Supervisor: Professor Helio Migon.

Thesis Title: Joint modeling of longitudinal markers and survival data: an approach via dynamic hierarchical models.[Link to pdf]

M.Sc. in Statistics 2012-2014

Graduate program in Statistics. Institute of Mathematics - Federal University of Rio de Janeiro, Brasil

Supervisors: Professor Fernando Moura.

Title: Modelo Hierárquico Robusto para o Risco coletivo com sobredispersao.[Link to pdf]

B.Sc. in Statistics 2003-2007

National University Mayor de San Marcos, Perú

CURRENT ACTIVITY

Post-Doctorate in oceanography modelling 2021

Marine Research Institute. Biotechnology Marine Department. Federal University of Rio de Janeiro, Brasil. FAPERJ scholarship.

SUPPLEMENTARY EDUCATION

Designing a Multidimensional Poverty Index United Nations Development Programme (UNDP)
Oxford Poverty and Human Development Initiative (OPHI)
2021

Geostatistical Functional Data Analysis Univariate and Multivariate Spatial Functional Prediction
And Optimal Sampling with Environmental Applications. LARS School on Computational Statistics and Data Science
2021

Course in NASA ARSET: Applied Remote Sensing Training Program of NASA.
National Aeronautics and Space Administration
2020

Course in Geosciences Artificial Intelligence in Geosciences
University of São Paulo. Geosciences Institute
2020

Course in Ecology Introduction to Ecology of Coral Reefs
Federal University of Rio de Janeiro. Biology Institute. Graduation in marine ecology.
2019

Course in Data Science An Introduction to data-driven modelling & Graph clustering.
University of São Paulo. Institute of Mathematical and Computer Sciences.
2017

Short Course in Actuarial Science Property Insurance Management. Rio de Janeiro, Brasil
National School of Insurance.
2016

PROFESSIONAL EXPERIENCE

Post-Doctorate research in oceanography modelling Federal University of Rio de Janeiro, Brasil
FAPERJ-Scholarship
2021

Post-Doctorate research in Ecological modelling Federal University of Rio de Janeiro, Brasil
Institute of Biology
2018-2020

Lecturer in the Department of Mathematic at Federal University of Rio de Janeiro, Brasil
Undergraduate program of Statistics and Actuarial Sciences
2018-2019

