

Freddy Palma Mancilla

CURRICULUM VITAE - March 16, 2020

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CURRENT POSITION

Associate Professor A, Department of Mathematics, Science Faculty, UNAM.

RESEARCH INTEREST

- Stochastic processes: Markov Branching processes, intertwining of Markov processes, stochastic filtering, estimation and prediction of Markov processes.

EDUCATION

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| March - August
2019 | Postdoctoral position, Institute of Mathematics, UNAM.
Advisor: Dr. Gerónimo Uribe Bravo.
<i>Intertwining for Markov branching processes.</i> |
| 2014 - 2017 | PhD in Mathematical Sciences (Probability and Statistics)
Research Institute in Applied Mathematics and Systems, UNAM.
Advisor: Dr. Ramsés Mena Chavez.
Thesis: <i>A dual construction of reversible Markov processes for filtering problems.</i> |
| 2009 - 2011 | Master of Mathematical Sciences (Probability and Statistics)
Research Institute in Applied Mathematics and Systems, UNAM.
Grade tests: Probability, Statistics and Mathematical Finance. |
| 2005 - 2009 | Bachelor in Actuary, Science Faculty, UNAM.
Actuarial Society exams (SoA):(P) Probability, (FM) Financial Mathematics,
(MLC) Models Life Contingency. |

PUBLICATIONS

Refereed journal publications

1. Leisen, F., Mena, R., Palma, F. and Rossini, L. (2019) On a flexible construction of a Negative binomial model. *Statistics and Probability Letters*, **152**, 1-8.
2. Palma, F. and Mena, R. (2020) Continuous-time Markov processes, orthogonal polynomials and Lancaster probabilities. *ESAIM:PS*, **24**, 100-112.

Submitted

3. Palma, F. and Mena, R. (2019) Duality for a class of continuous-time reversible Markov models.

Papers in progress

- Mena, R., Palma, F. and Uribe, G. (2020) Intertwining for Markov branching processes.
- Mena, R., Palma, F. and Uribe, G. (2020) Inference of a class of continuous-time Markov chains.

ATTENDED CONFERENCES/WORKSHOPS*Selected Presentations*

- XV Latin American Congress of Probability and Statistical Mathematics, 2019, Yucatán, México.
- 10-th International Workshop on Bayesian Inference in Stochastic Processes, 2017, Universidad de Bocconi, Milán, Italia.
- International Workshop in Applied Probability, 2016, Toronto, Canada.
- Meeting Bath-UNAM-CIMAT 2 (BUC-2, 2016), Postgraduate Unit, UNAM.
- Seminar of Probability and Stochastic Processes, UNAM, 2018-1.

Posters.

- 32 Foro Nacional de Estadística (2017), Postgraduate Unit, UNAM.
- 11th Bayesian Nonparametrics (2017), Ecole Normale Supérieure, Paris, Francia.
- Bayesian Congress of Latin America V (2017) CIMAT, Guanajuato.
- Symposium of Inference and Statistical Modeling (2016), CIMAT, Guanajuato.
- Stochastic Processes and their Applications (2015), Oxford University, UK.

Participation.

- IX School of Probability and Stochastic processes (2018), CIMAT, Guanajuato.
- International Society for Bayesian Analysis World Meeting (2017), Cancún, México.
- XIII Symposium of Probability and Stochastic Processes (2017), Science Faculty, UNAM.
- Workshop on Risk Analysis in Economics and Finance (2013), CIMAT.

EXPERIENCE*Associate Profesor in Science Faculty, UNAM.*

- Probability I (2018-1,2019-1,2020-1,2020-2).
- Probability II (2020-1,2020-2).
- Stochastic processes I (2018-2, 2019-1,2019-2).
- Risk theory (2019-2).

Thesis revisions.

- Carlos Garza Bracamontes (2020), *Inferencia bayesiana y simulación estocástica de modelos Markovianos estacionarios.*
- Erick Iván Castro Granados (2019), *Modelo de valuación para tasas de interés con procesos de Lévy no homogéneos.*
- Pablo Ulises Hernández Garcés (2018), *Método de Propagación de Esperanzas.*

Referee

- Foro Nacional de Estadística(FNE) y 13 Congreso Latinoamericano de Sociedades de Estadística (CLATSE).

AWARDS

- 2009 - 2011 Graduate scholarship for Master degree CoNaCyT.
- 2014 - 2017 Graduate scholarship for PhD degree CoNaCyT.
- 2019 Postdoctoral position, scholarship CoNaCyT-Fronteras de la Ciencia.

NON-ACADEMIC WORK EXPERIENCE

- 2012 - 2013 Statistical Database Analyst.
Advertising Agency iLatina, Grupo Salinas.
Supervisor: Pablo Lévy y Alicia Sarkis.
- 2009 Statistical Database Analyst.
Social Research Institute, UNAM.
Supervisor: Martha Mier y Teheran.

ADDITIONAL ACADEMIC FORMATION

- 2012 Training program for the use of SAS, SAS Offices in Mexico.
 - Programming I, II
 - Querying and reporting using SAS enterprise guide
 - Applied analytics using SAS enterprise miner 5.3.

Languages: English, Spanish (Mother tongue)

Software: R, Mathematica, SAS, SPSS, Matlab.

REFERENCES

Dr. Ramsés Mena
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