Operations Manager Kantar IBOPE Media Research
2007-2012

PUBLICATIONS

- [1] Tomazetto, R., Hill, L., Santiago, C., Bahia, R., Moraes, F., and **Chiroque-Solano, Pamela** (2021). Macroalgae assemblage shifts in coastal reefs after the fundão dam collapse. *Submitted*.
- [2] **Chiroque-Solano, Pamela** and Fernando, M. (2021). A heavy-tailed and overdispersed collective risk model. *Submitted*. <https://arxiv.org/abs/2101.09022v2>.
- [3] Teixeira, C., **Chiroque-Solano, Pamela**, Ribeiro, F., Carlos-Júnior, L., Neves, L., Salomon, P., Salgado, L., Falsarella, L., Cardoso, G., Villela, L., Freitas, M., Moraes, F., and Moura, R. (2021). Decadal (2006-2018) dynamics of southwestern atlantic's largest turbid zone reefs. *PLoS ONE*, 16(2). 10.1371/journal.pone.0247111.
- [4] Moura, R. L., Abieri, M. L., Castro, G. M., Carlos-Júnior, L. A., **Chiroque-Solano, Pamela M.**, Fernandes, N. C., Teixeira, C. D., Ribeiro, F. V., Salomon, P. S., Freitas, M. O., Gonçalves, J. T., Neves, L. M., Hackrad, C. W., Felix-Hackrad, F., Rolim, F. A., Motta, F. S., Gadig, O. B. F., Pereira-Filho, G. H., and Bastos, A. C. (2021). Tropical rhodolith beds are a major and belittled reef fish habitat. *Nature:Scientific Reports*, 11(1):794. <https://doi.org/10.1038/s41598-020-80574-w>.
- [5] Cardoso, G., Falsarella, L., **Chiroque-Solano, Pamela**, Salomon, P., Gonçalves, J., and Moura, R. (2021). Coral growth bands recorded trace metals anomalies associated with the fundão dam rupture (abrolhos bank, brazil). *Submitted*.
- [6] Moura, R., Carvalho, G. O., Salomon, P. S., Freitas, M. O., Malm, O., Kasper, D., Ferreira-Filho, V. J. M., Obino, A., Pontes, D., Silva, C. N., Parente, C. E. T., Louzada, T. S., Gonçalves, J. T., **Chiroque-Solano, Pamela**, M. H.-S., Braga, R. R., and Musiello-Fernandes, J. (2020). Paradise lost? trace elements in fisheries resources from a biodiversity hotspot in the southwestern atlantic. *Submitted*.
- [7] Leitão, R., Ribeiro, F., **Chiroque-Solano, Pamela**, Salomon, P., Teixeira, C., Magdalena, U., Villela, L., Bastos, A., Falsarella, L., Cardoso, G., Pereira-Filho, G., Salgado, L., and Moura, R. (2020). Interspecific variation in resilience after mass coral bleaching in southwestern atlantic turbid-zone reefs. *Submitted*.
- [8] Delgado, C. A., Shimabuku, R. L., and **Pamela M. Chiroque-Solano** (2020). Covid-19 waves: Importance of accumulative mortality per million inhabitants. *The Tohoku Journal of Experimental Medicine*, 251(1):47–49. <https://doi.org/10.1620/tjem.251.47>.
- [9] Amorin, A., Ribeiro, F., **Chiroque-Solano, Pamela**, Salomon, P., Teixeira, C., Magdalena, U., Villela, L., Bastos, A., Falsarella, L., Cardoso, G., Pereira-Filho, G., Salgado, L., and Moura, R. (2020). Benthic assemblages associated to the reefs off the amazon mouth. *Submitted*.
- [10] **Chiroque-Solano, Pamela** and Migon, H. (2018). *Joint modeling of longitudinal markers and survival data: an approach via dynamic hierarchical models*. PhD thesis, Federal University of Rio de Janeiro. <http://www.pg.im.ufrj.br/teses/Estatistica/Doutorado/040.pdf>.
- [11] Chiroque-Solano, R. and **Chiroque-Solano, Pamela** (2017). Visibilidad de la revista médica herediana. una revisión mediante google scholar. *Revista Medica Herediana*, 28(3):166. <https://doi.org/10.20453/rmh.v28i3.3183>.
- [12] **Chiroque-Solano, Pamela** and Moura, F. (2014). Modelo Hierárquico Robusto para o Risco Coletivo com sobredispersão. Master's thesis, Federal University of Rio de Janeiro. <http://www.pg.im.ufrj.br/teses/Estatistica/Mestrado/144.pdf>.

TEACHING

Assistent professor in the Department of Mathemathic at Federal University of Rio de Janeiro, Brasil UnderGraduate program of Statistics and Actuarial SciencesLink

March 2018- Dec 2019

Short courses in the Department of Biology at Federal University of Rio de Janeiro, Brasil Graduate program of Biology

Statistics for ecology; Statistical models for ecology; Bayesian Inference

2018-March 2020

RESEARCH SUPERVISOR

Co-Supervisor Graduate program of Applied Mathematics (UFRJ). João Paulo Pinto Siqueira.

Modelagem de taxa de crescimento de infecção via $AR(1)$ de espaço de estados, um caso particular.

2018-2019

Supervisor Graduate program of Statistics and Actuarial (UFRJ). Mariana Soares Sá.

Modeling compositional data.

2020

Supervisor Graduate program of Statistics and Actuarial (UFRJ). Larissa Maracajá.

Modeling multivariate environmental ocean data.

2020

EXAMINATION COMMITTEE

Undergraduate Dissertation Graduate program of Biology - Marine Ecology (UFRJ).

Daniela Chaves.

Demographic trends of a long-lived coral (*Mussismilia braziliensis*) over a cross-shelf gradient.

2019

Undergraduate Dissertation Graduate program of Biology - Marine Ecology (UFRJ).

Juliana Barboza.

Partitioning temporal Beta-diversity benthic reef community in Abrolhos, Brazil.

2019

JOURNAL REVIEWER

Frontiers Marine Science

AWARDS AND GRANTS

Approved in the selection of COVIDTECT Project in the Sciences Department at University of Lisboa, Portugal Centre for Ecology, Evolution and Environmental Changes (CE3C)

ANÚNCIO Nº 3320/2020/BIPD BIPD Page

2020

Approved in the selection of full time professor in the Department of Mathematic at Federal Rural University of Rio de Janeiro, Brasil Graduate program of Statistics (UFRRJ)

Editais nº 96 de 18 de OUTUBRO de 2019, DOU de 21/10/2019, Seção III, págs 76 a 78. DOU page

2020

Research participation: Monitoring the Covid-19 evolution in the extreme social inequality scenario in Brazil. Research project page.

2020-2021

Congress Studentship International Statistical Ecology Conference. Sydney, Australia. 2020

XIII Congreso Latino de sociedades de estadística (13 CLATSE). Guadalajara, Mexico. 2018

33 Foro Nacional de Estadística (33FNE). Guadalajara, Mexico. 2018

V Congreso Latinoamericano de Estadística Bayesiana. Guanajuato, Mexico. 2017

IV Congreso Latinoamericano de Estadística Bayesiana. Medellin, Colombia. 2015

Post-Doctorate research UFRJ, Brasil. Fundação de Amparo à Pesquisa do Estado do Rio de Janeiro *FAPERJ*

2021

Post-Doctorate research UFRJ, Brasil. Fundação Espírito-Santense de Tecnologia *FEST*

2018-2020

PhD Studentship Federal University of Rio de Janeiro, Brasil

CNPq and FAPERJ - E-26/200.319/2016(220962)

2014-2018

MSc Studentship Federal University of Rio de Janeiro, Brasil

Capes and FAPERJ- E-26/100.402/2013(121366)

2012-2014

Amartya Sen Award: Human Development Programa de formación en excelencia gerencial *PNUD: PROGRAMA DE LAS NACIONES UNIDAS PARA EL DESARROLLO*

2010

Undergraduated Award National University Mayor de San Marcos, Perú

The 1st. Best CR in Statistics over 2003-2007

2007

Medal of honor Faculty of Matematical in the National University Mayor de San Marcos, Perú

The 1st. Best CR in Statistics over 2003-2007

CODING AND HIGH PERFORMANCE COMPUTING

Google Earth Engine	Basic
R	Advanced
BUGS, JAGS, Stan	Advanced
ShinyApp	Advanced
Markdown	Advanced
Python	Intermediary
ArcGis	Intermediary

VOLUNTARY WORK

Application in Civil Engineering Construction Materials Research
Design of Fits and Forecasts of Real and Imaginary Impedance Measures for Corrosion Data in Cement Environment under Saline Solution
2020-2021

Covid-19 Action: [Link to Group Site](#)
Modeling the vulnerability to COVID-19 populations in a pandemic time
2020-2050

Consultant in the data science and artificial intelligence
Sustainable Agriculture: Challenges in the agricultural sector in Peru
2021-2050

REFERENCES CONTACTS

Professor Fernando Moura

Professor of Statistics in the Institute of Mathematics

Federal University of Rio de Janeiro, Rio de Janeiro, Brazil

fmoura@im.ufrj.br

Professor Ralph S. Silva

Professor of Statistics in the Institute of Mathematics

Federal University of Rio de Janeiro, Rio de Janeiro, Brazil

ralph@im.ufrj.br

Professor Rodrigo Leão de Moura

Professor of Ecology in the Institute of Biology

Federal University of Rio de Janeiro, Rio de Janeiro, Brazil

moura.uesc@gmail.com

Professor Carlos A. Delgado. MD, PhD

Paediatrician Neonatologist – Third level paediatric hospital

Professor of Paediatrics – Universidad Nacional Mayor de San Marcos

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